User's Manual

HIGH SPEED IP- DOME SERIES

HEAVY DUTY MODEL

Before attempting to connect or operate this product, please read these instructions completely.

00-37723EZ1EA2

CONTENTS

PREFACE

The speed dome is a new subcompact dome camera system designed to deliver superb performance and durability with a pristine housing that looks good in any security and surveillance installation.

This speed dome contains new generation advanced DSP color camera, with 25X optical zoom multiply 12X digital magnifier (22X optical zoom with 12X digital magnifier, or 23X optical zoom with 10 digital magnifier are selectable items), delivers the power of a 300X zoom (264X ,230X zoom) to make sure that the finest details are captured. Continuous auto focus, back light compensation, auto iris controls, IR cut filter removable, privacy mask functions (IR cut filter removable and privacy mask functions are not included in 22X lens) are some of the salient features incorporated to fit your needs.

High speed tilt and 360° endless rotation and auto flip function allows this speed dome to be installed in the most demanding applications. RS-485 communication channel is available for remote control purposes, 128 preset points can be programmed for precise location of target areas, and you can also define multiple cruise routes for the camera to operate automatically.

Home function allows the user to specify a preset position as the 'home position'. Dome camera can come back to home position when the user stops to move the camera for a while.

Built in network module allows users control all speed dome features through internet or intranet. User needn't pre-install specific windows application to access the IP dome cameras. Instead of that, user can access IP dome cameras through internet browser such like Microsoft IE.

Dependability and ultra high reliability are key factors in the speed dome design cycle. Every speed dome is assembled with meticulous care and thorough testing at our ISO 9001 compliant factory. High performance, reliability, and reasonably pricing, this speed dome is an ideal solution to your tough surveillance requirement.

FEATURES

NETWORK VIDEO SERVER FEATURES

1. Built-in HTTP web server providing Internet access capability.
2. Dome IP assignment via ARP/Web Page/IP Installer for easy setup.
3. JAVA-based web page providing maximum platform compatibility.
4. Active-X control for Internet Explorer providing maximum performance.
5. Motion Detection/ Date/ Time/ GPIO Input for event trigger.
6. Email/ FTP/ Internal Buffer Storage/ Relay Out/ PPP Dialing out for event trigger action.
7. Programmable event script for various applications.
8. IP Dome DDNS support for dynamic IP application.
9. 3- Layer user security control.
10. Firmware and user content pages are remote upgradeable via FTP.
11. CGI based server is easy to integrate new application for users.

CAMERA FEATURES

1. Optical performance:
    (1). S model: 25X optical zoom with 12X digital magnifier.
    (2). K model: 23X optical zoom with 10X digital magnifier.
    (3). R model: 22X optical zoom with 12X digital magnifier.
2. Continuous Auto-focus or manual focus
3. Minimum illumination:
    (1). S model: 25X lens: 0.01 lux   (0 lux: IR illuminator ON)
    (2). K model: 23X lens: 0.01 lux   (0 lux: IR illuminator ON)
    (3). R model: 22X lens: 1 lux
4. Advanced DSP camera provide:
    (1) Auto white balance
    (2) Back-light compensation
    (3) Auto iris control
    (5) IR-cut filters removable mechanism. (S, K model only)
    (6) Electronic shutter
5. **Slow Shutter** function enable dome to gain a brighter video output through shutter speed control. (S, K model only)
6. **Title Display** function enable dome to display a string for a view. The title will be displayed on screen if you pass through the region what you saved before.
7. **IR-Cut Filter Removable :**
    (1). S model: 25X lens: Equipped

(2). K model: 23X lens: Equipped

(3). R model: 22X lens: N/A

8. **WDR**

(1). S model: 25X lens: N/A

(2). K model: 23X lens: Equipped

(3). R model: 22X lens: N/A

9. **Privacy Mask**

(1). S model: 25X lens: Equipped

(2). K model: 23X lens: Equipped

(3). R model: 22X lens: N/A

ROTARY BODY FEATURES

1. 5" compact, low profile color dome camera

2. 360° endless rotation

3. Pan speed up to 375° /sec

4. Tilt speed up to 300° /sec

5. **Preset** function enable user to record different 128 viewpoints what you want. You can set Pan/ Tilt/ Zoom for every preset position.

6. **Proportional Zoom** enables Pan/ Tilt speed inverse proportional to Zoom ratio. You can track an object easily with this function.

7. **Auto-Turn Around** function allows user to keep tracking object even the object pass through the bottom of camera. You needn't rotate 180 degrees in pan direction to keep observing the object. This function will do this for you quickly.

8. **Auto-Pan** function enable dome camera to scan a specific region repeatedly with user defined speed. You can set start point, end point and scan speed to scan a specific region. User can make dome camera to do continuously panning without limit through setting the start point the same as end point

9. **Sequence** function enable dome camera to switch viewpoints between presets. There are three parameters can be filled into sequence function. You can set "Preset number", "Dwell Time" and "Speed" for sequence line.

10. **Cruise** function enable dome camera to scan a user defined path. User can manipulate dome camera with joystick to establish this path.

11. **Home** function enables the possibility to lock a viewpoint or a function. Home function will go back to home position or functions (Auto-pan/ Sequence/ Cruise) when user move the camera to other position and the time period is expired.

12. **Auto Restoring** function will record current position when user defined period of time is reached. Dome will go to the position if the power of your installation site is recovery after shutdown.

13. **Remote V-Sync Adjustment** function enable user to adjust the line lock signal remotely. You can adjust the phase of line lock signal to synchronize the system from keyboard.

14. **D Protocol and P Protocol Supported from OSD.** You can control our dome camera easily from any keyboard of **PELCO (Pelco Corporation)**.

15. **VCL Telemetry Control Protocol Supported from OSD.** You can control our dome camera easily from system of **DM (Dedicated Micros Corporation).**

16. Build-in 4 alarm input connectors

17. On Screen Display for camera control

18. 12VDC/ 24VAC power model available

19. Twist lock release from bracket for easy installation and servicing

PRECAUTIONS

1. **Handle the camera carefully**

   Do not abuse the camera. Avoid striking, shaking, etc. The camera could be damaged by improper handing or storage.

2. **Do not disassemble the camera**

   To prevent electric shock, do not remove screws or covers. There are no user serviceable parts inside.   Ask a qualified service person for servicing.

3. **Do not block cooling holes on the bracket**

   This camera has a cooling fan inside. Blocking the cooling holes leads to build up of heat the camera and may cause malfunction.

4. **Do not operate the camera beyond the specified temperature, humidity or power source ratings**

   Use the camera under conditions where temperature is between 0°C ~ 40°C (32°F ~ 104°F), and humidity is below 90%.

5. **Do not expose the camera to rain or moisture, or try to operated it in wet areas**

   This product is designed for indoor use or locations where it is protected from rain and moisture. Turn the power off immediately and ask a qualified service person for servicing. Moisture can damage the camera and also create the danger of electric shock.

6. **Do not use strong or abrasive detergents when cleaning the camera body**

   Use a dry cloth to clean the camera when dirty. In case the dirt is hard to remove, use a mild detergent and wipe gently.

7. **Never face the camera towards the sun**

   Do not aim the camera at bright objects. Whether the camera is in use or not, never aim it at the sun or other extremely bright objects. Otherwise, blooming or smear may be caused.

 * **PELCO** is a registered trademark of **PELCO** Corporation.

 * **P protocol** and **D protocol** are protocols what **PELCO** corporation used.

 * **DM** is a registered trademark of **Dedicated Micro** Corporation.

QUICK STARTING

The section is a quick reference for users to manipulate a dome camera in a short time.

FUNCTION DEFINITION

■ **Preset Function Definition**

Preset point means that dome camera will save pan/tilt/zoom positions to its memory.

You can recall the preset position through this function.

■ **Auto-Pan Function Definition**

Auto-Pan means that dome camera will scan a predicted region. The region is defined by "start point", "end point", "scan direction" and "scan speed".

Dome camera will scan a region from "start point" to "end point" according to the "scan direction" and "scan speed".

Dome camera will do pan motion continuously without limit if user set the start point the same as end point.

You can manipulate zoom in/out function when the dome camera is executing Auto-Pan function.

■ **Sequence Function Definition**

Sequence means that dome camera will switch its view between different preset positions.

The sequence parameters are "preset point", "jump speed" and "dwell time".

Dome camera will switch its view according to the sequence parameters. It will go to the "preset position N" with "jump speed S" and stay there for a period with "dwell time T". Then dome camera will go to the second preset position with the parameter 2….etc.

■ **Cruise Function Definition**

Cruise means that dome camera will patrol a special path. This path is generated by joystick movement. The memory sizes of dome camera limit the length of cruise path. After the memory of dome camera is filled up, it will stop to record the latter path. When you recall cruise function, it will patrol the path which is memorized in memory.

QUICK START FROM MICROSOFT WINDOWS

STEP1: Run "IPinstaller.exe" from PC.

The IP Installer will scan the Ethernet node address (MAC address) to check how many devices are connected to the network segment. Select an IP DOME with Ethernet node address and change its IP address to an assigned IP address which is issued by your network administrator.

STEP2: Control IP dome cameras through internet browser (Microsoft IE).

■ **Preset Function Operation**

(1) Setting

Press <Preset> for setting the preset point and select a number such as <2>. Press <SET> to record this position as preset point 2. If you want to name the preset position, you could fill in the <Title> blank, select a number and press <Set> button (Max. 20 set).

(2) Recall preset position

Select a number in the "RUN" area for preset point such as <2>. Then the camera will go to the preset position 2.

■ **Auto-Pan Function Operation**

(1) Setting

a. Move dome camera to a specific position and press <Start> to save it as start point of scan region.

b. Pan dome camera to another position and press <End> to save it as end point of scan region.

c. Using direction key to select the scan direction what you want.

d. Using direction key to select speed of Auto-Pan.

(2) Execute Auto-Pan function

Press <Start> in the "RUN" area to entering Auto-Pan mode.

■ **Sequence Function Operation**

(1) Setting

a. Select a Group for a sequence line such as <1>. You can modify parameters of sequence 1.

NOTE: Before setting sequence, you should have some preset points.

b. You can edit the parameters such as <3> for group, <1> for Point, <4> for Preset, <2> for Dwell Time, <6> for Speed and press <Set>. That means that the first preset point of sequence group 3 is preset point 4, dome

camera will stay 2 seconds there and dome will go to next preset with speed 6.

      c. Please continuous edit the parameters Point 2 / Preset / Dwell Time / Speed and so on.

  (2) Execute sequence function

      a. Press a group number (1~4) in the "RUN" area, and the dome will execute its sequence function.

■ **Cruise Function Operation**

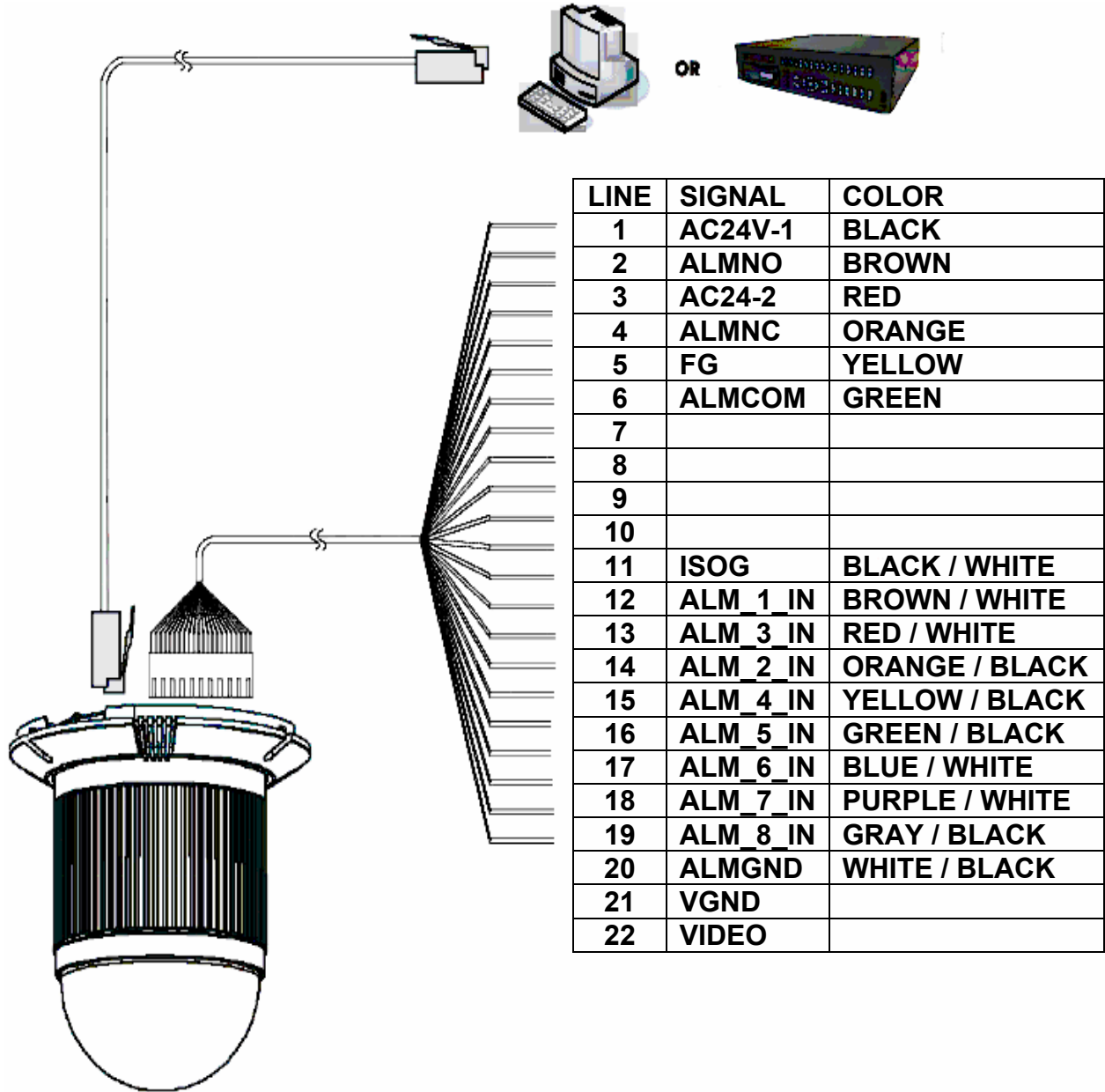 **(1)** Setting

      a. Press <Start> in the "Set" area to start recording your cruising path.

      b. When finishing cruising, press <End> to stop recording your cruising path.

  (2) Execute cruise function

    Press <Start> in the "RUN" area to entering cruise mode.

| LINE	SIGNAL	COLOR
1	AC24V-1	BLACK
2	ALMNO	BROWN
3	AC24-2	RED
4	ALMNC	ORANGE
5	FG	YELLOW
6	ALMCOM	GREEN
7		
8		
9		
10		
11	ISOG	BLACK / WHITE
12	ALM_1_IN	BROWN / WHITE
13	ALM_3_IN	RED / WHITE
14	ALM_2_IN	ORANGE / BLACK
15	ALM_4_IN	YELLOW / BLACK
16	ALM_5_IN	GREEN / BLACK
17	ALM_6_IN	BLUE / WHITE
18	ALM_7_IN	PURPLE / WHITE
19	ALM_8_IN	GRAY / BLACK
20	ALMGND	WHITE / BLACK
21	VGND	
22	VIDEO	

NOTE:

There is a "connector box" accessory. It is easy installation for users to enable alarm function.

SWITCH SETTING

SWITCH DEFINITION
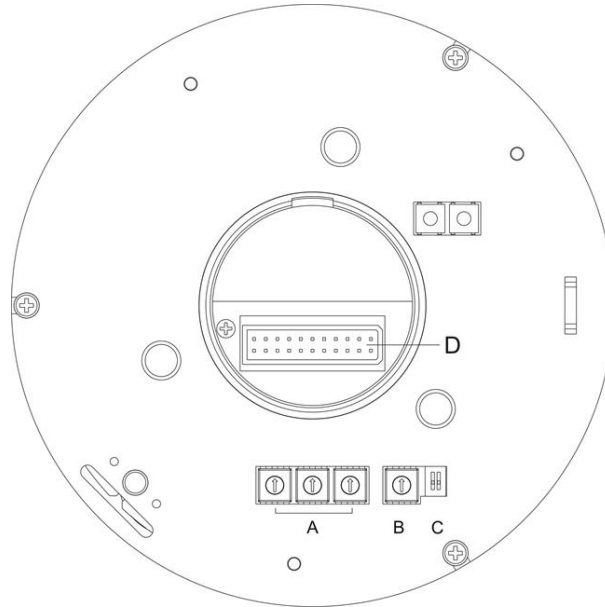
A. ID Setting
B. Dome Control Protocol
C. Reserved

ID SETTING

Use SW1 ~ SW3 to change your speed dome ID to "0" "0" "1".

Please set every IP dome address to "001" even you install multiple IP dome cameras.
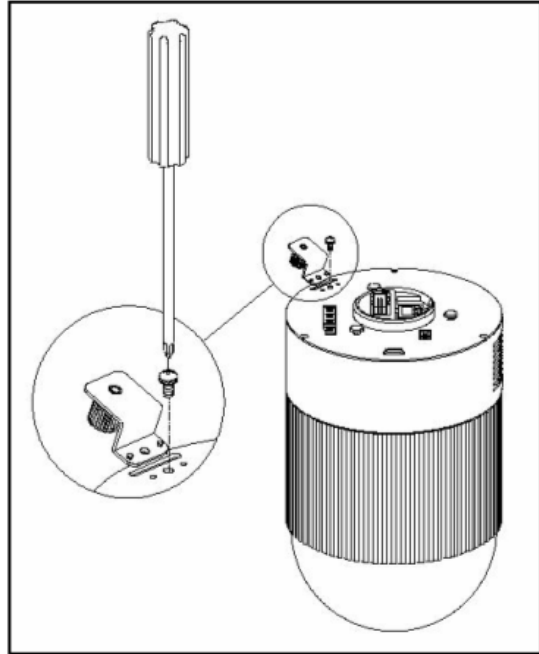
DOME CONTROL PROTOCOL

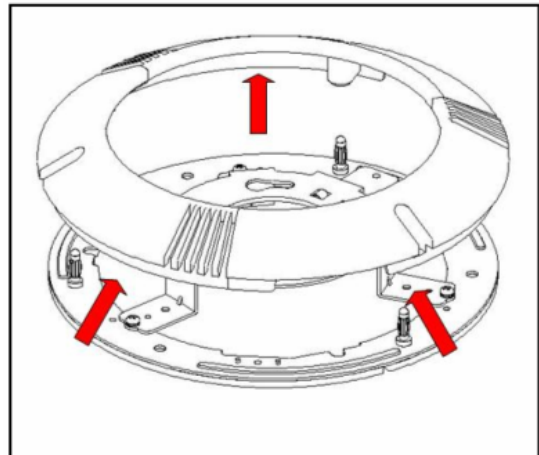Use SW4 to change the protocol to "B".

HARD CEILING MOUNTING

STEP1：

Screw the **Fixing Plate** to your **Dome Body**. Drill three holes on the hard ceiling.
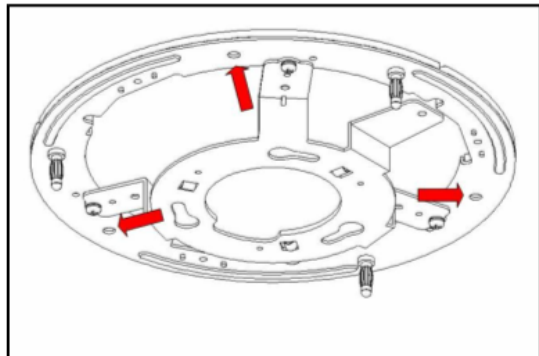

STEP2：

Unpack the dome package and take out the **Decorative Cover**. Remove the **Mounting Plate** from the **Decorative Cover**.

STEP3：

Attach the **Mounting Plate** to the ceiling. Insert a pencil or any other pen into the three ports to mark the locations where all three ceiling holes sould go.

STEP4:

Drill these holes on the hard ceiling.

STEP5：

Fix the attached **Bracket** to the holes on the hard ceiling with three screws.
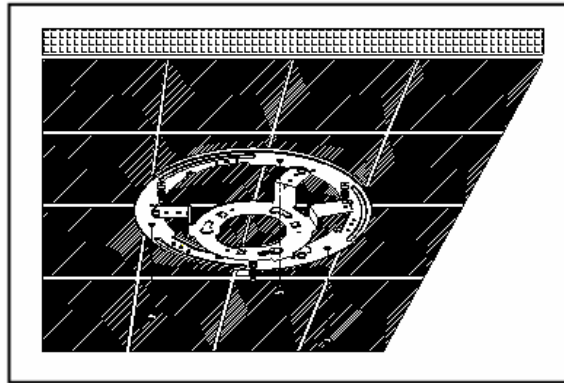
STEP6：

Connect data cable and RJ-45 cable through the center hole of the Bracket to Dome Body.
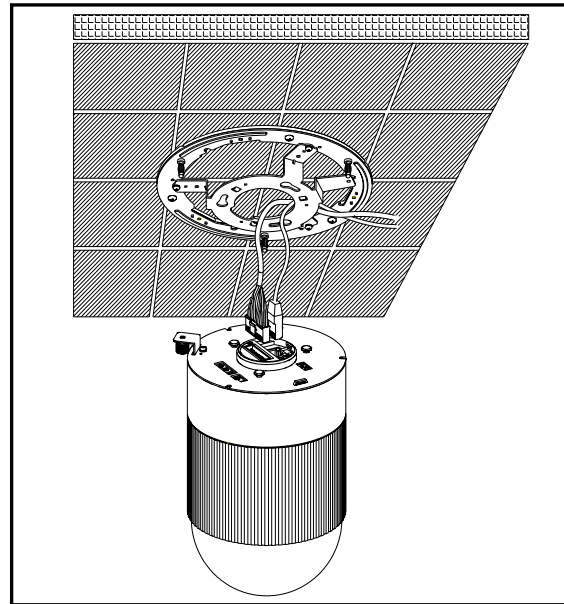
STEP7：

Mount Dome Body to the Bracket and rotate the Dome Body clockwise. Tighten the fixing screw to fix the Dome Body.
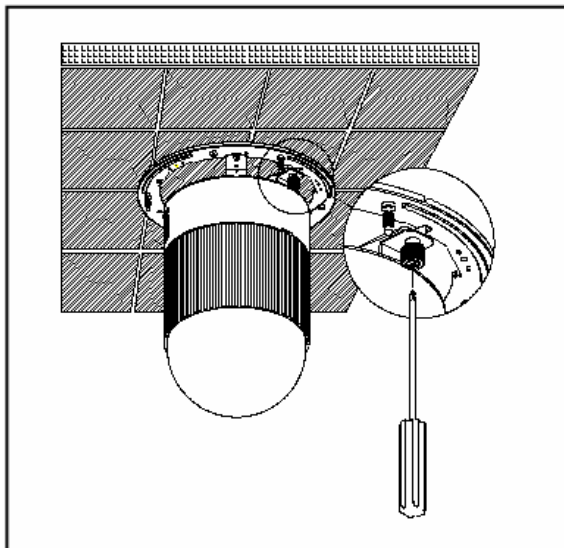
STEP8：

Assemble the **Decorative Cover** to the **Bracket**.

T-BAR CEILING MOUNTING

STEP1：

Screw the **Fixing Plate** to the **Dome Body**.

STEP2：

Place the **Red Sticker** on the ceiling plate, and cut the circle part out of the ceiling.
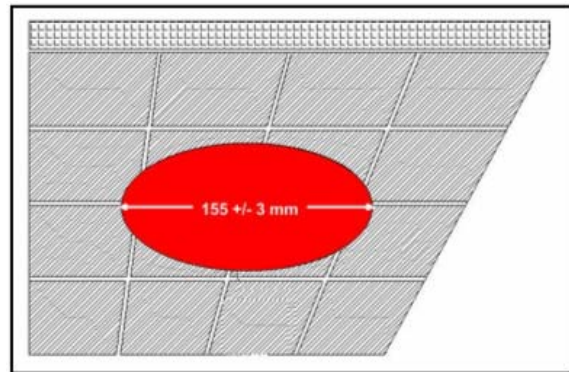
STEP3：

Put up the **T-Bar** into the ceiling hole.
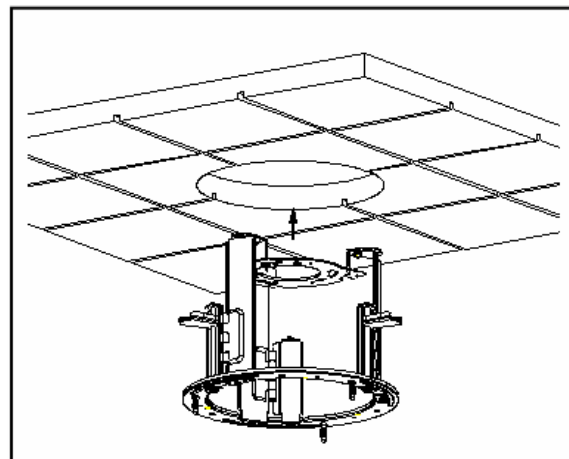
STEP4：

Rotate T-Bar wings of hinge to fix the T-Bar at the edge of the ceiling hole.
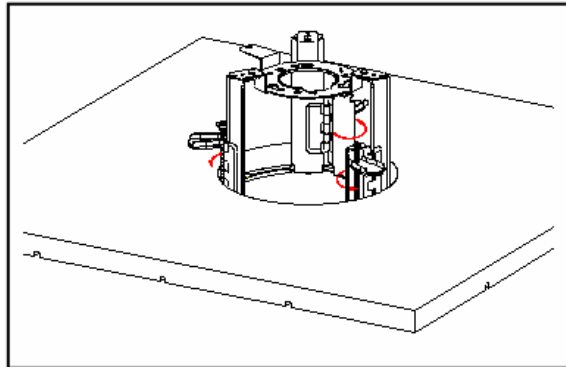
STEP5：

Tighten the screw of hinge.
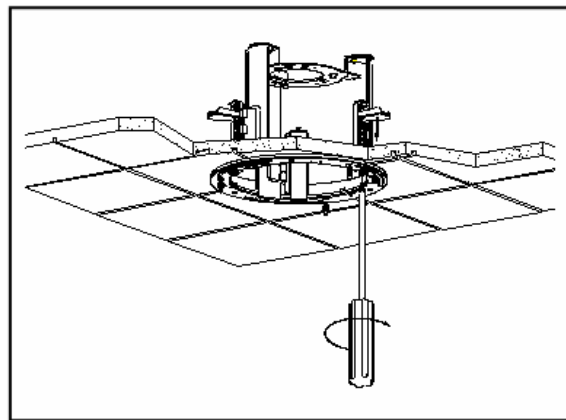
STEP6：

Connect data cable and RJ-45 cable to **Dome Body** through the center hole of the **Bracket**.
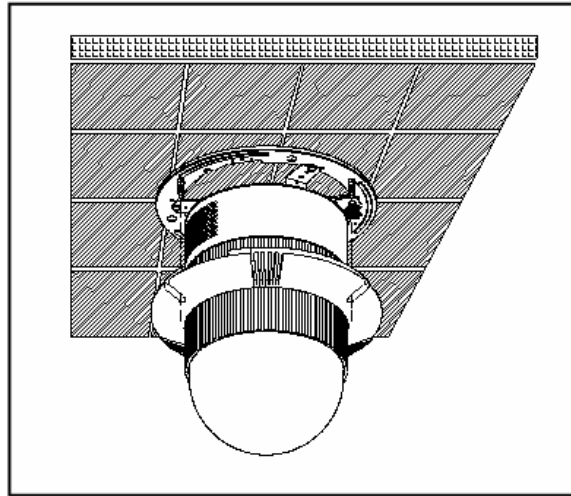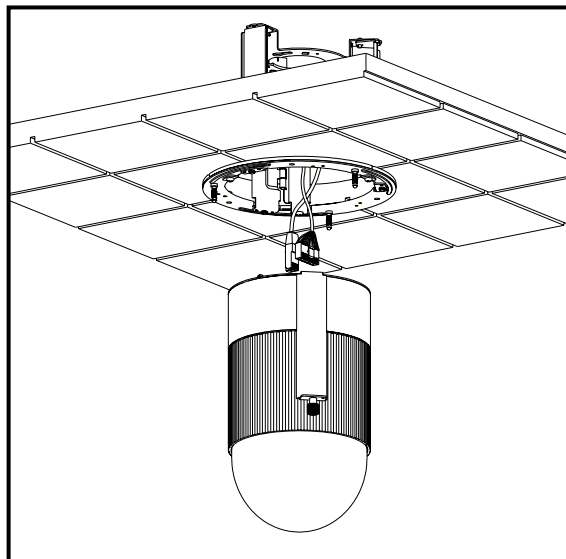
STEP7：

Mount **Dome Body** to the **Bracket** and rotate it clockwise. Tighten the fixing screw to fix the dome body.
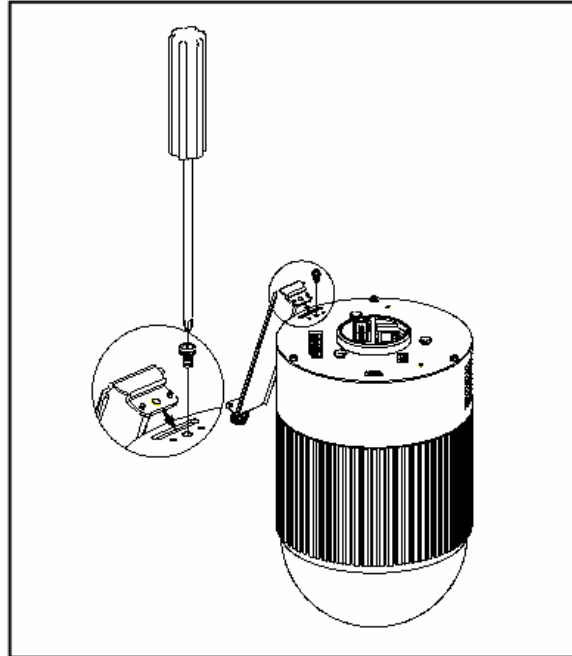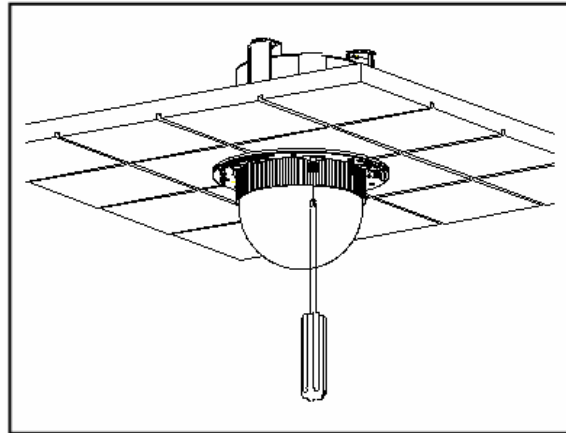
STEP8：

Assemble the **Decorative Cover** to the T-BAR.
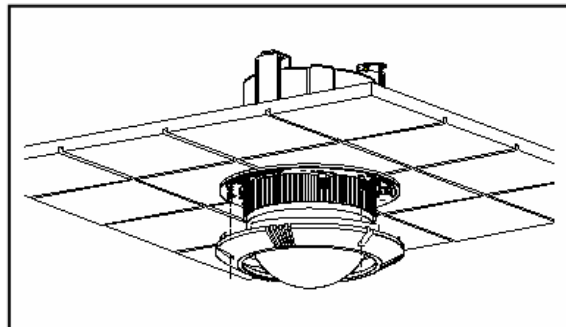
CONNECTION

CABLE CONNECTION

To IP dome

To 24VAC

Test purpose

LAN PORT (RJ-45)

1. RJ-45 connector: Network cable connection connector.
The recommended cable is CAT5 twisted pair cable.

2. NETWORK LED status:
   a. Constant green. Constant orange: Network is connected.
   b. Blinking orange. Blinking green: Networks have activities.
   c. Blinking orange. Blinking green: Data sent out from server.
   d. Constant slow blinking green. Constant slow blinking orange: Network disconnected.
   e. Constant blinking orange from slow to fast: Upgrading software.

OSD DISPLAY FORMAT
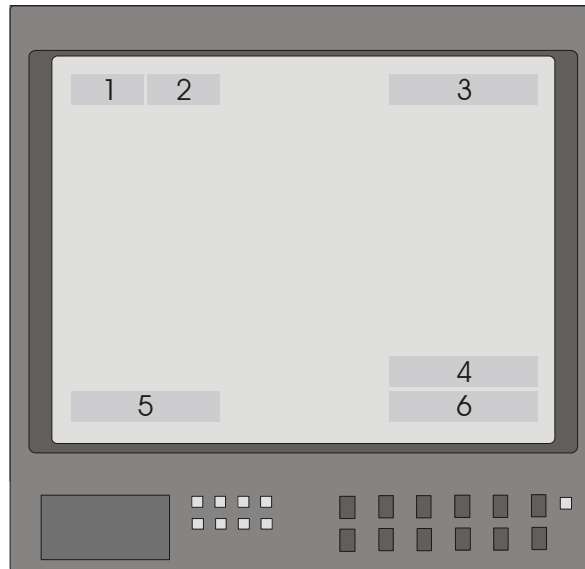
< Fig1. OSD DISPLAY POSITION>

POSITION	FUNCTION	OSD DISPLAY	DESCRIPTION
1	FOCUS MODES	A	Auto Focus Mode
		M	Manual Focus Mode
2	BACKLIGHT	X	Back Light Compensation OFF
		B	Back Light Compensation ON
3	ALARM	ALARM	Alarm Message
4	ZOOM RATIO	X1	Present Zoom Ratio
5	TITLE	1. Max. 20 letters for each title. 2. 16 sets of titles are available.	
6	CAMERA ID	Show the camera ID of this camera	

SPECIFICATIONS

GENERAL FEATURES

Environment	Indoor / Outdoor
Controller I/F	-
Operating Temperature	0° – 40 °C
Power Source	24 VAC
Power Consumption	22W
Dimensions	φ130X200mm
Weight	2kg

ROTARY BODY FEATURES

Environment	D7723B	D7723C
Pan Travel	360 Degree Endless	
Tilt Travel	-99 ~ 99 Degree	
Manual Speed	1~150 Deg/s	1~150Deg/s
Preset Speed — **Pan**	1~375 Deg/s High Resolution	1~375 Deg/s High Resolution
Tilt	6~360 Deg/s Standard	1~375 Deg/s High Resolution

Standard : 768 steps/circle   High Res. : 1600 steps/circle

CONTROL FEATURES

	D7723□-R□□□	D7723□-K□□□	D7723□-S□□□
D&P protocol	YES	YES	YES
Presets	128	128	128
Preset Accuracy	0.5	0.5	0.5
Patterns	1	1	1
Sequence	4	4	4
Auto-Pan	1	1	1
Privacy Mask	X	8	24
Proportional Pan&Tilt	YES	YES	YES
Zone Title	YES	YES	YES
Home Function	YES	YES	YES
P/T/Z Auto-restoring	YES	YES	YES
Auto-Turn Around	YES	YES	YES
Digital Flip	X	YES	YES
DSS	X	YES	YES
IR Cut Removable	X	YES	YES
WDR	X	YES	X
Motion Detection	X	X	YES

CAMERA FEATURES

|	D7723□-R□□	D7723□-K □□	D7723□-S □□
Effective Pixels	NTSC 768(H)X 494(V) PAL 752(H)X 582(V)	NTSC 724(H)X 494(V) PAL 724(H)X 582(V)	NTSC: 680K pixels PAL: 800K pixels
Scanning Area	1/4" CCD		1/6" CCD
Scanning system	PAL , NTSC , 2:1 interlace		
Synchronization	Internal / Line Lock		
Video Output	1.0Vpp/75 Ω , BNC		
Horizontal Resolution	NTSC: 470 TV lines. PAL 460 TV lines.	NTSC: 470 TV lines PAL: 470TV lines.	NTSC: 470 TV lines PAL: 460TV lines
S/N Ratio	50dB	50dB	49dB
Minimum Illumination	1 lux	0.01 lux 0 lux (IR illuminator)	0.01 lux 0 lux (IR illuminator)
Focal length	4~88 mm	3.6~82.8 mm	2.4~60 mm
Zoom ratio	22x optical	23x optical	25x optical
Digital Zoom	X10	X12	X12
Zoom Speed	3.9 sec / 6.3 sec	1.9 sec / 5.8 sec	1.9 sec / 4.8 sec
Focus Mode	Auto / Manual		
White Balance	Auto / Manual		
Iris Control	Auto / Manual		
Electronic shutter	NTSC (1/60~1/30k sec) PAL (1/50~1/30k sec)	NTSC (1/2~1/30k sec) PAL (1/1.5~1/30k sec)	NTSC (1/4~1/10k sec) PAL (1/3~1/10k sec)
AGC control	Auto / Manual		
BLC	On/Off		

NETWORK FEATURES

	DESCRIPTION
Compression	Video : Motion-JPEG with adjustable compression rate Still Capture : JPEG
Networking	10baseT Ethernet
Protocols	TCP/UDP/IP, HTTP, FTP ,SMTP ,ARP ,ICMP ,DHCP ,PPP ,Telnet
Alarm	4 digital alarm inputs / 1 alarm outputs
Performance	Maximum video performance : Up to 30 frames/ second Maximum network performance : Up to 800K bytes/second
Video Size	NTSC: 704x480(Still), 352x240(CIF) PAL: 704x576(Still), 352x288(CIF)
Security	Three-layer Password Protection
IP Assignment	ARP command / Web Page / IP Installer
Upgrade	Remote software up-gradable using FTP Custom web contents updated via FTP & Telnet
Supported Web Browser	Windows – Microsoft Internet Explorer 5.x or later and Mozilla 1.4 or later Linux – Mozilla 1.4 or later Mac OSX – Netscape 7.x or later or Mozilla 1.4 or later
Management	Remote configuration through Web-based tools

ARCHITECTURE 1
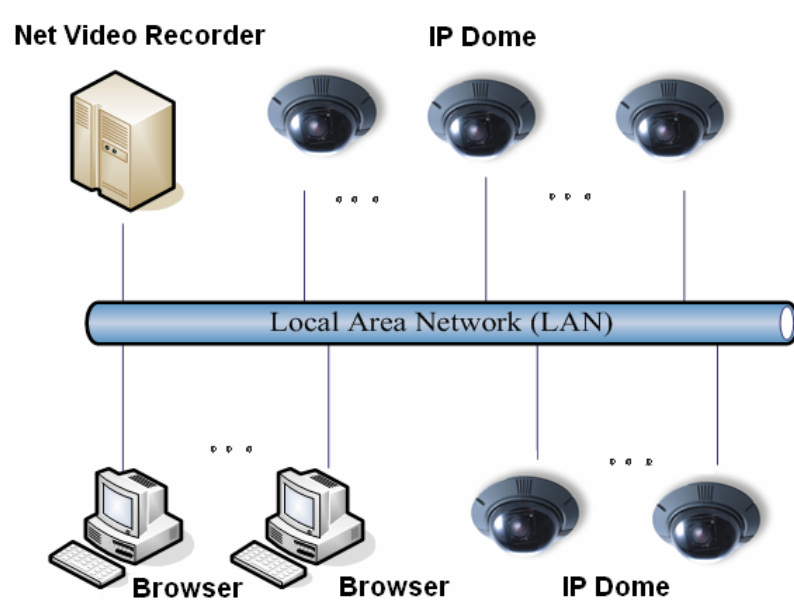
APPENDIX - NETWORK CONNECTION

1. Please keep IP Dome camera power off.

2. Network cable connection:

■ Connect to Hub (Standard network installation):

Connect one endpoint of PC-to-Hub Ethernet cable to RJ-45 connector of IP dome camera. Connect another endpoint of PC-to-Hub cable to the hub of this network segment.

■ Connect to PC directly:

Connect one endpoint of PC-to-PC Ethernet cable (crossover) to RJ-45 connector of IP dome camera. Connect another endpoint of PC-to-PC cable (crossover) to any PC.

3. Alarm connection:

Connect alarm devices to IP dome cameras.

4. Power ON:

Connect AC24V power to IP dome cameras.

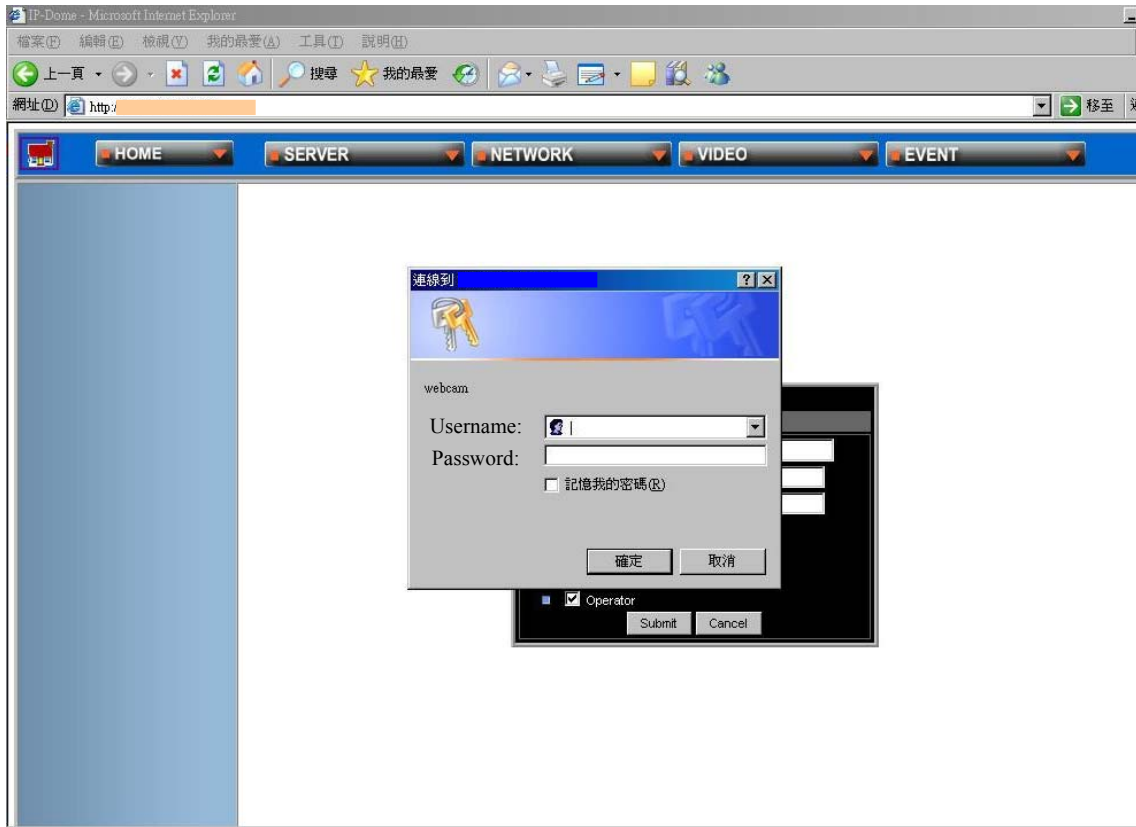Note: The requirement of 24VAC power adapter is 24W.

5. Checking:

Check the network LED (display link status) status is correct or not.

If it is not, please check LAN cable first.

APPENDIX - NETWORK PASSWORD

The default administrator username is "Admin" and password is "1234".

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APPENDIX - NETWORK SETUP

■ Note before IP assignment:

1. Make sure the IP Dome is powered on and connected to the network correctly.

2. Request a unique IP address from your network administrator.

3. Each IP Dome has unique Ethernet node address (MAC address), which is recorded as 12 digits serial number labeled at the bottom side of IP Dome (e.g. 000429xxxxxx).

4. The IP address assigned to the IP dome cameras shall be the same IP domain (presented as same subnet mask) as the PC IP address. For example, an IP address of PC is 192.168.0.1 and the IP address of IP dome camera is 192.168.0.200, so the subnet mask shall be 255.255.255.0. If a PC subnet mask is 255.255.255.128 or higher, then the domain can't cover 192.168.0.200, so the setting won't take effective.

5. Users can use "IPInstaller.exe" application to quick setup the IP configuration of IP dome.

■ **Assign IP Address by using "ARP" command under windows environment**

Follow the instructions to assign new IP address to IP dome cameras by using "ARP" command under windows environment:

1. Open "command prompt" box from Microsoft Windows:

For example:

<Start→**Program**→MS-DOS Prompt>

2. Make sure the assigned IP address for IP dome camera doesn't be occupied by other PC: (the example IP address is 192.168.0.200)

For example:

Enter <ping 192.168.0.200> and make sure the response message is "time out" message, in command prompt box.

```
C:\>ping 192.168.0.200
Pinging 192.168.0.200 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.0.200:
        Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
Approximate round trip times in milliseconds:
        Minimum = 0ms, Maximum =   0ms, Average =   0ms
C:\>
```

3. Enter command <arp –s [IP Dome IP Address] [IP Dome MAC Address]>.
   For example:
   Enter "arp –s 192.168.0.200 00-04-29-00-01-50", in "command prompt" window.

4. Enter command <ping –t [IP Dome IP Address]> shall get constant reply after 3~4 timeouts, then press CTRL-C to exit pinging.
   For example:
   In "command prompt" window, enter "ping –t 192.168.0.200"

```
C:\>arp -s 192.168.0.200 00-04-29-00-01-50

C:\>ping -t 192.168.0.200

Pinging 192.168.0.200 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Reply from 192.168.0.200: bytes=32 time=5ms TTL=255
Reply from 192.168.0.200: bytes=32 time=4ms TTL=255
Reply from 192.168.0.200: bytes=32 time=4ms TTL=255
Reply from 192.168.0.200: bytes=32 time=4ms TTL=255

Ping statistics for 192.168.0.200:
        Packets: Sent = 7, Received = 4, Lost = 3 (42% loss),
Approximate round trip times in milliseconds:
        Minimum = 4ms, Maximum =   5ms, Average =   2ms
Control-C

C:\>
```

5. Complete setting and **verify** the installation.

Launch your web browser (Internet Explore) and enter the IP address. The web page of IP dome camera will be displayed now.

For example:

Enter "http://192.168.0.200" in Location/Address field of Internet Explore, and then the Internet live video can be opened.

■ Assign IP by "IPInstaller.exe"

IP Installer is a Windows program. The software providing an easy way for setting up the network configurations of IP dome cameras. Using this tool, you can configure multiple IP dome cameras at the same time. Through IP Installer, the setting process is simplified and reduces the configuration time. Moreover, IP installer can save all the configurations of IP dome cameras to local computer for backup and it can restore the backup setting to the IP dome cameras.

1. Execute "IPInstaller.exe"

Double click the mouse left button on the IP Installer icon, shown as below figure.

IPInstaller.exe

The IP Installer window is displayed as below picture.
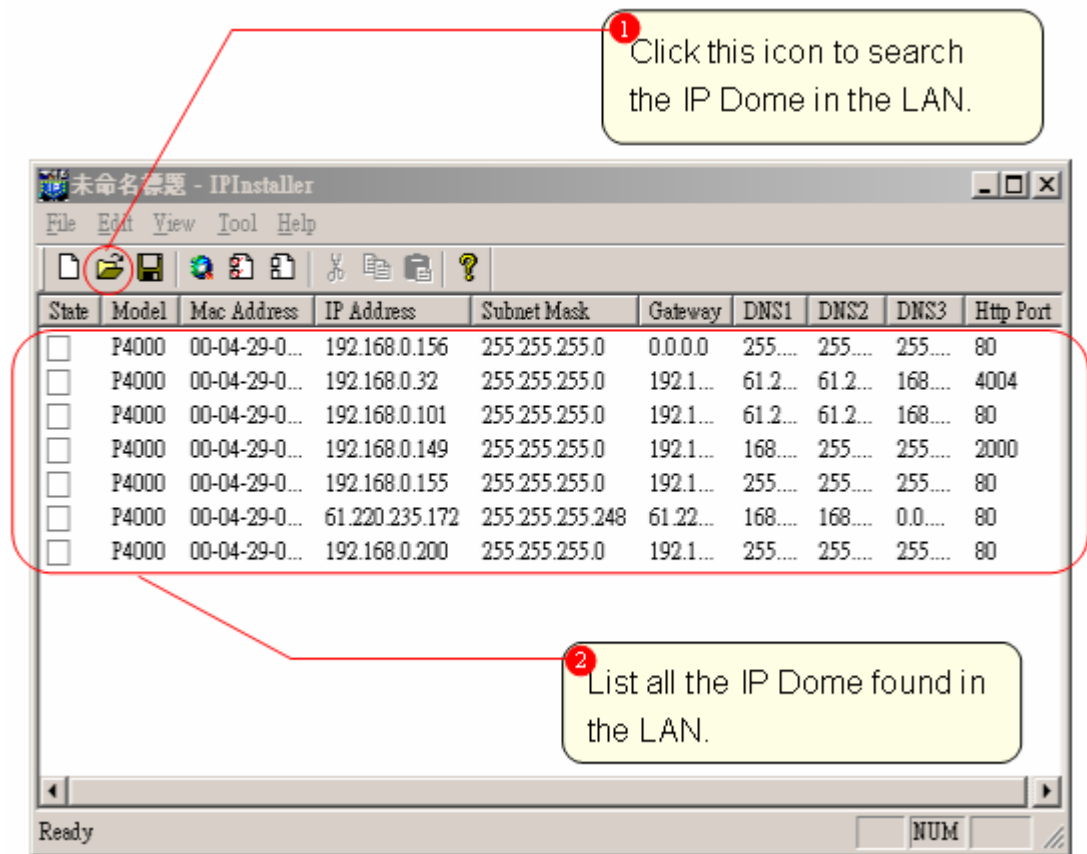
2. Assign an IP Address to IP Dome Camera

(1) Select the MAC Address of IP dome cameras what you want to configure in the list. The MAC Address of IP dome cameras are the same as the serial number of IP dome cameras which are labeled on the IP dome cameras.

(2) Click the "View/Property" item from menu bar to open the Property Page for the selected item.

(3) Fill in suitable parameters into the edit box on the property page, and click OK button to submit the settings for the unit and the settings will be activated immediately.
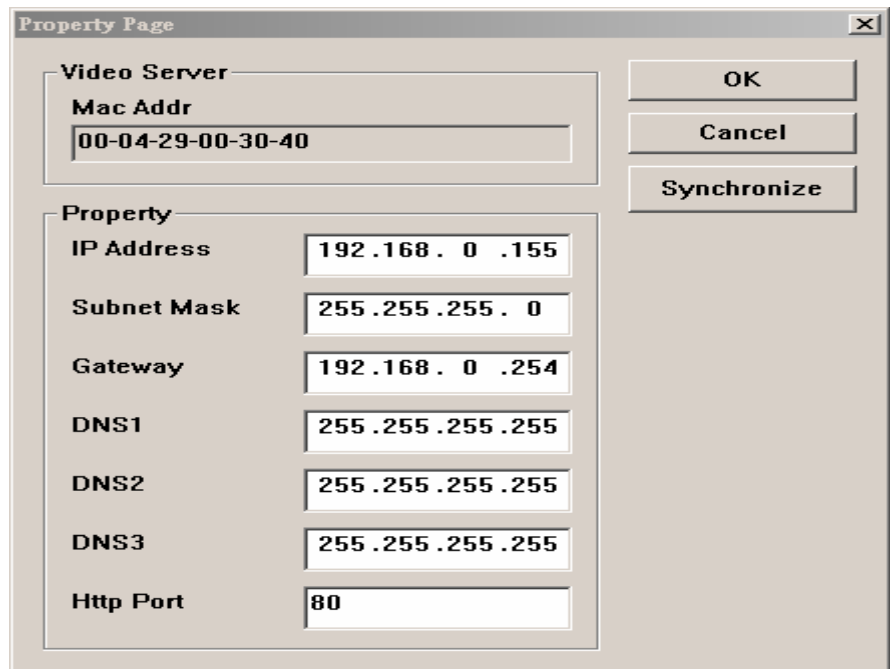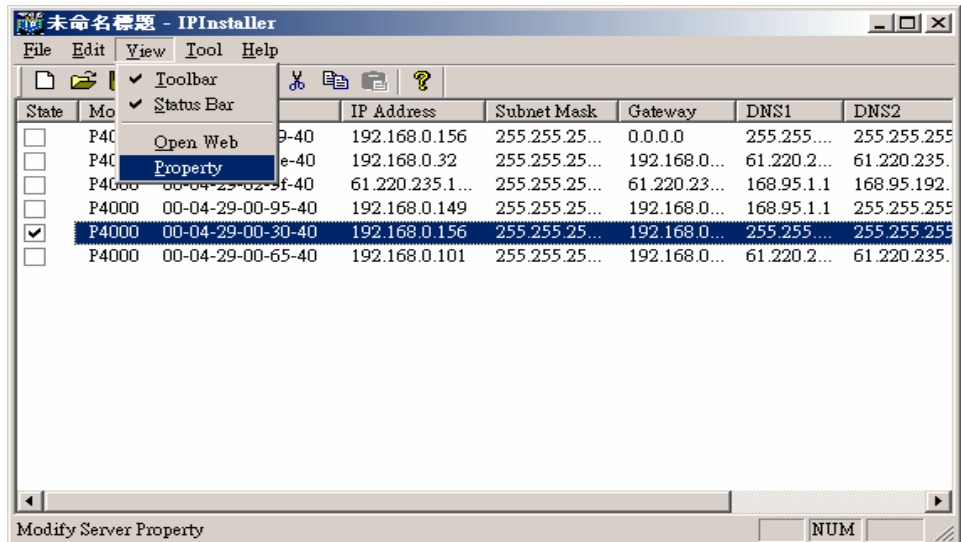
3. Verify the IP address setting of selected dome camera

(1) To access the web page of the selected unit, click the "View/ Open Web" on the menu bar.

(2) The internet browser will be launched and connect to the IP dome camera web page automatically. That means you've assigned an IP Address to the unit successfully. Now you can close the "IPInstaller" application and the IP dome cameras are ready for operation.
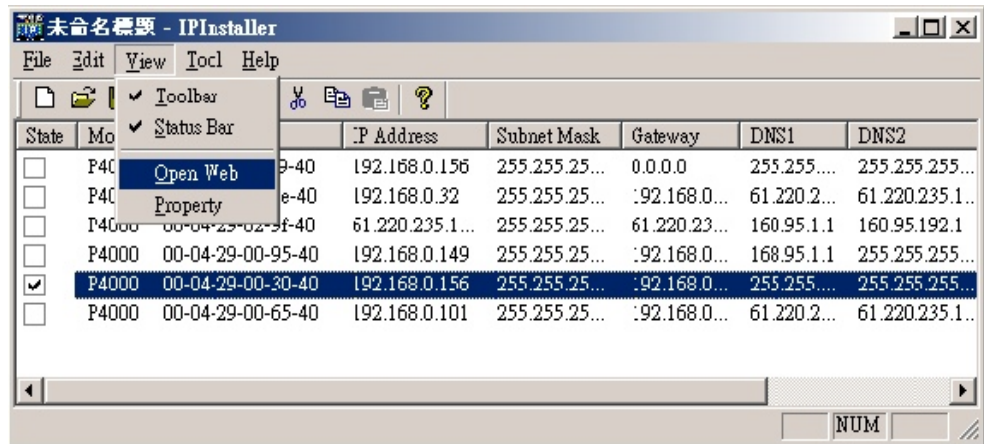
4. Verify and complete the installation from browser

User can browse the web page of IP dome camera through internet browser (Microsoft IE of Netscape Navigator).

User should lower the browser security settings temporarily to perform IP dome camera configuration. This configuration procedure is one-time-only procedure for first connection.

(1) Launch Internet browser(Microsoft IE).

(2) Select [Tools] -> [Internet Options]

(3) Click the "Security" property page.

(4) Click the "Custom security level" button.

(5) Adjust the security level to "Low" and click "OK".

(6) Connect to the IP address of IP dome cameras through Internet browser.

(7) A dialog is pop up and asking user whether user want to install "servp14.cab" or not. Click "Yes" to start the installation.

(8) After the component installation is complete, return the security settings to their original value.

(9) Now the configuration is complete and user can browser the web page of IP dome cameras.

APPENDIX - IP DOME CONTROL

■ **Video Size:** You can adjust the video size and appearance on the screen with the following sizes.

Video SIZE	NTSC	PAL
Small	176 x 112	176 x 144
Default	352 x 240	352 x 288
Large	704 x 480	704 x 576

■ **Still:** Click to take a stillpicture from the viewing video.

■ **Direction/Stop:** Control the connected devices pan and tilt.The continuous or degree movement controlled is available.

■ **Zoom:** To **control** the connected devices zoom in and out.

■ **IRIS:** With this option, the IRIS priority is higher than SHUTTER and AGC circuit will function automatically to get consistent exposure. After the IRIS is selected manually, the action of exposure compensation depends on the AGC circuit.

■ **Focus/Auto Focus:** When AUTO FOCUS status is OFF, the Manual Focus Mode is enabled.

■ **Speed:** To **select** the Pan/ Tilt speed grade from 1 (slowest) to 10 (fastest).

■ **Auto Pan: Automatic** run "Pan Path". The "Pan Path" parameters can be set on the Setup/Auto Pan.

■ **Sequence: Select** a number (1~4) to run a sequence line. A sequence line can be set on the Setup/Sequence.

■ **Cruise:** Run "**Cruise** Path". The "Cruise Path" can be record on the Setup/Cruise.

■ **Go Preset:** To select wanted preset point. The preset point can be set on the Setup/Set Preset

■ **Set Up:** You **can** set up the Auto Pan/Sequence/Cruise/Set Preset on the section. You also can set up these function on OSD menu one by one.(please see to APPENDIX OSD (On Screen Display)

APPENDIX - SERVER CONFIGURATIONS

1. SERVER GENERAL SETTINGS

This page allows user to configure server setting such as server name and e-mail address, etc.

■ **Name:** Please input a server name.

■ **Owner:** Please input the name of this server owner.

■ **Owner Email:** Please input an e-mail address for receiving specific event information.

■ **MAC Address:** MAC address information of this video server. It is read only.

■ **Large Size Image Using the True Resolution**: You can enable or disable the function.

■ **Live Video Using:**

Active X: Better performance through MS Internet Explorer, but compatibility is low.

Java Applet: High internet browser compatibility, but low performance for live video streaming

2. USER SETTINGS

This page allows user to create, change or delete user account, password …..etc.
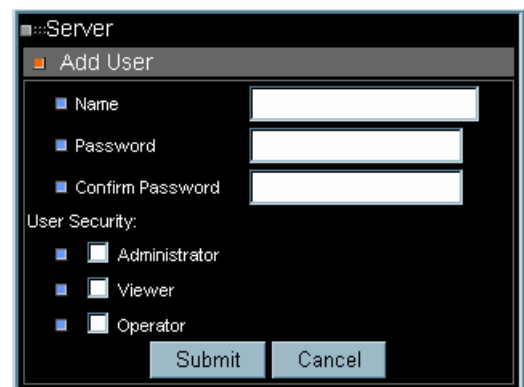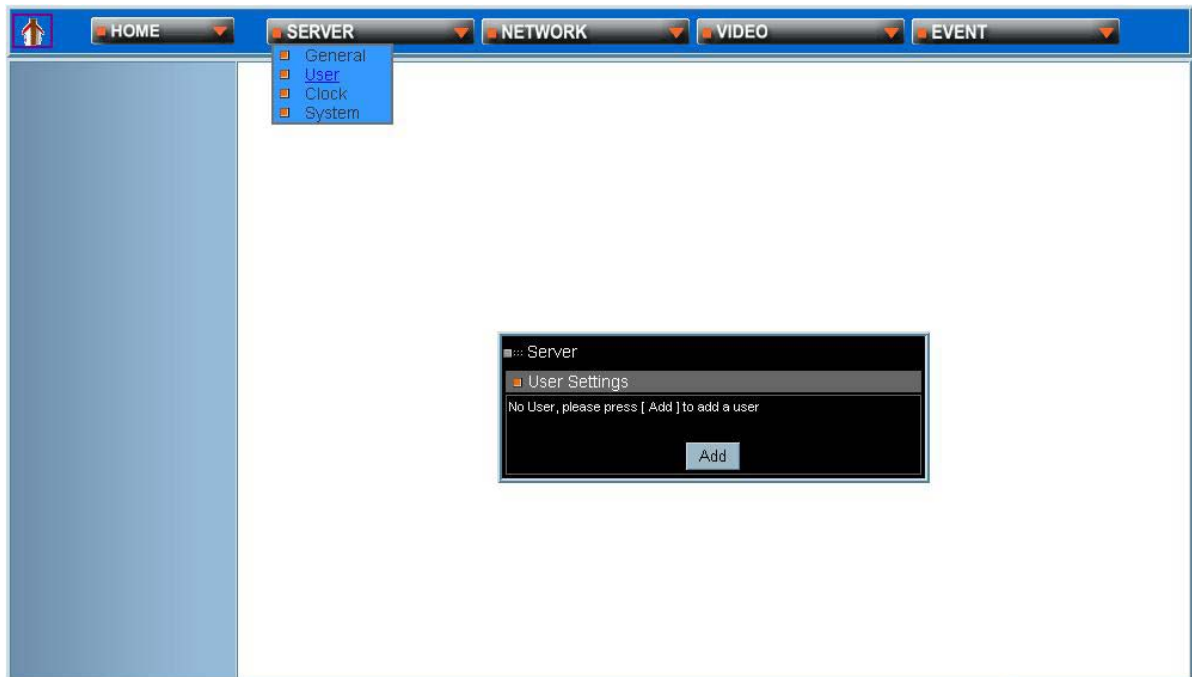
■ **Name:** New user name to log in.

■ **Password:** Password for above user.

■ **Confirm Password:** Type again to confirm password.

■ **User Security:** Administrator / Viewer / Operator.

NOTE: The first user shall be an administrator. Otherwise, he can't get into administration page any more. If this happened, he must use emergency factory default to clean all users.

3. CLOCK SETTINGS

The built-in real-time clock module provides date/ time information for IP dome cameras even the power of IP dome cameras is off.

■ **Set as PC clock:** Click [Set as PC clock] to set the date/ time of the IP dome cameras with the time of user's PC.

■ **Submit (Save changes):** Click [Submit] if users want to change the time settings by themselves.

4. SYSTEM COMMANDS

User can reset IP dome cameras to the factory default settings through this page.
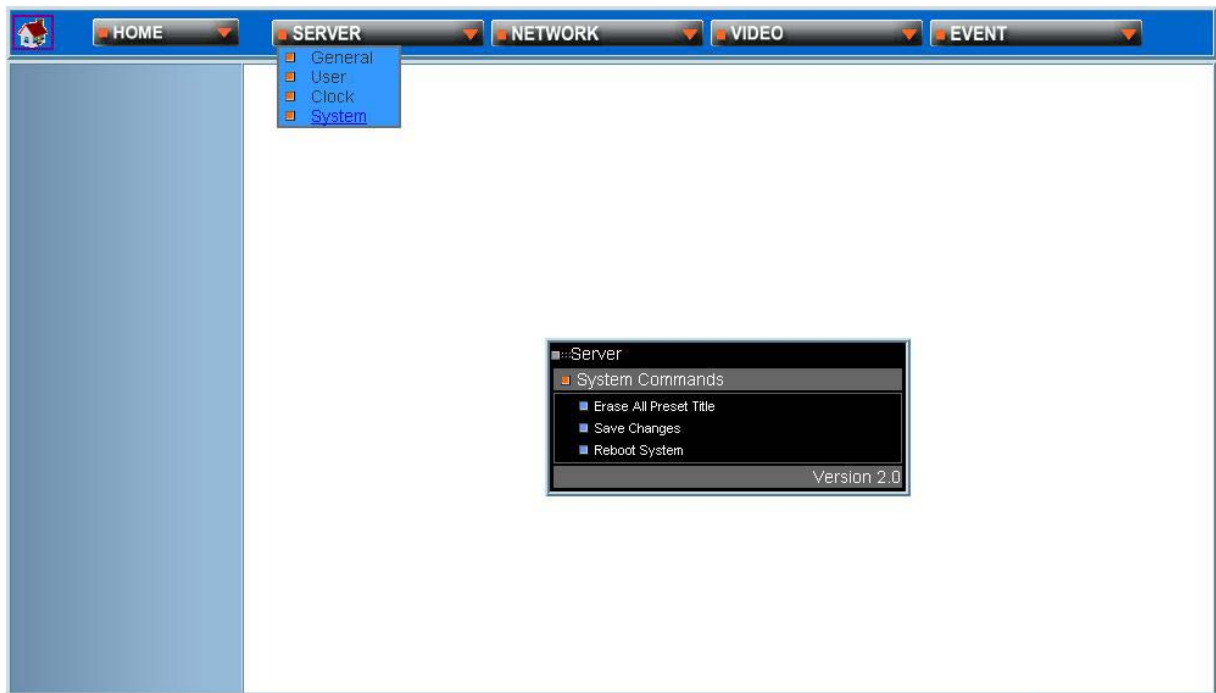
■ **Erase All Preset Title:** Clear all user defined title for preset point.

■ **Save Changes:** Save user setting and the setting will be loaded into IP dome cameras after reboot.

■ **Reboot System:** Reboot the IP dome cameras.

APPENDIX - NETWORK CONFIGURATIONS

1. NETWORK GENERAL SETTINGS

The page allows user to assign a specific IP address to IP dome cameras and configure the network parameters of IP dome cameras.

- ■ **IP Address:** Please input the assigned IP address of IP dome.
- ■ **Subnet Mask**: Please input the subnet mask for IP dome.
- ■ **DNS IP Address**: Please input preferred Domain Name Server (DNS) IP address.
- ■ **Gateway IP Address**: Please input the IP address of Gateway server.
- ■ **HTTP Connection Port:** Please input the HTTP web server listen port of IP dome cameras for internet browser connection (default port is 80).
- ■ **Submit:** Click [Submit] to let IP dome store the setting. IP dome will reboot the system automatically. It will take 5 seconds to complete the boot procedure.

2. DHCP SETTINGS

■ **Using Dynamic IP Address:** Installer can enable IP dome cameras be assigned IP address through DHCP server or disable this feature. If installer disables DHCP function, static IP address is needed.

■ **IP Notification by FTP:** If a FTP server is installed on your network, you can enable this option to obtain the newly assigned IP address of your video server. A HTML file named NewIP_xxxxxx.htm will appear under the upload path for you to link to video server, where xxxxxx is the last six digits of the serial number.

■ **FTP Host Name:** FTP server address

■ **Login Name:** Name of your FTP account

■ **Password:** Password used to log in your FTP account

■ **Upload Path:** Path to put the file.

■ **IP Notification by E-mail:** With this option enabled, your video server will send E-mail to you as soon as it obtains the IP address from DHCP.

■ **SMTP Host Name:** SMTP server.

■ **Recipient:** Your E-mail address.

■ **From:** Sender's E-mail address.

■ **Message subject:** Subject of this E-mail.

3. DDNS SETTINGS

The DDNS (Dynamic Domain Name Service) is used when users want to access the Video Server with an easy memorized name instead of IP address number.
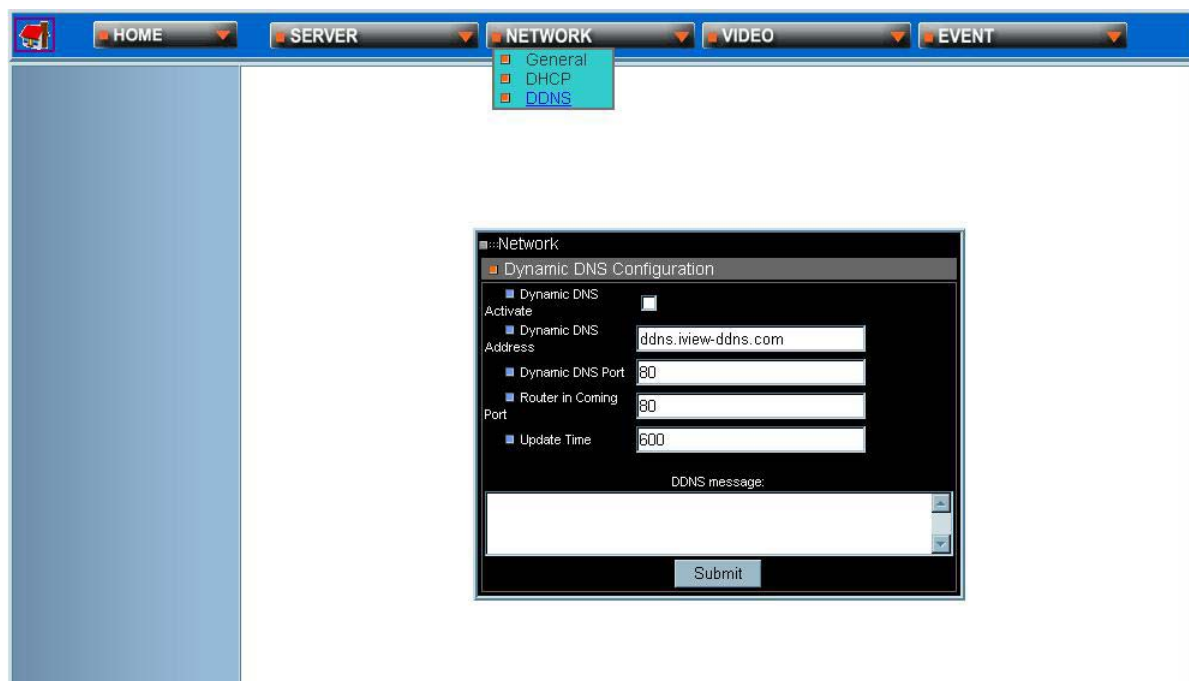
■ **Dynamic DNS Activate:** Click to activate the DDNS service

■ **Dynamic DNS Address:** Specify address of the DDNS server.

■ **Dynamic DNS Port:** Specify the DDNS server listen port.

■ **Router Incoming Port:** Specify your router listen port for DDNS server to redirect. The router may configure the different port for incoming (Internet request) and outgoing (Intranet request).

■ **Update Time:** Specify the video server updated frequency in seconds, and the default is 600 (10 minutes), this is interval that video server will automatically send an updated packet to the DDNS server.

■ **DDNS message:** Return messages from remote DDNS server, and some hints may help to diagnostic the reason if register fails.

APPENDIX - VIDEO CONFIGURATIONS

1. TIME STAMP

This page allows user to configure IP dome cameras to display time and text on the video stream or not.
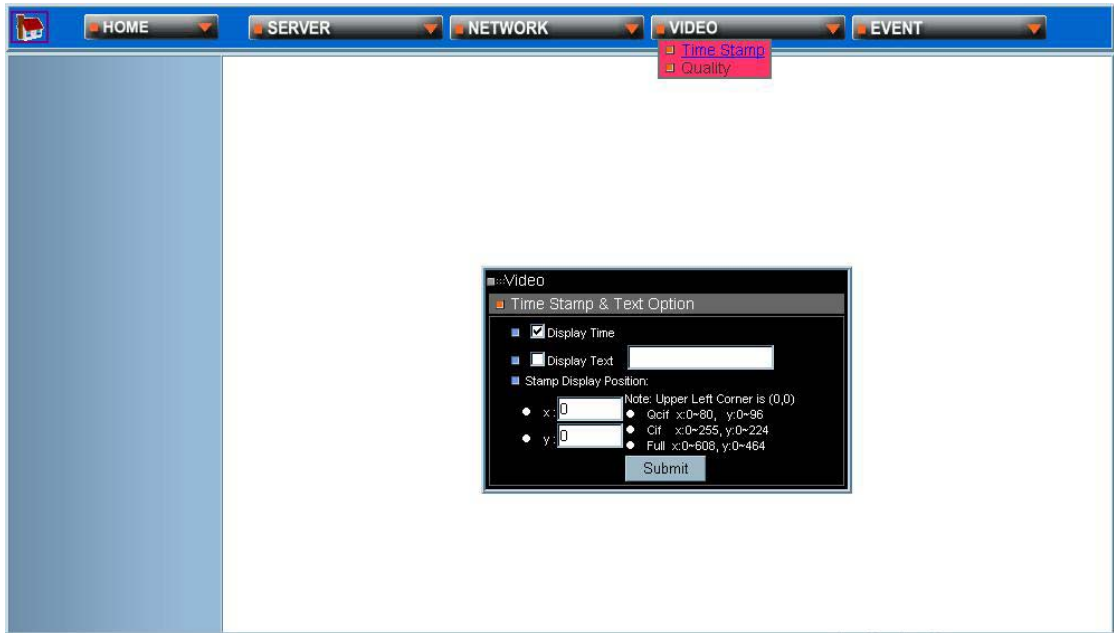
■ **Display Time:** Display the Time Stamp.

■ **Display Text:** Display text block. Fill in the text string to display. The valid characters are a – z, A – Z, 0 – 9, !, @, #, $, %, &, *, (and).

To change the location of Time/ Text information, just fill in the X and Y coordinate.

Note: The maximum display block area (Time + Text) are 12X4 characters. String length more than 12 will feed to next line, and totally 4 lines available. More than 4 lines will strip off.

2. VIDEO QUALITY
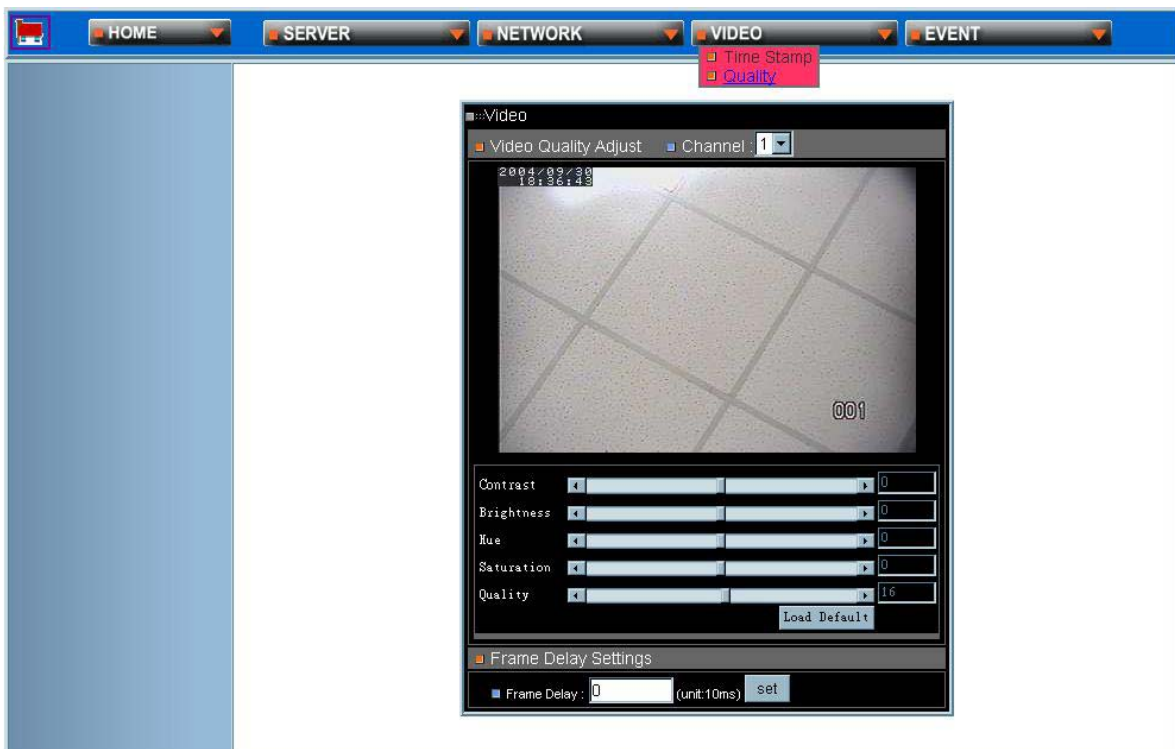
■ **Quality Adjustments:** To adjust video contrast, brightness, hue, color saturation, and quality.

■ **Frame Delay:** To set the delay time between frames. The unit of delay time is 10 ms. You can limit the output bandwidth via setting the frame delay to do the flow control of the video stream. When the value is set to 0, it means no limitation on the video stream.

Note that the quality level affects compression ratio and file size of video.

NTSC			PAL		
Resolution	File size (kb)	Max fps	Resolution	File size (kb)	Max fps
4CIF (704 x 480)	7 – 160	3	4CIF (704 x 576)	9 – 200	3
CIF (352 x 240)	2 - 50	30	CIF (352 x 288)	2 - 60	25

(The Maximum performance is given in single user and only one video source in use.)

APPENDIX - EVENT CONFIGURATIONS

1. SCRIPT EDIT

The Script Editor offers advanced administrators and developers with an greater level of flexibility for customizing the application specifically to meet their user needs. Using the on-line help as a reference, advanced users follow the instructions below to quickly develop programming scripts for time and/ or alarm-triggered events.

Application developers wish to have different levels of customization within their own applications. They may build through event manager; the event system provides several trigger sources and action types which allow administrators to record the emergency images, such as Motion detection, I/O control, FTP or EMAIL to outside world.

The video server's event manager provides event control through programmable Event Scripts which are the combination of several events. Each event works simultaneously. If one of the trigger conditions in event script is satisfied, then corresponding action will start to execute accordingly. A comprehensive set of "trigger conditions" and "action commands" allowed to fit in varies of applications. To start the event manager, simply click "Event", then event frame will pop up.

There are two ways to enter the event script. One is to use "Script Wizard" which just follows the procedure to fill up some items. And, it will generate and append new script code to edit window. The other one is to edit the form manually, which is for experienced users that want to deeply control the functionalities of event operation. To edit manually, please refer to "Appendix: Event Script Programmers Guide" for detailed description.
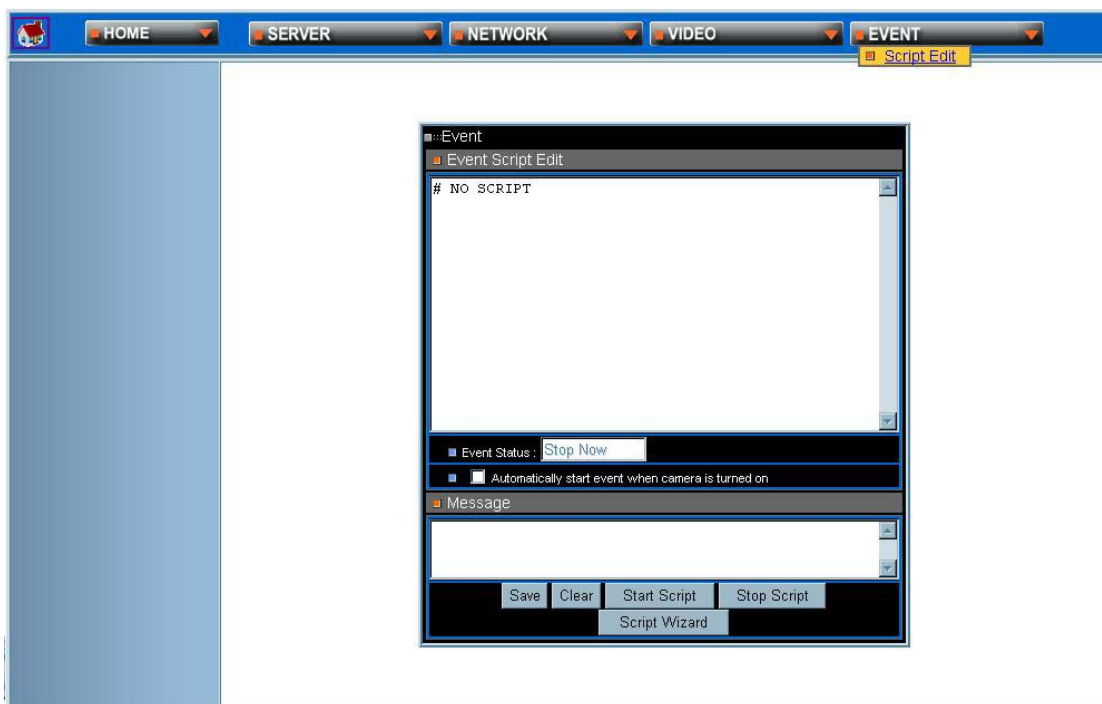
■ **Event Script Edit:** Text window to enter event script manually.

■ **Event Status:** Indicate the event status, "Stop Now" or "Start Now".

■ **Message:** A window to show the results when below command icon pressed --- normally will show "OK", "Parsing", "Fail", Or "Err String" which indicates the syntax error of parsing, and starts from the error position in the script.

■ **Save Script:** Command to save and parse current scripts in the "Event Script Edit" window. If any syntax errors are detected, the error message, indicating the starting position of syntax error, will be shown in the "Message" window.

■ **Event Auto Start when Power On:** The flag is to set the event script auto start-up when the system is powered on.

NOTE: Any changes in "Event Script Edit" window must "Save Script" before "Start Script"; otherwise, the new changes will be lost and won't take effective. Also the changes won't be saved into permanent memory unless you click the "Save Changes" button in main Administration panel.

■ **Clear:** Command to clean up "Event Script Edit" window.

■ **Start Script:** Command to start the script execution.

■ **Stop Script:** Command to stop the script execution.

■ **Script Wizard:** Command to start the script wizard. It helps user to make simple script automatically by wizard, but the wizard supports only partial trigger and action commands. To fully leverage the complete functionalities of event script, please refer to "Appendix: Event Script Programmers Guide".

2. SCRIPT WIZARD

This section will detail the "Script Edit" settings. To start Script Wizard, run "Event"→"Script Edit"→"Script Wizard", and the form will be shown on the screen as below:
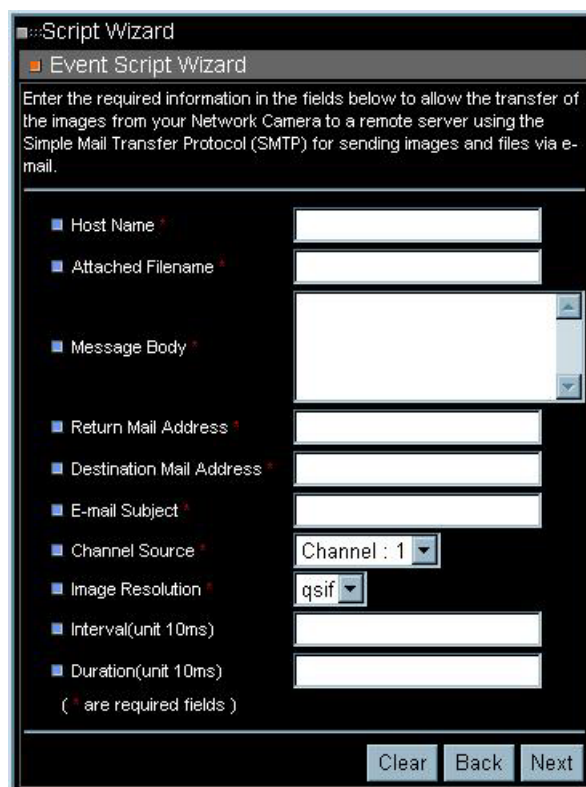
Different trigger action types are offered for administrators to configure the video server for their personal applications; once the "trigger condition" is matched, the video sever will react based on the "Event Action" settings. The two pre-determined settings would be detailed in the following sections.

Click on the action type you want to configure, and then click on Next to continue your setting.

(1) Email Setting

Once the event is triggered, the video server would send out an email using the Simple Mail Transfer Protocol (SMTP) based on the information you filled in the field.

■ **Host Name:** Specifies the SMTP Server name or IP address.

e.g. "mail.domain.com" or "61.220.235.170"

■ **Attached Filename:** Filename of attachment.

■ **Message Body:** Text message contain in email body.

■ **Return Mail Address:** Return mail address, if omit, default is "webcam@domain.com".

■ **Destination Mail Address:** Destination address to receive this email, could be multiple address separate by semicolon ";".

■ **E-mail Subject:** Specifies email subject.

■ **Channel Source:** Select the video source. Channel 1 is the only available option now.

■ **Image Resolution:** Specifies the image format (H x V):

	NTSC image	PAL image
QCIF	176 x 112	176 x 114
CIF	352 x 240	352 x 288
FULL	704 x 480	704 x 576

■ **Interval:** Specifies the time interval between consecutive snapshots in unit of 10ms system tick. If omitted, default value is 50 (i.e. 500ms).

■ **Duration:** Specifies the total time for the command to run. Accept value is:

-1	Infinite loop
Omit or 0	Run Once,</TD< tr>
>0:	Value in unit of 10ms system tick

After you fill in all required information, click Next to continue the setting. Once you click on Next, another window will appear. The window allows you to select the condition you want the video server to take action.
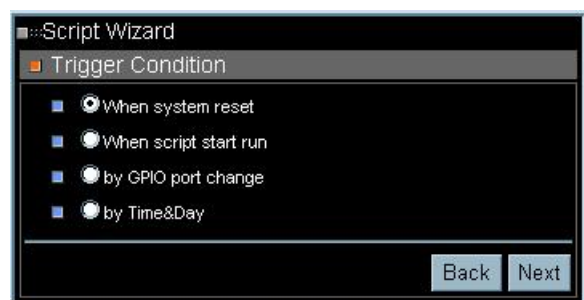
Click Next to continue the setting. A new window then appears, you can

preview the script in this window.
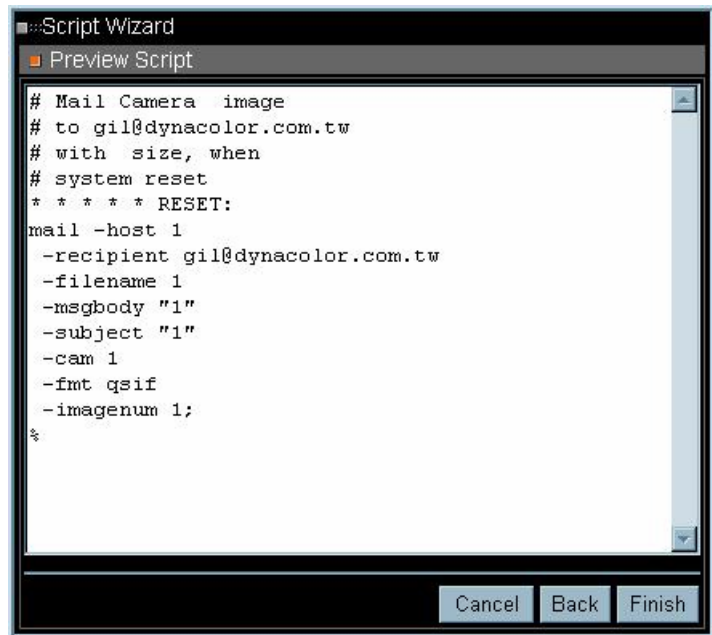
(2) FTP Event

By filling the required information the video server is able to transfer an image from your Network camera to a remote server using the standard File Transfer Protocol (FTP).
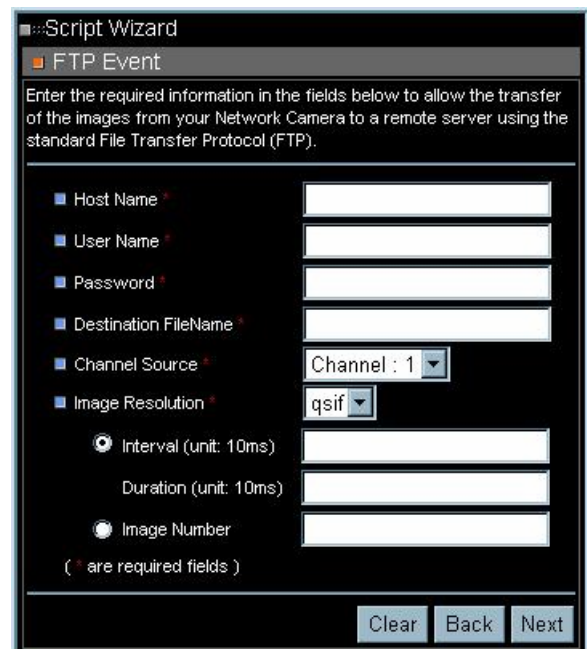
This camera utilizes a user setup menu that is displayed on-screen. This setup menu contains various sub menus that from a tree-type structure as shown below. This menu is described in the "SETUP MENU DESCRIPTION"

OSD TREE STRUCTURE (R, K MODEL)

DEFAULT	ON		
	OFF		
BACKLIGHT	ON	BLC LEVEL	
	OFF		
FOCUS	AUTO	Focus Length: 1cm 10cm 30cm 1m	
	MANUAL		
APERTURE	AUTO		
	MANUAL	H APERTURE	000 ~ 031
		V APERTURE	000 ~ 031
AE MODE	AUTO	IRIS OFFSET	000 ~ 100
	SHUTTER	SHUTTER SPEED	
	IRIS	IRIS	
	AGC	AGC	
WBC MODE	AUTO		
	MANUAL	R GAIN	
		G GAIN	
ID DISPLAY	ON		
	OFF		
SETUP MENU	ENTER	FLIP	ON
			OFF
		ZOOM SPEED	FAST
			SLOW
		SPEED BY ZOOM	ON
			OFF
		AUTO CALI.	ON
			OFF
		DIGITAL ZOOM	1 ~ 10
		SLOW SHUTTER	1/2 ~ 1/60 (NTSC) 1/1.5 ~ 1/50 (PAL)
		RESET	YES
		EXIT	
TITLE DISPLAY	ON		
	OFF		
TITLE SETTING	000 ~ 016		
ALARM	ENTER	ALARM PIN	1 ~ 4

SETTING		ALARM SWITCH	OFF
			ON
		ALARM TYPE	N.O.
			N.C.
		ALARM ACTION	POINT
			SEQUCENCE POINT
		ALARM POS	001 ~ 127
		SEQUENCE LINE	1 ~ 4
		DEWLL TIME	001 ~ ALWAYS SEC.
		EXIT	YES
HOME SETTING	ENTER	HOME FUNC.	ON
			OFF
		PRESET POS	1 ~ 127
		RETURN TIME	1 ~ 127 MIN.
		HOME POS.	GO
		EXIT	
SEQUENCE	ENTER	SEQUENCE LINE.	1 ~ 4
		SEQUENCE POINT	1 ~ 32
		PRESET POS.	1 ~ 127
		SPEED	1 ~ 15
		DWELL TIME	1 ~ 127
		RUN SEQUENCE	ENTER
		EXIT	
AUTOPAN	ENTER	START POINT	TO FIND
			TO SAVE
		END POINT	TO FIND
			TO SAVE
		DIRECTION	RIGHT
			LEFT
		SPEED	1 ~ 4
		RUN AUTOPAN	ENTER
		EXIT	
CRUISE	ENTER	RECORD START	ENTER
		RECORD END	ENTER
		RUN CRUISE	ENTER
		EXIT	
IR FUNCTION	AUTO	SENSITIVITY	LOW, MID, HI
		IR COLOR	B/W, COLOR
		EXIT	
	ON		
	NONE (22X)		
WDR SETTING	ENTER	WDR SWITCH	ON/OFF
		WDR FUNCTION	AUTO
			MANUAL
		EXIT	
PRIVACY	ENTER	PRIVACY SWITCH	OFF / ON

		SHADE	GRAY / WHITE / BLACK	
		SET MASK	1 / 2	HCENTER (000~100)
				VCENTER (000~100)
				HSIZE (000~100)
				VSIZE (000~100)
				EXIT
		EXIT		
EXIT OSD	YES			

OSD MENU (R, K MODEL)

There are two pages of OSD setup menu allow users to control the camera parameters, these functions are described in the following sections in detail. Please use LEFT/ RIGHT/ UP/ DOWN of direction keys to select your parameters.

1. DEFAULT

If you select ON for this item, all the camera parameters will be restored to the factory initial (default) data. Once you modify any of the following items, this item becomes OFF.

2. BACKLIGHT

In case that excessive light is behind the center object, it is necessary to prevent the center object too dark.

Turn this item ON, the center object will be brighten in contrast to the edge of the picture (where a backlight would most likely be located).

3. FOCUS

The focus of the dome camera can be operated in two different modes: 'Manual Focus mode' and 'Auto Focus mode'.

Manual

Users can the move focus lens by pressing the "focus Near/Far button" on the control keyboard.

Auto

The optimum focus is achieved by the internal digital circuit. User can limit the minimum auto focus range through selecting a suitable item for some special condition.

4. APERTURE

You can edit the aperture setting of camera module.

AUTO

Camera will automatically assign a suitable aperture value for camera to achieve a better image.

MANUAL

You can set aperture value with higher value to enhance the incident ray of camera.

5. AE MODE

Here you can select how the auto exposure function works, five options are available in this item, they are explained in the following section:

AUTO
With this option, the camera's Shutter, IRIS and AGC control circuits work together automatically to compensate the light exposure of CCD sensor, in order to get consistent video output level. IRIS OFF SET is used to set the level of IRIS variation.

SHUTTER
With this option, the SHUTTER priority is higher than IRIS and AGC circuit will function automatically to get consistent exposure.
This option is available only for 22X and 23X lenses.

IRIS
With this option, the IRIS priority is higher than SHUTTER and AGC circuit will function automatically to get consistent exposure. After the IRIS is selected manually, the action of exposure compensation depends on the AGC circuit.

AGC
With this option, the AGC priority is higher than SHUTTER and IRIS circuit will function automatically to get consistent exposure. After AGC is selected manually, the action of exposure compensation depend on changing the IRIS of Lens

6. WBC MODE
You can select one of six White Balance Control modes as described follows:

AUTO
In this mode, white balance works within its color temperature range.

MANUAL
In this mode, you can control the Write Balance value manually, R gain and B gain adjustable range from 0 to 100.

7. ID DISPLAY
You can display the ID of dome on monitor or not.

ON
Display the ID address of this dome.
OFF
Do not display the ID address of this dome.

8. SETUP
You can adjust some parameters under SETUP item.

FLIP (IMAGE/ ME/OFF)
User can track an object continuously when it passes through under dome camera with setting flip item to IMAGE/ ME.
IMAGE item enable user to keep tracking object seamlessly through image flip

technology. ME item is a standard function which is the same as AUTO-FLIP function.

ZOOM SPEED
You can select a suitable zoom speed.

SPEED BY ZOOM
The tracking speed is adjusted by internal algorithm. The lager zoom ratio the lower rotation speed.

AUTO CALI.
The default setting is OFF.

DIGITAL ZOOM
Digital zoom ratio is adjustable from 1 to 12 (S model), 1 to 10 (K model) or 1 to 12 (R model).

SLOW SHUTTER
You can set the slowest shutter speed. With the slowest shutter speed, you can see objects in a dark environment under 0.2 lux. With a higher shutter speed, you can see a smooth video image from camera

ANGLE ADJUSTER (MIN/ MAX)
User can see more area higher if they adjust the MAX angle to +99 degree. User can see more area lower if they set the MIN angle to -10 degree.

RESET
Reset the Speed Dome.

EXIT
Quit the SETUP menu.

9. TITLE DISPLAY
You can turn on or off the TITLE DISPLAY function of this dome
.

ON
It will display a mark what you input for this view when you came back to the view.

OFF
It will not display any mark what you input for this view when you came back to the view.

10. TITLE SETTING

You can name a view for dome camera and it will display the name when you came back to the view.

STEP 1: Operate dome to a view what you want to name it.
STEP 2: Turn on OSD and move blink words to "TITLE SETTING"
STEP 3: Select a number what you want to name it.
STEP 4: Press <ENTER> to go into edit mode.

SET TITLE: (XXX)

```
0      0 1 2 3 4 5 6 7 8 9      S:SAVE
1      A B C D E F G H I J      /S:EXIT
2      K L M N O T P Q R S      ←:LEFT
3      U V W X Y Z : / . ,      ➡:RIGHT
4      ( ) + ? - SP
```

    TITLE:
    X

STEP 5: Choose a character what you want to input with direction key and press <ENTER>.
  Example: A <ENTER>, B <ENTER>, C <ENTER>
  TITLE: ABC
STEP 6: Move blink character to "S: SAVE" and press <ENTER> to save setting. You can erase the word what you don't like it through move blink character to "SP" and press <ENTER>

11. ALARM SETTING

Alarm parameters can be set on this page.

ALARM PIN
Choose an alarm connector what you want to set its status.

ALARM SWITCH
Turn ON/ OFF alarm function.

ALARM TYPE
There are two kind of alarm types can be selected. One is normal open the other is normal close.

ALARM ACTION
User can choose what kind of action should be executed when the alarm condition taken place. There are two kind of alarm actions can be set. One is go to a specific position when alarm taken place. The other is executing sequence function when alarm condition taken place.

Point Mode
PRESET POS.
Enter a preset position where the dome will go to when alarm pin is triggered.

Sequence Mode
SEQUENCE
Enter the sequence line you wish the Dome execute when alarm pin is triggered.

DWELL TIME (Seconds)
Camera will stay at the preset position for "DWELL TIME" seconds then go back to previous position. If you select "Always", dome will go to the preset position and stay there until alarm condition is released or user move its joystick on keyboard.

EXIT
Quit the ALARM SETTING menu.

12. HOME SETTING
Home parameters can be set on this page.

HOME FUNC
Turn home function on or off.

SELECT MODE (AUTOPAN/ SEQUENCE/ CRUISE/ PRESET)
Dome will go to execute this mode function when home function is enabled and the "RETURN TIME" is reached.

RETURN TIME (MIMUTES)
Dome will start to count "RETURN TIME" when user move the camera to arbitrary position.

AUTOPAN/ SEQUENCE LINE/ CRUISE/ PRESET POS
This item is detailed mode setting of home function. This item will vary with 'SELECT MODE' item.

GO.
Go to execute home function (**HOME FUNC ON only**).

EXIT
Quit the HOME SETTING menu.

13. SEQUENCE
Sequence parameters can be set on this page.

SEQUENCE LINE
There are four sets of sequence lines built in dome camera. You can choose a line to execute. Please use LEFT/ RIGHT of direction key to select your sequence line.

SEQUENCE POINT
There are 32 sets of sequence points can be specified in every sequence line. The sequence points are linked list. Sequence function will go through the linked list again and again.

PRESET POSITION
You can specify a preset position where the dome should go to at this sequence point.

SPEED
Speed is adjustable from 1~15.

DWELL TIME
Dome will stay on the sequence point for "DWELL TIME" then go to next sequence point.

RUN SEQUENCE
User can command dome camera to execute sequence function.

EXIT
Quit the SEQUENCE menu.

14. AUTOPAN

AutoPan parameters can be set on this page. User can enable dome camera to do continuously panning without limit through setting the start point the same as endpoint.

START POINT
Start position of the "AUTOPAN path".
   TO FIND: Press 'ENTER' to go into joystick mode. User can move camera to suitable position under joystick mode.
   TO SAVE: Press 'ENTER' to set this position as start point and escape joystick mode.

END POINT
End position of the "AUTOPAN path".
   TO FIND: Press 'ENTER' to go into joystick mode. User can move camera to suitable position under joystick mode.
   TO SAVE: Press 'ENTER' to set this position as end point and escape joystick mode.

DIRECTION
Rotational direction of dome camera.

SPEED
AUTOPAN function will rotate camera with this speed.

RUN AUTOPAN
Execute AUTOPAN function.

EXIT
Quit the AUTOPAN menu.

15. CRUISE

Cruise parameters can be set on this page.

RECORD START
Command dome to start to record "CRUISE PATH".

STEP1: Press 'ENTER' to go into joystick mode. Dome will move blink words to 'RECORD END' automatically.

STEP2: User can move camera to form a path.

STEP3: Press 'ENTER' to save the path.

RECORD END
Command dome to stop to record "CRUISE PATH".

RUN CRUISE
Execute "CRUISE" function.

EXIT
Quit the CRUISE menu.

16. IR FUNCTION

"IR Cut Filter" function can be set on this page.

AUTO

THRESHOLD: The Internal circuit will decide to remove the "IR Cut Filter" according to its threshold value. You can set the sensitivity as high then dome will remove the filter immediately if the threshold value is reached. Of course, low sensitivity can improve the reliability of lens.

IR COLOR: You can program the video output as color or B/W when IR function is enabled.

ON
Turn on IR function.

17. WDR SETTING

The parameter of WDR (Wide Dynamic Range) function can be set on this page.

WDR SWITCH
You can turn on/off the WDR function.

WDR FUNCTION
You can edit all parameters of WDR by yourself.

EXIT
Exit this page.

18. PRIVACY

You can program the privacy zone position with this option.

PRIVACY SWITCH
You can display "Privacy masks" with this option.

SHADE
The color of privacy mask can be selected through this option.

SET MASK

After you press "ENTER" on this item, dome will memory this position as "privacy mask position". You can select form Mask1 to Mask8 for this item.

    MAKS   MENU

    H CENTER 000~100

The original center of mask zone is the center of screen. User can move the center of mask zone to another position through adjust this value.

    V CENTER`000~100

The original center of mask zone is the center of screen. User can move the center of mask zone to another position through adjust this value.

    H SIZE 000~100

User can adjust the horizontal size of "privacy mask" through this item.

    V SIZE 000~100

User can adjust the vertical size of "privacy mask" through this item.

    EXIT+SAVE

Exit this page and save the privacy zone data into dome camera.

    EXIT

    Exit this page.

19. EXIT OSD

You can exit OSD mode with this item. Of course, you can close the OSD menu through "ESC" button on D7312.

APPENDIX - OSD MENU (S MODEL)

This camera utilizes a user setup menu that is displayed on-screen. This setup menu contains various sub menus that from a tree-type structure as shown below. This menu is described in the "SETUP MENU DESCRIPTION"

OSD TREE STRUCTURE (S MODEL)

DEFAULT	ON		
	OFF		
BACKLIGHT	ON		
	OFF		
FOCUS	AUTO	AF MODE – NORMAL	
		AF MODE – ZOOM TRIGGER	
		AF MODE – INTERVAL	
	MANUAL	FOCUS MANUAL SPEED	
AE MODE	AUTO	EXPORSURE COMP	
	BRIGHT	BRIGHT VALURE	
	SHUTTER	SHUTTER SPEED	
	GAIN	GAIN VALUE	
	IRIS	IRIS VALURE	
WBC MODE	AUTO		
	INDOOR		
	OUTDOOR		
	ATW		
	MANUAL	R GAIN, B GAIN	
ID DISPLAY	ON		
	OFF		
SETUP MENU1	ENTER	FLIP	IMAGE
			ME
			OFF
		ZOOM SPEED	FAST
		SPEED BY ZOOM	ON
			OFF
		AUTO CALI.	ON
			OFF
		DIGITAL ZOOM	1~ 12 (R model) 1 ~ 10 (K model) 1 ~ 12 (S model)
		SLOW SHUTTER	ON
			OFF
		ANGLE ADJUSTER	ADJUST MIN ANGLE
			ADJUST MAX ANGLE
			RESET
		RESET	YES
		EXIT	

SETUP MENU2	ENTER	APERTURE	
		FREEZE	ON
			OFF
		PICTURE EFFECT	COLOR
			NEG.
			B/W
		STABILIZER	ON
			OFF
		MASK DISPLAY	FIRST
			LAST
TITLE DISPLAY	ON		
	OFF		
TITLE SETTING	000 ~ 016		
ALARM SETTING	ENTER	ALARM PIN	1 ~ 4
		ALARM SWITCH	OFF
			ON
		ALARM TYPE	N.O.
			N.C.
		ALARM ACTION	POINT
			SEQUENCE POINT
		PRESET POS	001 ~ 128
		SEQUENCE LINE	1 ~ 4
		DEWLL TIME	001~ALWAYS SEC.
		EXIT	YES
HOME SETTING	ENTER	HOME FUNC.	ON / OFF
		SELECT MODE	PRESET
			SEQUENCE
			AUTO-PAN
			CRUISE
		RETURN TIME	1 ~ 127 MIN.
		PRESET/ AUTOPAN/ SEQUENCE/ CRUISE	
		GO	ENTER
		EXIT	
SEQUENCE	ENTER	SEQUENCE LINE.	1 ~ 4
		SEQUENCE POINT	1 ~ 32
		PRESET POS.	1 ~ 128
		SPEED	1 ~ 15
		DWELL TIME	1 ~ 127
		RUN SEQUENCE	ENTER
		EXIT	
AUTOPAN	ENTER	START POINT	TO FIND
			TO SAVE
		END POINT	TO FIND
			TO SAVE
		DIRECTION	RIGHT

			LEFT
		SPEED	1 ~ 4
		RUN AUTOPAN	ENTER
		EXIT	
CRUISE	ENTER	RECORD START	ENTER
		RECORD END	ENTER
		RUN CRUISE	ENTER
		EXIT	
IR FUNCTION	AUTO		
	ON		
ALARM DETECT	ENTER	DETECT SWITCH	ON/OFF
		DETECT MODE	FIX FOCUS
			INT. AE
			FIX AE
			INT. FOCUS
		EXIT	
PRIVACY	ENTER	PRIVACY SWITCH	OFF / ON
		TRANSPARENCY	OFF/ON
		COLOR	
		SET MASK	1 ~ 24
		RESET	YES
		EXIT	YES
EXIT OSD	YES		

OSD MENU (S MODEL)

There are two pages of OSD setup menu allow users to control the camera parameters, these functions are described in the following sections in detail. Please use LEFT/ RIGHT/ UP/ DOWN of direction keys to select your parameters.

1. DEFAULT

If you select ON for this item, all the camera parameters will be restored to the factory initial (default) data. Once you modify any of the following items, this item become OFF.

2. BACKLIGHT

In case that excessive light is behind the center object, it is necessary to prevent the center object too dark.

Turn this item ON, the center object will be brighten in contrast to the edge of the picture (where a backlight would most likely be located).

3. FOCUS

The focus of the dome camera can be operated in two different modes: 'Manual Focus mode' and 'Auto Focus mode'.

Manual

Users can the move focus lens by pressing the "focus Near/ Far button" on the control keyboard. The focus speed of lens can be adjusted through this item.

Auto

The optimum focus is achieved by the internal digital circuit. User can select a suitable item for different condition.

Normal AF Mode: This is the normal mode for AF operations.

Interval AF Mode: The mode used for AF movements carried out at particular intervals. The time intervals for AF movements and for the timing of the stops can be set in one-second increments using the Set Time Command. The initial value for both is set to five seconds.

Zoom Trigger Mode: When the zoom is changed with the TELE or the WIDE buttons, the pre-set value (initially set at 5 seconds) becomes that for AF Mode. Then, it stops.

4. AE MODE

Here you can select how the auto exposure function works, five options are available in this item, they are explained in the following sections:

AUTO

With this option, the camera's IRIS and AGC control circuits work together automatically to compensate the light exposure of CCD sensor, in order to get consistent video output level. At this condition the shutter speed is fixed to 1/60 (NTSC) or 1/50 (PAL). User can offset the internal brightness reference level through **EXPOSURE COMP.** to control the brightness of camera. The value of EXPOSURE COMP. is selectable from 0 to 16 and the gain is varying from -10.5 dB to 10.5 dB. Each step is 1.5dB gain. The value 7 is equal to 0dB. The camera will not compensate the brightness when the **EXPOSURE COMP.** is set to **OFF.** The default setting is **OFF**.

BRIGHT

The bright control function adjusts both gain and iris using an internal algorithm, according to a brightness level freely set by the user. Exposure is controlled by gain when dark, and by iris when bright.

SHUTTER

With this option, the SHUTTER speed is selectable. Auto IRIS and AGC circuit will function automatically to get consistent exposure output.

GAIN

With this option, the GAIN value is selectable. GAIN priority is higher than SHUTTER and IRIS. The internal circuit will function automatically to get consistent exposure.

IRIS

With this option, the IRIS value is selectable. Auto SHUTTER speed and AGC circuit will function automatically to get consistent exposure output.

5. WBC MODE

You can select one of six White Balance Control modes as described follows:

AUTO

In this mode, white balance works within its color temperature range. This mode computes the white balance value output using color information from the entire screen. It outputs the proper value using the color temperature radiating from a black subject based on a range of values from 3000 to 7500K.

INDOOR
3200 K Base Mode

OUTDOOR
5800 K Base Mode

ATW
Auto Tracing White balance (2000 to 10000 K).

MANUAL
In this mode, you can control the Write Balance value manually, R gain and B gain is adjustable.

6. ID DISPLAY
You can display the ID of dome on monitor or not.

ON
Display the ID address of this dome.

OFF
Do not display the ID address of this dome.

7. SETUP MENU1
You can adjust some parameters under SETUP MENU1 item.

FLIP (IMAGE/ ME/ OFF)
User can track an object continuously when it passes through under dome camera with setting flip item to IMAGE/ ME.
IMAGE item enable user to keep tracking object seamlessly through image flip technology. ME item is a standard function which is the same as AUTO-FLIP function.

ZOOM SPEED
User can select a suitable zoom speed.

SPEED BY ZOOM
The tracking speed is adjusted by internal algorithm. The lager zoom ratio the lower rotation speed.

AUTO CALI.
The default setting is OFF.

DIGITAL ZOOM
Digital zoom ratio is adjustable from 1 to 12.

SLOW SHUTTER
User can enable the slow shutter function. With the slowest shutter speed, user can see objects in a dark environment under 0.01 lux. With a higher shutter speed, you can see a smooth video image from camera

ANGLE ADJUSTER (MIN/ MAX)
User can see more higher if they adjust the MAX angle to +99 degree. Users can see more area lower if they set the MIN angle to -10 degree.

RESET
Reset the Dome camera.

EXIT
Quit the SETUP menu.

8. SETUP MENU2

You can adjust some parameters under SETUP MENU2 item.

APERTURE

Aperture control is a function which adjusts the enhancement of the edges of objects in the picture. There are 16 levels of adjustment, starting from "no enhancement." When shooting text, this control may help by making them sharper.

FREEZE

This function captures an image in the field memory of the camera so that this image can be output continuously.

PICTURE EFFECT

User can select a special video output type.

STABILIZER.

When the Image Stabilizer Function is ON, it helps in obtaining a stable image free of vibration caused by jarring movements. For a vibration frequency of around 10 Hz, correction is approximately 90%. **But this function will make user feel a doesn't exist residual motion around 1 second after the dome camera finish a quick motion.** This function is only suitable for fixed point observation.

MASK DISPLAY.

User can enable masking zone or disable masking zone through this item.

9. TITLE DISPLAY

You can turn on or off the TITLE DISPLAY function of this dome
.

ON

It will display a mark what you input for this view when you came back to the view.

OFF

It will not display any mark what you input for this view when you came back to the view.

10. TITLE SETTING

You can name a view for dome camera and it will display the name when you came back to the view.

STEP 1: Operate dome to a view what you want to name it.
STEP 2: Turn on OSD and move blink words to "TITLE SETTING"
STEP 3: Select a number what you want to name it.
STEP 4: Press <ENTER> to go into edit mode.

SET TITLE: (XXX)

```
0    0 1 2 3 4 5 6 7 8 9      S:SAVE
1    A B C D E F G H I J     /S:EXIT
2    K L M N O T P Q R S     ←:LEFT
3    U V W X Y Z : / . ,     →:RIGHT
4    ( ) + ? - SP
```

TITLE:
X

STEP 5: Choose a character what you want to input with direction key and press <ENTER>.
Example: A <ENTER>,   B <ENTER>, C <ENTER>
TITLE: ABC
STEP 6: Move blink character to "S: SAVE" and press <ENTER> to save setting. You can erase the word what you don't like it through move blink character to "SP" and press <ENTER>

11. ALARM SETTING

Alarm parameters can be set on this page.

ALARM PIN
Choose an alarm connector what you want to set its status.

ALARM SWITCH
Turn ON/OFF alarm function.

ALARM TYPE
There are two kind of alarm types can be selected. One is normal open the other is normal close.

ALARM ACTION
User can choose what kind of action should be executed when the alarm condition taken place. There are two kind of alarm actions can be set. One is go to a specific position when alarm taken place. The other is executing sequence function when alarm condition taken place.

Point Mode
PRESET POS.
Enter a preset position where the dome will go to when alarm pin is triggered.

Sequence Mode
SEQUENCE
Enter the sequence line you wish the Dome execute when alarm pin is triggered.

DWELL TIME (Seconds)
Camera will stay at the preset position for "DWELL TIME" seconds then go back to previous position. If you select "Always", dome will go to the preset position and stay there until alarm condition is released or user move its joystick on keyboard.

EXIT
Quit the ALARM SETTING menu.

12. HOME SETTING
Home parameters can be set on this page.

HOME FUNC
Turn home function on or off.

SELECT MODE (AUTOPAN/ SEQUENCE/ CRUISE/ PRESET)
Dome will go to execute this mode function when home function is enabled and the "RETURN TIME" is reached.

RETURN TIME (MIMUTES)
Dome will start to count "RETURN TIME" when user move the camera to arbitrary position.

AUTOPAN/ SEQUENCE LINE/ CRUISE/ PRESET POS
This item is detailed mode setting of home function. This item will vary with 'SELECT MODE' item.

GO.
Go to execute home function (**HOME FUNC ON only**).

EXIT
Quit the HOME SETTING menu.

13. SEQUENCE
Sequence parameters can be set on this page.
SEQUENCE LINE
There are four sets of sequence lines built in dome camera. You can choose a line to execute. Please use LEFT/RIGHT of direction key to select your sequence line.

SEQUENCE POINT
There are 32 sets of sequence points can be specified in every sequence line. The sequence points are linked list. Sequence function will go through the linked list again and again.

PRESET POSITION
You can specify a preset position where the dome should go to at this sequence point.

SPEED
Speed is adjustable from 1~15.

DWELL TIME
Dome will stay on the sequence point for "DWELL TIME" then go to next sequence point.

RUN SEQUENCE
User can command dome camera to execute sequence function.
EXIT
Quit the SEQUENCE menu.

14. AUTOPAN

AutoPan parameters can be set on this page. User can enable dome camera to do continuously panning without limit through setting the start point the same as endpoint.

START POINT
Start position of the "AUTOPAN path".
    TO FIND: Press 'ENTER' to go into joystick mode. User can move camera to suitable position under joystick mode.
    TO SAVE: Press 'ENTER' to set this position as start point and escape joystick mode.

END POINT
End position of the "AUTOPAN path".
    TO FIND: Press 'ENTER' to go into joystick mode. User can move camera to suitable position under joystick mode.
    TO SAVE: Press 'ENTER' to set this position as end point and escape joystick mode.

DIRECTION
Rotational direction of dome camera.

SPEED
AUTOPAN function will rotate camera with this speed.

RUN AUTOPAN
Execute AUTOPAN function.

EXIT
Quit the AUTOPAN menu.

15. CRUISE

Cruise parameters can be set on this page.

RECORD START
Command dome to start to record "CRUISE PATH".
    STEP1: Press 'ENTER' to go into joystick mode. Dome will move blink words to 'RECORD END' automatically.
    STEP2: User can move camera to form a path.
    STEP3: Press 'ENTER' to save the path.

RECORD END

Command dome to stop to record "CRUISE PATH".

RUN CRUISE

Execute "CRUISE" function.

EXIT

Quit the CRUISE menu.

16. IR FUNCTION

"IR Cut Filter" function can be set on this page.

AUTO

The Internal circuit will decide when to remove the "IR Cut Filter" according to its internal algorithm.

ON

Turn on IR function.

17. MOTION DETECT

This function instructs the camera to detect movement within the monitoring area and then send an alarm signal automatically.

DETECT SWITCH

You can turn on/ off the MOTION DETECTION function.

DETECT MODE

INT. FOCUS

Set the internal focus position. When focus movement is detected, the alarm condition is set. When focus goes back to the previous position, the alarm condition is cleared.

FIX FOCUS

Set a fixed period of time. When focus movement is detected, the alarm condition is set. When focus goes back to the previous position, the alarm condition is clear. When focus moves, the alarm condition is set. Afterwards when focus does not move for the fixed period of time, the focus position is memorized and the alarm condition is cleared.

INT. AE

Set the internal AE level. When AE movement is detected, the alarm condition is set. When AE Level goes back to the previous level, the alarm condition is cleared.

FIX AE

Set a period of time. When AE Level does not change during this time, the AE value is memorized as a rest value and the alarm condition is cleared. When AE value changes, the alarm condition is set. Afterwards when AE value does not change for the fixed period of time, the AE value is memorized and the alarm condition is cleared.

EXIT
Exit this page.

18. PRIVACY
You can program the privacy zone position with this option.

PRIVACY SWITCH
You can display "Privacy masks" with this option.

TRANSPARENCY
The color of privacy mask can be set as transparency related to background image.

COLOR
The color of privacy mask can be selected through this option.

SET MASK
After you press "ENTER" on this item, dome will memory this position as "privacy mask position". You can set up to 24 masks.

H CENTER 000~100
The original center of mask zone is the center of screen. Users can move the center of mask zone to another position through adjust this value.

V CENTER`000~100
The original center of mask zone is the center of screen. Users can move the center of mask zone to another position through adjust this value.

H SIZE 000~49
User can adjust the horizontal size of "privacy mask" through this item.

V SIZE 000~49
User can adjust the vertical size of "privacy mask" through this item.

EXIT+SAVE
Exit this page and save the privacy zone data into dome camera.

EXIT
Exit this page.

20. EXIT OSD
You can exit OSD mode with this item. Of course, you can close the OSD menu through "ESC" button on your D7312 control keyboard.