

Wide Dynamic **30x Zoom Speed Dome Camera**

INSTRUCTION MANUAL



30x Zoom Speed Dome Camera



· DC12V or AC24V

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1. Precautions

- * The purpose of this information is to ensure proper use of this product to prevent danger to damage to property. Please be sure to observe all precautions.
- * The precautions are divided into “Warnings” and “Cautions” as distinguished below:
 Warnings : Ignoring these warnings may result in death or serious injury.
 Cautions : Ignoring these cautions may result in injury or damage to property

	
Warning : instructions alert you to the potential risk of death or serious injury	Caution : instructions alert you to the potential risk of injury or damage to property

WARNINGS

1. Be sure to use only the standard adapter which is specified in the specification sheet.
Using any other adapter could cause fire, electrical shock, or damage to the product.
2. When connecting the power supply and signal wires, check the external connection terminal before connecting them. Connect the alarm signal wires to the alarm terminals.
The AC adaptor to the AC power input receptacle, and the DC adapter to the DC power input, making sure that the correct polarity is observed.
(Connecting the power supply incorrectly may cause fire, electrical shock, or damage to the product)
3. Do not connect multiple cameras to a single adapter.
(Exceeding the capacity may cause abnormal heat generation or fire)
4. Securely plug the power cord into the power receptacle.
(Insecure connection may cause fire)
5. When installing the camera on a wall or ceiling, fasten it securely and firmly.
(A falling camera may cause personal injury)
6. Do not place conductive objects (e.g. screwdrivers, coins, and metal things) or containers filled with water on the top of the camera.
(Doing so may cause personal injury due to fire, electrical shock or falling objects)
7. Do not install the unit in humid, dusty, or sooty locations.
(Doing so may cause fire or electrical shock.)
8. If any unusual smells or smoke come from the unit, stop using the product. In such case, immediately disconnect the power source and contact the store of purchase.
(Continued use in such a condition may cause fire or electrical shock.)
9. If this product fails to operate normally, contact the store of purchase.
Never disassemble or modify this product in any way.
10. When cleaning, do not spray water directly onto parts of the product.
(Doing so may cause fire or electrical shock)
Wipe the surface with a dry cloth. Never use detergents or chemical cleaners on the product, as this may result in discoloration of surface or cause damage to the finish.

1. Precautions

CAUTIONS

1. Do not drop objects on the product or apply strong shock to it.
Keep away from a location subject to excessive vibration or magnetic interference.
2. Do not install in a location subject to high temperature(over 122°F), low temperature(below 14°F), or high humidity.
(Doing so may cause fire or electrical shock)
3. Avoid a location which is exposed to direct sunlight or near heat sources such as heater or radiators.
(Neglecting to do so may result in a risk of fire)
4. If you want to relocate the already installed product, be sure to turn off the power and then move or reinstall it.
5. Install in a well-ventilated location.
6. Remove the power plug from the outlet when there is a lightning storm.
(Neglecting to do so may cause fire or damage to the product)

2. Features

* Dynamic and precise AF control

The camera can trace and pick up the object moving away fast from the scene with Powerful 240 times zoom and greatly improved Auto Focus control.

* Removable Motorized IR Cut Filter (ICR)

Viewable in total darkness.

The image in daytime displays as True Color with IR Cut filter attached and turns to Clear B/W(color signal removed)mode at night(True Day/Night) With ICR it comes to IR sensitive.

That enables the camera to view the scene in total darkness.

* Super Wide Dynamic (sWDR)

With new powerful DSP system integrated it makes 126 times upgraded Backlight compensation than that of existing BLC system.

* High resolution of 520TVL

* Powerful 30x optical zoom

* Extremely upgraded sensitivity of 0.0006Lux

Clear different from conventional PTZ this dome with built-in Super DSP system can see the Object very clear at even a starless dark night. In addition, the built-in Dynamic Noise Reduction(DNR) removes noises and ghost effect to have the picture quality greatly improved. It also saves the DVR's recoding capacity up to 70%.

* Quick and Easy installation

Dome base is separated and easily mounted on the ceiling first and the main body is simply hooked on it by hand, with no tool. Complicated cable connection is not additionally required with the built-in one-stop connection mechanism.

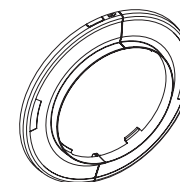
3. Package



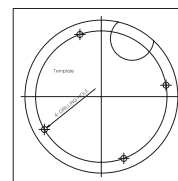
Wide Dynamic 30x Zoom
Speed Dome Camera 1EA



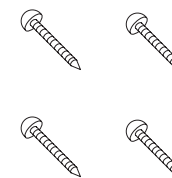
Instruction manual
1EA



Decorative cover
1EA



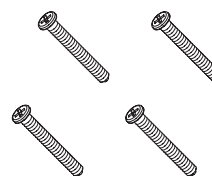
Drilling template
1EA



Tapping screw
4EA

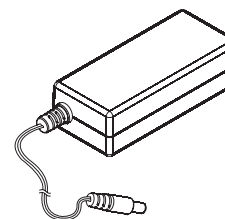


Plastic anchor
4EA



Fixed screw
4EA

[Option]



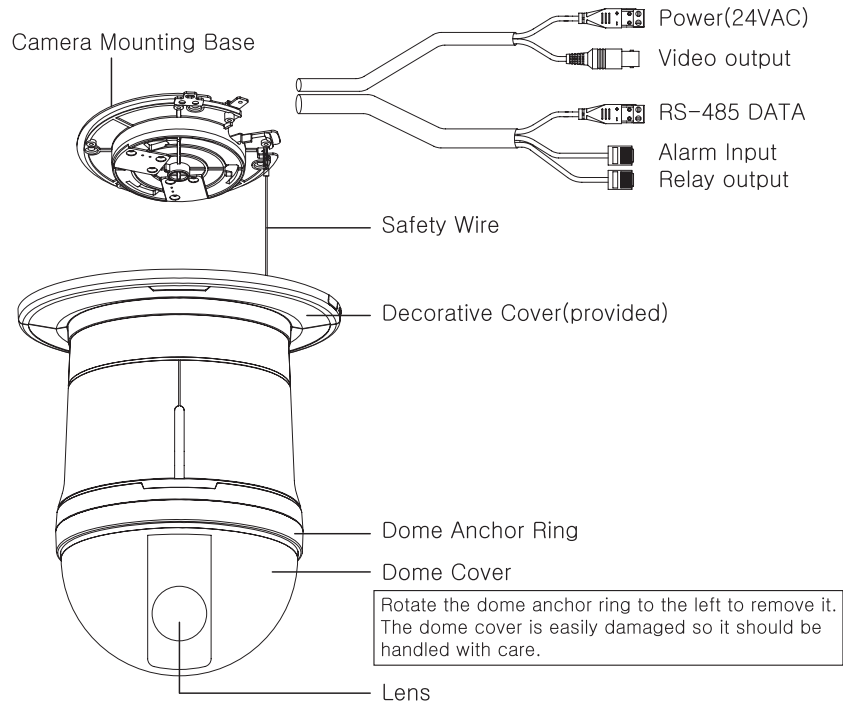
Adaptor (AC24V/2A)
1EA



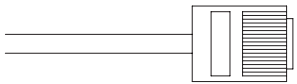
Adaptor power plug
1EA

4. Part names and function

4-1. Body



* Alarm Input Cable



6	ALARM IN 4	RED
5	ALARM IN 3	SHIELD
4	GND	YELLOW
3	GND	BLUE
2	ALARM IN 2	BLACK
1	ALARM IN 1	WHITE

* Relay Output Cable



6	N.C	
5	COM2	YELLOW
4	OUT2	BLUE
3	COM1	BLACK
2	OUT2	WHITE
1	N.C	

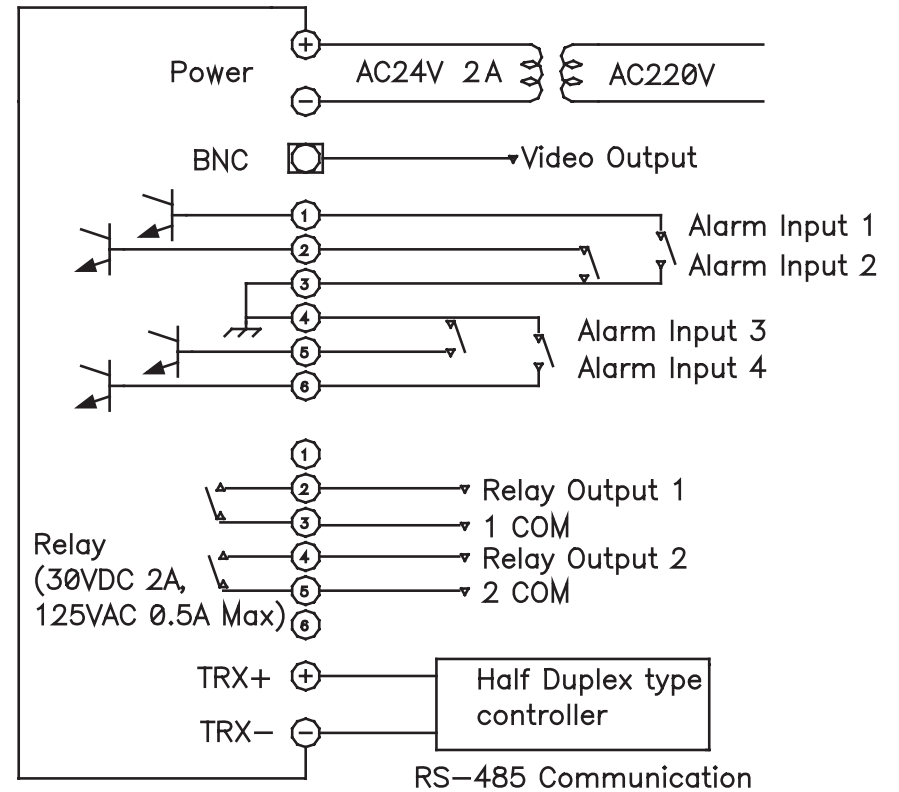
* RS-485 Cable



+	TRX+
-	TRX-

4. Part names and function

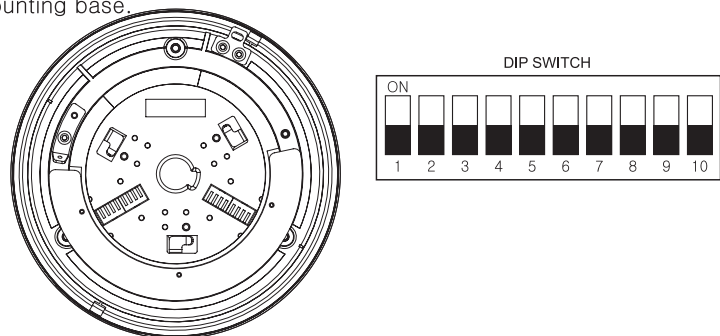
4-2. Camera Cable Connection



4. Part names and function

4-3. Dip Switch Settings

In a configuration where the camera's RS485 data port is used for camera control(pan,tilt,etc) by the system controller, the camera's DIP switches must be configured to specify the camera ID number and communication parameters. The camera mounting base needs to be removed to access the DIP switches. See steps 1 and 2 on page 10,11 for information about how to remove the camera mounting base.



* Setting Camera ID Switch

The factory default settings of these DIP switches are ID 1.
(1-ON,0-OFF) SW1~SW8

DIP SW	ID	DIP SW	ID	DIP SW	ID	DIP SW	ID	DIP SW	ID	DIP SW	ID
10000000	1	10101000	21	10010100	41	10111100	61	10001010	81	10100110	101
01000000	2	01101000	22	01010100	42	01111100	62	01001010	82	01100110	102
11000000	3	11101000	23	11010100	43	11111100	63	11001010	83	11100110	103
00100000	4	00011000	24	00101000	44	00000010	64	00101010	84	00010110	104
10100000	5	10011000	25	10110100	45	10000010	65	10101010	85	10010110	105
01100000	6	01011000	26	01110100	46	01000010	66	01101010	86	01010110	106
11100000	7	11011000	27	11110100	47	11000010	67	11101010	87	11110100	107
00010000	8	00111000	28	00001100	48	00100010	68	00011010	88	00110110	108
10010000	9	10111000	29	10001100	49	10100010	69	10011010	89	10110110	109
01010000	10	01111000	30	01001100	50	01100010	70	01011010	90	01110110	110
11010000	11	11111000	31	11001100	51	11100010	71	11011010	91	11110110	111
00110000	12	00001000	32	00101100	52	00010010	72	00111010	92	00001110	112
10110000	13	10001000	33	10101100	53	10010010	73	10111010	93	10001110	113
01110000	14	01000100	34	01101100	54	01010010	74	01111010	94	01001110	114
11110000	15	11000100	35	11101100	55	11010010	75	11111010	95	11001110	115
00001000	16	00100100	36	00011100	56	00110010	76	00000110	96	00101110	116
10001000	17	10100100	37	10011100	57	10110010	77	10000110	97	10101110	117
01001000	18	01100100	38	01011100	58	01110010	78	01000110	98	01101110	118
11001000	19	11100100	39	11011100	59	11110010	79	11000110	99	11101110	119
00101000	20	00010100	40	00111100	60	00001010	80	00100110	100	00011110	120

4. Part names and function

DIP SW	ID	DIP SW	ID	DIP SW	ID	DIP SW	ID	DIP SW	ID	DIP SW	ID
10011110	121	00001001	144	11100101	167	01111101	190	10101011	213	00110111	236
01011110	122	10001001	145	00010101	168	11111101	191	01101011	214	10110111	237
11011110	123	01001001	146	10010101	169	00000011	192	11101011	215	01110111	238
00111110	124	11001001	147	01010101	170	10000011	193	00011011	216	11110111	239
10111110	125	00101001	148	11010101	171	01000011	194	10011011	217	00001111	240
01111110	126	10101001	149	00110101	172	11000011	195	01011011	218	10001111	241
11111110	127	01101001	150	10110101	173	00100011	196	11011011	219	01001111	242
00000001	128	11101001	151	01110101	174	10100011	197	00111011	220	11001111	243
10000001	129	00011001	152	11110101	175	01100011	198	10111011	221	00101111	244
01000001	130	10011001	153	00001101	176	11100011	199	01111011	222	10101111	245
11000001	131	01011001	154	10001101	177	00010011	200	11111011	223	01101111	246
00100001	132	11011001	155	01001101	178	10010011	201	00000111	224	11101111	247
10100001	133	00111001	156	11001101	179	01010011	202	10000111	225	00011111	248
01100001	134	10111001	157	00101101	180	11010011	203	01000111	226	10011111	249
11100001	135	01111001	158	10101101	181	00110011	204	11000111	227	01011111	250
00010001	136	11111001	159	01101101	182	10110011	205	00100111	228	11011111	251
10010001	137	00000101	160	11101101	183	01110011	206	10100111	229	00111111	252
01010001	138	10000101	161	00011101	184	11110011	207	01100111	230	10111111	253
11010001	139	01000101	162	10011101	185	00001011	208	11100111	231	01111111	254
00110001	140	11000101	163	01011101	186	10001011	209	00010111	232	11111111	255
10110001	141	00100101	164	11011101	187	01001011	210	10010111	233		
01110001	142	10100101	165	00111101	188	11001011	211	01010111	234		
11110001	143	01100101	166	10111101	189	00101011	212	11010111	235		

* RS485 Communication Parameters

Configuring DIP Switch as shown below resets communication parameters to their factory default settings. You can then change the settings as desired.

SW10	SW9	BAUD RATE	PROTOCOL
0	0	9600BPS	PELCO-D
0	1	4800BPS	PELCO-D
1	0	9600BPS	PELCO-P
1	1	4800BPS	PELCO-P

NOTE

Factory default Setting : 9600bps, PELCO-D

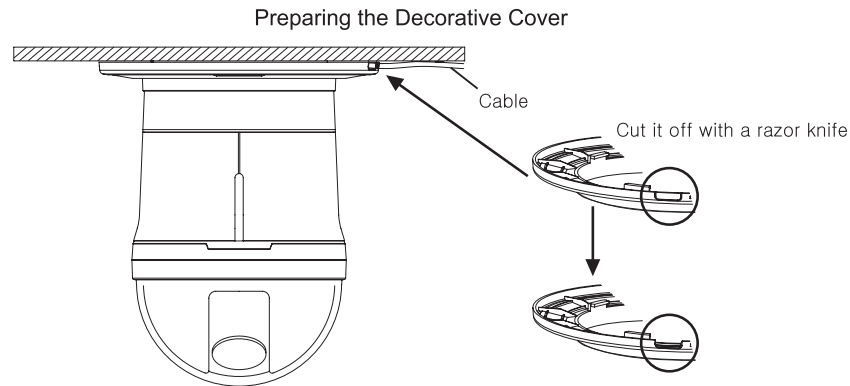
5. Camera Installation

5-1. Preparing the Camera and Decorative Cover for Side Cable Exit

The camera and decorative cover should be prepared as shown below when mounting the camera on a ceiling or wall with its cables (power, video output, RS485, alarm in Relay out) exiting from the side.

The camera mounting base needs to be removed in order to prepare the camera. See step 1 and 2 below for information about how to remove the camera mounting base.

* Prevent the dome cover from being scratched by placing it on a soft cloth while you are working.



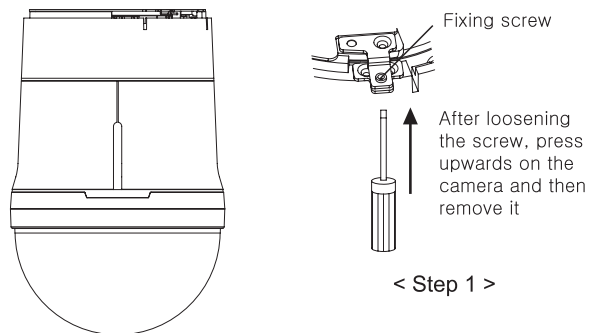
5-2. Installing the Camera

* Select an installation location that is strong enough to withstand the total weight of the camera.

Installing the camera at a location that is too weak can cause it to fall.

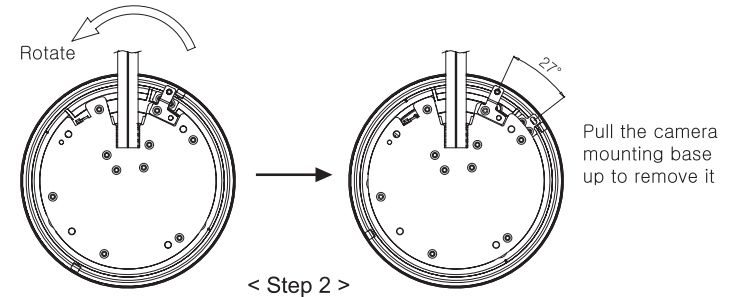
* If you are using an optional bracket to install the camera, install the bracket in accordance with the instructions that come with it.

① Remove the fixing screw (M3X6) that secures the camera to the mounting base. Put the screw in a place where it will not become lost.

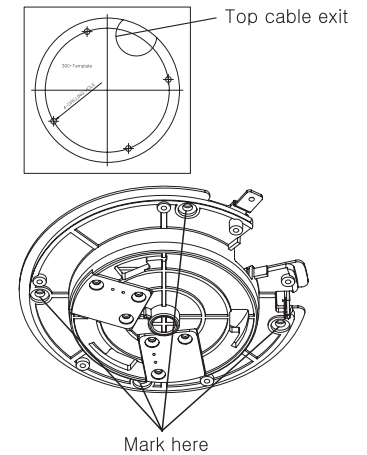


5. Camera Installation

② Rotate the camera base unit in the direction indicated by the arrow and remove it



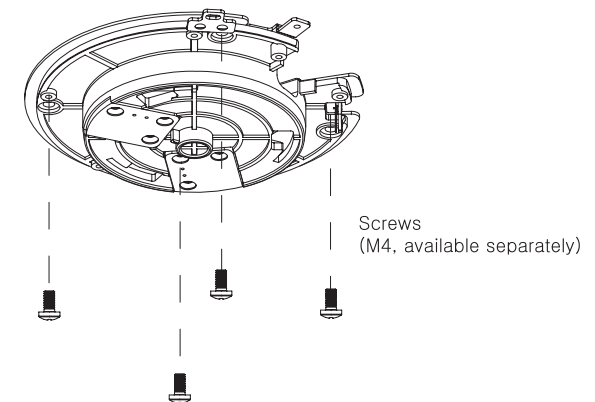
③ To install the camera mounting base to the ceiling, attach a template and drill the holes. If you are using the top cable exit configuration, drill the top cable exit part of a template.



NOTE

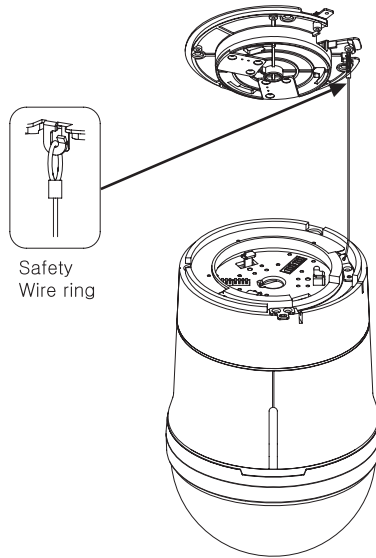
When you use the camera mounting base without a template, you can mark the location of four mounting holes & drill the holes.

④ Affix the camera mounting base onto the ceiling. Use screws (M4) at the locations you marked above to secure the mounting base to the ceiling.



5. Camera Installation

- ⑤ Attach the safety wire for securing the camera to the mounting base.
Pull on the safety wire to check whether or not its ring is securely connected to the mounting base.

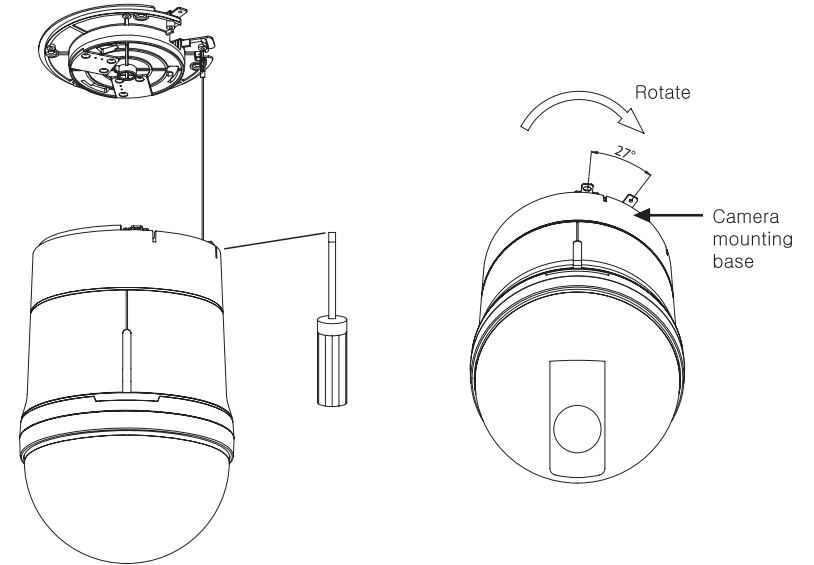


NOTE

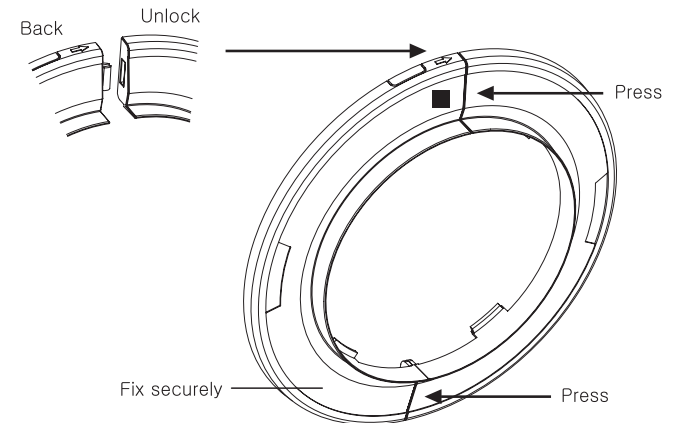
The safety wire is designed to allow the camera to hang from it.
Do not apply force greater than the weight of the camera to the wire.

- ⑥ Install the camera onto the mounting base.
Aligning with the mounting base, press down on the camera as far as it will go and rotate in the direction indicated by the arrow.
- ⑦ Use the fixing screw you removed in step 1 in order to secure the camera to the mounting base.
- ⑧ Check the installation
- Is the camera is level and installed securely?
 - Is the camera free to looseness?
 - Does the fixed part of the camera remain in place when you try to rotate it?

5. Camera Installation



- ⑨ Separate the two parts of the decorative cover(that comes with camera)
Press upwards on the decorative cover at the points marked ■ (indicated by the arrows in the illustration below) to unlock the two parts from each other.
· When removing the decorative covers, the direction to press(←) is shown on the side of the decorative cover.

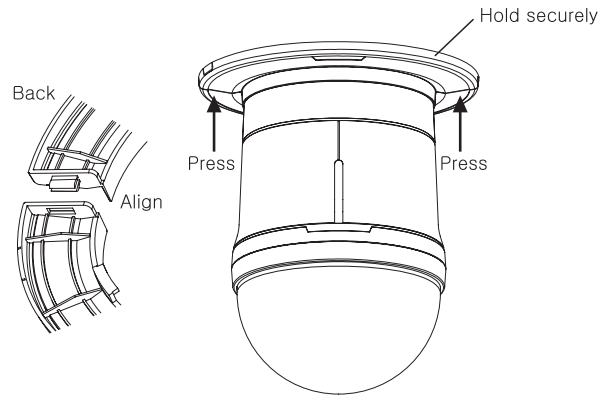


Caution

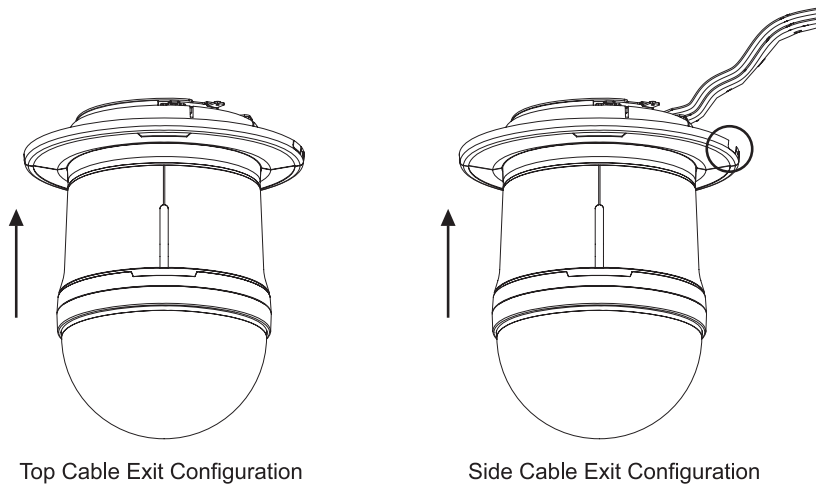
Pressing up on the wrong side of the decorative cover can damage it.

5. Camera Installation

- ⑩ Put the two parts of the decorative cover on the left and right side of the camera and hook them together. Align the hooks and press the piece indicated by the arrow in the illustration below into the other piece.



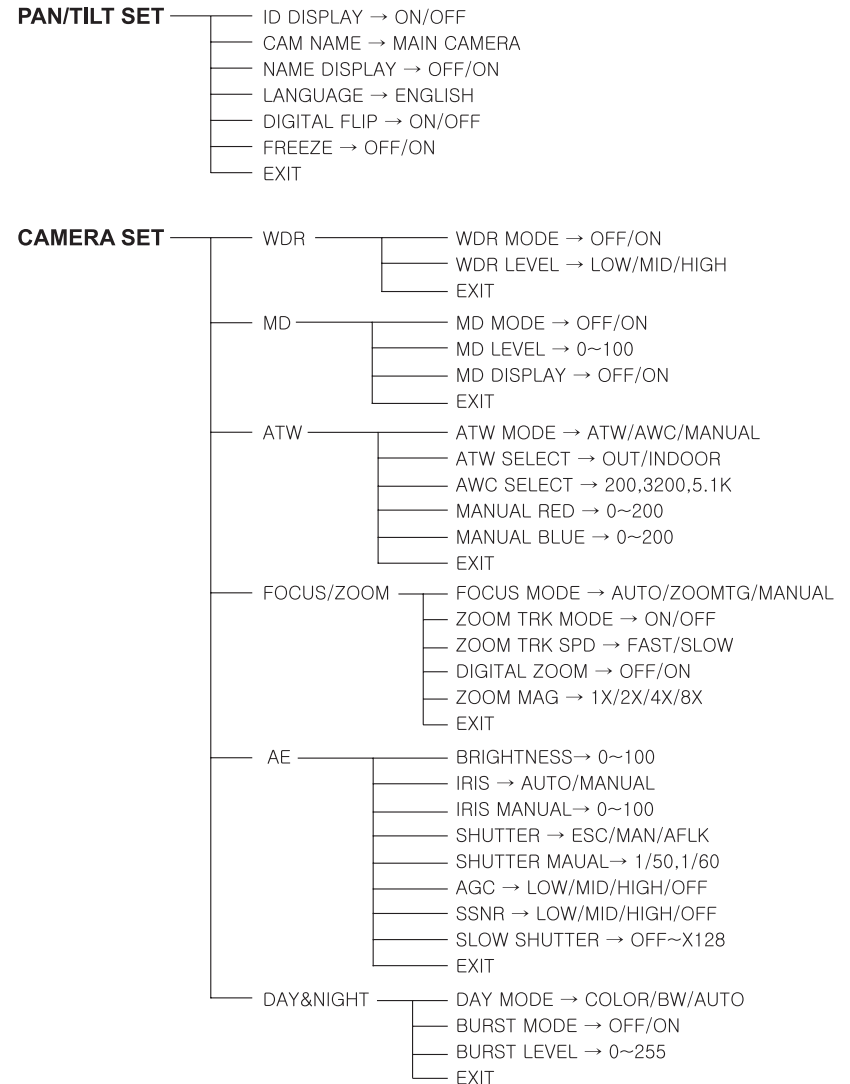
- ⑪ Slide the decorative cover up to the ceiling.
- In the case of a top cable exit configuration side the decorative cover, straight up and press it firmly against the ceiling.
 - In the case of a side cable exit configuration, align the cutout in the Decorative cover with the cables as you slide it up and press it firmly against the ceiling.



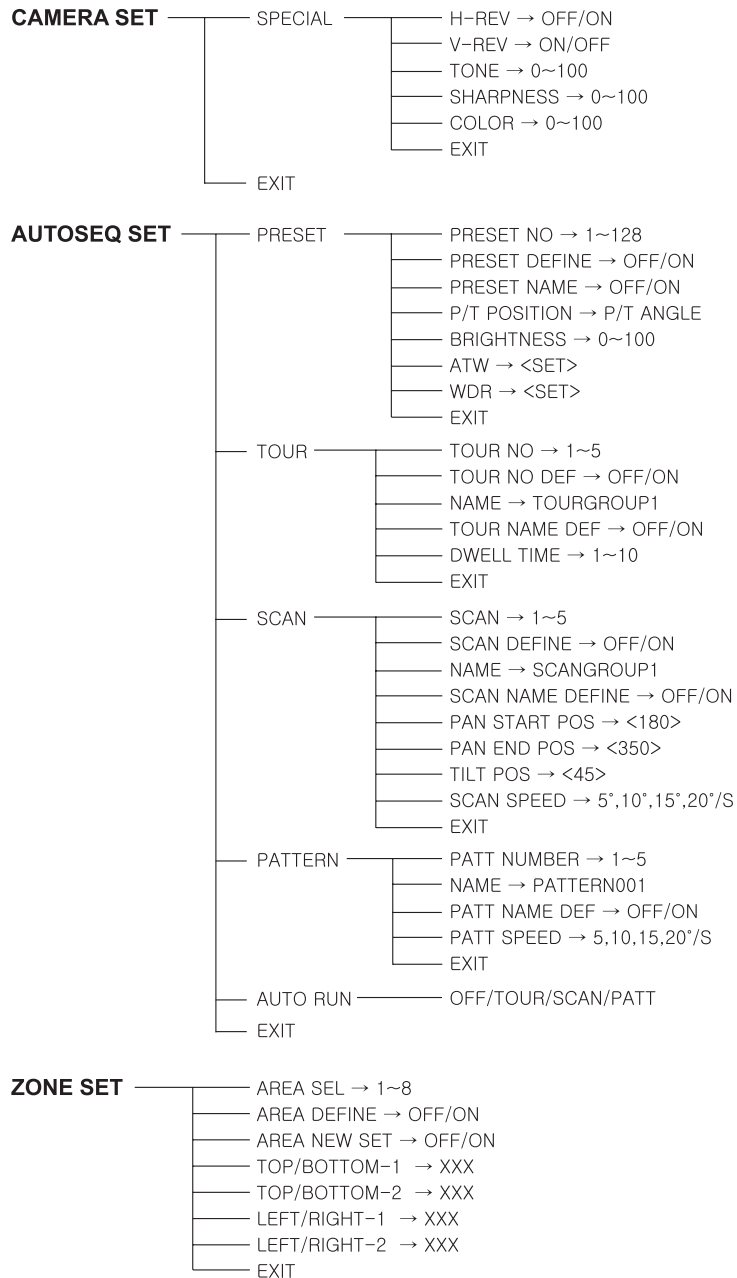
6. Functional Description

6-1. OSD Menu Organization

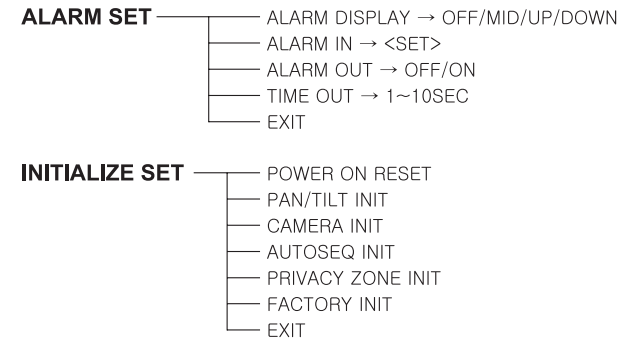
In this chapter we will look over the Setup Menu of the this camera. At first we'll look over the overall structure of the Setup Menu and then we'll look at the functions of each menu.



6. Functional Description



6. Functional Description



* SYSTEM INFO

The diagram shown above illustrates the overall structure of the setup menu. In this section a description of the setup menu features will enable users of the camera to tailor it to their personal needs.

6. Functional Description

MAIN MENU

```
1. PAN TILT SET
2. CAMERA SET
3. AUTOSEQ SET
4. ZONE SET
5. ALARM SET
6. INITIALIZE SET
EXIT
```

The Selection Key : UP,DOWN KEY
The Execution key : IRIS OPEN KEY

(1) PAN TILT SET

```
1. ID DISPLAY: <ON>/OFF
2. CAM NAME: MAINCAMERA
3. NAME DISPLAY: OFF/<ON>
4. LANGUAGE: ENGLISH
5. DIGITAL FLIP: ON/ OFF
6. FREEZE: OFF/ON
EXIT
```

The Selection Key : UP, DOWN, LEFT, RIGHT KEY
The Execution key : IRIS OPEN KEY

☞ ID DISPLAY

The Camera ID appears on the screen.
OFF : The ID does not appear on the screen
<ON> : The ID appears on the screen.

☞ CAM NAME

A maximum of 10 characters can be input for CAMERA NAME. If you change the camera name, press the IRIS OPEN Key when name display is set to <ON>. The camera name display menu appears.

☞ DIGITAL FLIP

When you operate the Tilt up to 90° limit using the joystick and keep it for a certain time, the image gets reversed automatically and the opposite Tilt area is seen.

☞ FREEZE

When going to a preset, the screen displays the frozen image of the currently displayed preset.

OFF : Frozen image is released and the film is replayed.

ON : The image is frozen.

< Notes >

It operates only on the TOUR of AUTO RUN mode.

1-A. ID DISPLAY

```
MOVE : U/D/L/R
EXIT : IRISOPEN
```

The Selection Key : UP, DOWN, LEFT, RIGHT KEY
The Execution key : IRIS OPEN KEY

The changing method of ID location is as follows:

- ① Select <ON> from ID DISPLAY mode.
- ② Press the IRIS OPEN Key.
- ③ Press the IRIS OPEN Key when setting is done.

6. Functional Description

1-B. CAMERA NAME DISPLAY

```
CAMERA NAME : MAINCAMERA
0123456789ABCDEFGH
IJKLMNOPQRSTUVWXYZ
DELETE : <IRISOPEN>
POSITION : <IRISOPEN>
EXIT
```

The Selection Key : UP, DOWN, LEFT, RIGHT KEY
The Execution key : IRIS OPEN KEY

The method of Camera naming is as follows:

- ① Select DELETE and press the IRIS OPEN Key.
- ② Move to the desired characters from 0 to Z and press the IRIS OPEN Key to select it.
- ③ Repeat step② until the name is completed.
- ④ If you change the location of the camera name, select position and press the IRIS OPEN Key. How to change the location of camera name is the same as 1.A, ID DISPLAY.

(2) CAMERA SET

```
1. WDR _____< SET >
2. MD _____< SET >
3. ATW _____< SET >
4. FOCUS/ZOOM _____< SET >
5. AE _____< SET >
6. DAY&NIGHT _____< SET >
7. SPECIAL _____< SET >
EXIT
```

2-A. WDR

```
1. WDR MODE : OFF/ON
2. WDR LEVEL : LOW/MID/HIGH
EXIT
```

WDR MODE ON : When both bright and dark areas exist, the objects of these two areas can be seen clearly. For setting, select "WDR-<SET>" and press the IRIS OPEN Key.

The higher WDR LEVEL can display better image of bright area and dark area.

< Notes >

- ① When the shutter menu is in the manual mode, WDR function cannot be used.
- ② If the screen may become unnatural according to lighting conditions, set "OFF" of the WDR mode.

2-B. MOTION DETECT

```
1. MD MODE : OFF/ON
2. MD LEVEL : 0~100
3. MD DISPLAY : OFF/ON
EXIT
```

When MD MODE is "ON", MD appears on the center of screen.
While the OSD menu is activated, MD function cannot be used.

☞ MD LEVEL

Use MD LEVEL to set up the sensitivity of MOTION detection strength. The higher MD level, the more sensitivity.

6. Functional Description

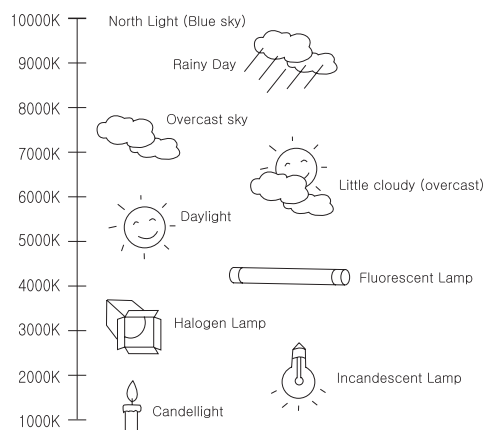
< Notes >

- ① MD cannot be operated in the SCAN, PATTERN mode.
- ② MOTION detection function operates based on the brightness change within the setup region. Therefore, erroneous operation may occur according to the brightness difference between the background and the object that is being taken, or the status of the area setup, etc.

2-C. ATW

1. ATW MODE : ATW/AWC/MANUAL
2. ATW SELECT : OUTDOOR/INDOOR
3. AWC SELECT : 2000,3200,5100K
4. MANUAL RED : 0~200
5. MANUAL BLUE : 0~200
- EXIT

Color temperature in general is as follows:



The Selection Key : UP, DOWN,
LEFT, RIGHT KEY
The Execution key : IRIS OPEN KEY

☞ ATW MODE : ATW

White balance functions automatically in the range of color temperature from 1,800K to 10,500K (Indoor to Outdoor).

☞ ATW MODE : AWC

White balance functions at the selected temperature of AWC SELECT.

☞ ATW MODE : MANUAL

According to the adjusted the values of MANUAL RED, MANUAL BLUE, White Balance functions & you see the color change on your screen.

< Notes >

- ① When it is too dark or bright, white balance may not function properly.
- ② At the place the camera is directed towards the fluorescent lamp or lighting conditions is changeable, white balance functions improperly.

2-D. FOCUS/ZOOM

1. FOCUS MODE : MANUAL/AUTO/ZMTRG
2. ZOOM TRK MODE : ON/OFF
3. ZOOM TRK ZPEED : FAST/SLOW
4. DIGITAL ZOOM : OFF/ON
5. ZOOM MAG : 1X/2X/4X/8X
- EXIT

☞ FOCUS MODE

- * MANUAL
A user adjusts the focus manually.
- * AUTO
The camera adjusts the focus automatically.

6. Functional Description

* ZMTRG

When you select ON, the Focus function is executed when the Zoom function is on.
When you select OFF, the Focus function is not executed even when the Zoom function is on.

☞ ZOOM SPEED

The bigger value speeds up the Zoom.

☞ ZOOM TRK MODE

When the zoom lens adjusts "Wide <->Tele", you can set up whether the Focus function is executed or not. It is applied only to Auto Mode and ZOOM TRK MODE.
When you move the Zoom to the designated position and faster, "OFF" of ZOOM TRK MODE moves faster than "On" of it.

< Notes >

Under the following conditions, AUTO FOCUS may not function properly.

- ① When the lux level is too low or high.
- ② When the objects in the long & short distance are under the same area.
- ③ When there is no contrast (of Black and White).

2-E. AE

1. BRIGHTNESS : 0 ~ 100
2. IRIS : AUTO/MANUAL
3. IRIS MANUAL : 0 ~ 100
4. SHUTTER : ESC/MANUAL/A.FLK
5. SHUTTER MANUAL : 50Hz, 60Hz...
6. AGC : LOW/MID/HIGH/OFF
7. SSNR : LOW/MID/HIGH/OFF
8. SLOW SHUTTER : OFF~X128
- EXIT

☞ BRIGHTNESS

The brightness of the screen can be controlled.

☞ IRIS

The brightness of the screen can be adjusted automatically with IRIS adjustment depending on the amount of light.
AUTO : The brightness of the screen can be adjusted automatically and then the shutter is fixed.

MANUAL : It opens or closes IRIS manually. Users can control the brightness by the value of "IRIS Manual".

☞ SHUTTER

When the camera collects bright and fast moving objects or the circumstance are extremely low-light situations, you can control the shutter speed, fast or slow, to get improved images.

ESC : It controls the shutter speed automatically.

MANUAL : Shutter speed can be operated manually from 1/2000 ~ X 128.

A.FLK : Use this mode when the screen flickers because of inconsistent frequency with the surrounding lights.

☞ SHUTTER MANUAL

SHUTTER MANUAL is controlled only when SHUTTER is set to MANUAL.

☞ AGC

The AGC (Auto Gain Control) function is to brighten the screen at the dark lighting.

☞ SSNR (DIGITAL NOISE REDUCTION)

OFF : No noise reduction effect.

LOW : Noise reduction effect is small but there is little afterimage.

MID : Noise reduction effect is generally effective in this mode. Noise can be reduced properly and the afterimage is not strong.

HIGH : Noise reduction effect is excellent but afterimage is also strong.

6. Functional Description

☞ SLOW SHUTTER

It can be adjusted to brighten the object at the very dark condition.

2-F. DAY&NIGHT

```
1. D/N MODE : COLOR/BW/AUTO
2. BURST MODE : OFF/ON
3. BURST LEVEL : 0 ~ 255
EXIT
```

B/W mode removing the IR cut filter at the low lux level has Black & White screen and better sensitivity.
Color mode that the cut filter is ON has Color screen and is preferred in normal lighting conditions.

☞ D/N MODE

AUTO : In the daytime, the screen is the color mode and in the night it change to the BW mode to distinguish the dark circumstances clearly.

☞ BURST MODE

OFF : BURST signal is removed.

ON : BURST signal is output together with B/W Luminance signal.

☞ BURST LEVEL

Burst level can be adjusted in the color mode of D/N Mode.

< Notes >

- ① If the AGC mode is set to OFF, the AUTO mode cannot be used. Only Color or B/W mode can be used.
- ② If the sunlight or halogen lamp is used in the BW mode, Focus may be blurred or dimmed.

2-G. SPECIAL

```
1. H-REV : OFF/ON
2. V-REV : ON/OFF
3. TONE : 0 ~ 100
4. SHARPNESS : 0 ~ 100
5. COLOR : 0 ~ 100
EXIT
```

☞ H-REV

The screen flip horizontally.

☞ V-REV

The screen filp vertically.

☞ TONE

Clarity of the video signal may be adjusted.

☞ SHARPNESS

The overall sharpness of the image can be adjusted.

☞ COLOR

The overall colour density of the image can be adjusted.

(3) AUTOSEQ SET

```
1. PRESET <SET>
2. TOUR <SET>
3. SCAN <SET>
4. PATTERN <SET>
5. AUTORUN OFF/TOUR/SCAN/PATT
EXIT
```

The Selection Key : UP, DOWN, LEFT, RIGHT KEY
The Execution key : IRIS OPEN KEY

☞ PRESET

Location of the current Pan/Tilt, Zoom & Focus can be programmed. It is the special function of Speed Dome camera. In the Alarm or Tour operation the camera moves to the programmed preset.

6. Functional Description

☞ TOUR

Up to 5 presets per group can be registered. Up to 5 groups can be operated.

☞ SCAN

Automated surveillance between the starting point and the end point. Upto 5 scans can be set up.

☞ PATTERN

The operation path of Pan/Tilt Zoom can be displayed. Up to 2 minutues can be saved.

☞ AUTORUN

OFF : Auto Run will be cancelled.

TOUR,SCAN,PATT : If the setting is programmed properly, it will be executed automatically after you exit the menu.

< Notes >

On Auto Run operation, if there is a controller operation, Auto Run will be cancelled and the controller operation will be executed. In order to operate Auto Run again, press the IRIS OPEN Key to activate the main menu & exit it. And then Auto Run will be executed.

3-A. PRESET

This function is to move the designated postions if you select the desirable target or location.

```
1. PRESET NO : 1~128
2. PRESET DEFINE : OFF/<ON>
3. PRESET NAME : OFF/<ON>
4. P/T POSITION : P/T ANGLE
5. BRIGHTNESS : 0~100
6. ATW : <SET>
7. WDR : <SET>
EXIT
```

The Selection Key : UP, DOWN, LEFT, RIGHT KEY
The Execution key : IRIS OPEN KEY

☞ PRESET NO

Total 128 Presets can be set up.

If you want to change the PRESET NO, use the LEFT, RIGHT key.

☞ PRESET DEFINE

OFF : PRESET can not be operated.

ON : PRESET can be operated.

When you want to change the location of Pan/Tilt/Zoom, it is as follows:

- ① After the PRESET DEFINE options switch OFF to <ON>, press the IRIS OPEN Key.
- ② Locate the desirable place of Pan/Tilt.
(If Digital Flip is ON, the Tilt can be operated up to 180° automatically)

```
PRESET NAME : PRESET0001
PAN : XXX
TILT : XXX
ZOOM : T/W EXIT : IRIS OPEN
```

③ If you want to Zoom location, press TELE/WIDE buttons of controller.

④ At last, press the IRIS OPEN Key for the last setting of Pan/Tilt/Zoom.

6. Functional Description

PRESET NAME

OFF : Preset Name is not displayed on the screen after Preset movements.
 <ON> : Preset Name is displayed on the screen after Preset movements.
 The default of PRESET NAME is PRESET0001. The method of editing is as follows:

- ① Press the IRIS OPEN Key after PRESET NAME is ON.
- ② How to edit PRESET NAME is the same as "1-B. CAMERA NAME DISPLAY"

BRIGHTNESS

Brightness of the current preset can be adjusted.

ATW

White Balance of the current preset can be adjusted. The setting is as follows:

- ① Select the ATW menu.
- ② Press the IRIS OPEN Key at SET mode.
- ③ How to edit ATW setting is the same as "2-C. ATW"

WDR

When the screen of the current preset is darker because of surrounding bright light, it is used. To edit WDR setting is as follow:

- ① Select the WDR menu.
- ② Press the IRIS OPEN Key at SET mode.
- ③ How to edit WDR setting is the same as "2-A. WDR"

< Notes >

- ① When setting preset by the shortcut key, it can be from No. 1 to No. 64. From No. 65, it should be set up by the OSD menu.
- ② When setting preset by the shortcut key, BRIGHTNESS, WDR, ATW will be set to the factory default.

3-B. TOUR

This Function is to operate repeatedly Group surveillance with programmed presets.

1. TOUR NO :	1 ~ 5
2. TOUR NO DEF :	OFF/<ON>
3. NAME :	TOURGROUP1
4. TOUR NAME DEF :	OFF/<ON>
5. DWELL TIME :	1~10
EXIT	

TOUR NO

Maximum 5 Groups can be registered.

TOUR NO DEF

OFF : Tour Group setting is cancelled
 ON : Tour Group is set up

< Setting example >

TOUR NO	1	2	3	4	5
TOUR DEF	ON	OFF	ON	OFF	ON

TOUR will be executed with programmed preset 1, 3, 5.

To set Tour group1 is as follows:

- ① Register "1" to TOUR NO.
- ② Press they IRIS OPEN Key after TOUR NO DEF is set to <ON>.

1. PRESET NUMBER OFF/1~128
2. PRESET NUMBER OFF/1~128
3. PRESET NUMBER OFF/1~128
4. PRESET NUMBER OFF/1~128
5. PRESET NUMBER OFF/1~128
EXIT

6. Functional Description

- ③ Input desirable PRESET Number from 1 in serial order.
- ④ When the setting is done, select EXIT and press IRIS OPEN Key.

< Notes >

If TOUR GROUP1 PRESET set was as in the following picture:

1. PRESET NUMBER 1
2. PRESET NUMBER 2
3. PRESET NUMBER 3
4. PRESET NUMBER OFF
5. PRESET NUMBER 4
EXIT

After that is, the presets operates from PRESET1, 2, 3 it returns PRESET1.
 If there is "OFF" during operation in serial order, it returns to the first preset.

NAME

It changes the TOUR GROUP name. Tour naming is as follows:

- ① After the TOUR NAME DEF menu is set to <ON>, press the IRIS OPEN Key.
- ② To define the Tour group name is the same as "1-B. CAMERA NAME DISPLAY"

DWELL TIME

Waiting time between preset execution and the next preset.

< Notes >

When ZOOM is in the PRESET mode and MD and FREEZE function is used, DWELL TIME of Tour setting should be minimum 5 seconds.

3-C. SCAN

This function is to surveil the designated two points automatically, repeatedly to the designated speed.

1. SCAN NO	1 ~ 5
2. SCAN DEFINE	OFF/ON
3. NAME	SCANGROUP1
4. SCAN NAME DEF	OFF/<ON>
5. PAN START POS	<180>
6. PAN END POS	<350>
7. TILT POS	<45>
8. SCAN SPEED	5°,10°,15°,20°/S
EXIT	

SCAN NO

You can register 5 scans.

SCAN NO DEF

OFF : Scan can be cancelled.
 ON : Scan can be set up (It should be ON for the operation of AUTO RUN)

< Setting Example >

SCAN NO	1	2	3	4	5
SCAN DEF	ON	OFF	ON	OFF	ON

Designated SCAN 1, 3, 5 are executed.

How to set SCAN1 is as follows:

- ① Register "1" to SCAN NO.
- ② Press the IRIS OPEN Key after SCAN DEFINE is set to <ON>.

NAME

It changes SCAN NAME. How to change NAME is as follows:

- ① Press the IRIS OPEN Key after switching SCAN NAME DEF mode to <ON>.
- ② How to edit SCAN NAME is the same as "1-B. CAMERA NAME DISPLAY"

6. Functional Description

☞ PAN START POS

Starting position of SCAN is set up. PAN direction is 0°~360°, 0°~-360°.
Setting is as follows:

PAN START POSITION SET
PAN START POSITION: XXX
EXIT: IRIS OPEN

- ① Press the IRIS OPEN Key in the PAN START POS mode.
 - ② After you adjust the desired position of PAN, press the IRIS OPEN Key and the setting is done.
- The Pan moving key : LEFT, RIGHT KEY

☞ PAN END POS

Ending position of SCAN is set up. PAN direction is 0°~360°, 0°~-360°.
Setting is the same of "PAN START POS"

☞ TILT POS

It set up the Tilt angle of SCAN. Tilt limit is 0°~90°.
Setting is the same of "PAN START POS". The Tilt moving Key is Up/Down Key.

< Notes >

- ① As though DIGITAL FLIP is ON and Tilt exceeds 0°(90°) limit, TILT POS keeps 0°(90°).
- ② If you set TILT POS first, SCAN setting is much easier.

☞ SCAN SPEED

SCAN SPEED is set up. The setting SPEED range limits 5°/S (Slow) to 20°/S (Fast).

< Notes (SCAN setting) >

- ① It switches automatically to ZOOM 1X and AUTO FOCUS.
- ② The value of BRIGHTNESS, WDR, ATW goes to the Factory default setting.

3-D. PATTERN

This function is to memorize the paths operated with the joystick and replay them.

1. PATT NUMBER	1 ~ 5
2. PATT DEFINE	OFF/ON
3. NAME	PATTERN001
4. PATT NAME DEF	OFF/<ON>
5. PATT RECORD	OFF/<ON>
6. PATT SPEED	5,10,15,20°/S
EXIT	

The Selection key : UP, DOWN, LEFT, RIGHT KEY
The Execution key : IRIS OPEN KEY

☞ PATT DEFINE

OFF : PATTERN can be cancelled.
ON : PATTERN is set up
When you use it in AUTO RUN mode, it should be ON.

☞ NAME

It changes PATTERN NAME. How to edit it is as follows:
① Press the IRIS OPEN Key after switching PATTERN NAME DEF mode to <ON>.
② How to edit pattern is the same as "1-B. CAMERA NAME DISPLAY"

6. Functional Description

☞ PATT RECORD

OFF : Pattern is not memorized.
ON : Pattern is memorized.

☞ PATT SPEED

This function sets up the speed of Pattern by 4 steps from 5°/S (SLOW) to 20°/S (FAST).
How to set Pattern:

MEMORY FILL : XXX (Recorded)
START:IRIS OPEN
EXIT:IRIS CLOSE

The PAN/TILT selection key : UP, DOWN, LEFT, RIGHT KEY

- ① Press the IRIS OPEN Key after switching PATT RECORD mode to <ON>.
- ② Move the PAN/TILT to the desired position before starting PATTERN.
- ③ Press the IRIS OPEN Key in order to start the process.
- ④ Press the IRIS CLOSE Key to save the process.

< Notes (PATTERN setting) >

- ① If there is no moving of PAN/FILT, no pattern is memorized.
- ② It switches automatically to ZOOM 1X and AUTO FOCUS.
- ③ The value of BRIGHTNESS, WDR, ATW goes to FACTORY DEFAULT SETTING.

(4) ZONE SET

1. AREA SEL	1 ~ 8
2. AREA DEFINE	OFF/ON
3. AREA NEW SET	OFF/ON
4. TOP	XXX
5. BOTTOM	XXX
6. LEFT	XXX
7. RIGHT	XXX
EXIT	

The Selection Key : UP, DOWN, LEFT, RIGHT KEY
The Execution key : IRIS OPEN KEY

☞ AREA SEL

Up to 8 privacy areas are set up.

☞ AREA DEFINE

OFF : PRIVACY ZONE is not used.
ON : PRIVACY ZONE is used.

☞ AREA NEW SET

OFF : Use the previous PRIVACY ZONE.
ON : Set new PRIVACY ZONE from the current PAN/TILT position.
(When it switches OFF to ON, PRIVACY ZONE appears on the center of the screen)

* How to set PRIVACY ZONE1.

- ① When the menu is OFF, move PAN/TILT and locate PRIVACY ZONE block on the center of the screen. .
- ② Press the IRIS OPEN KEY in order to activate the MENU and press it again after select "ZONE SET"
- ③ Change AREA SEL to 1.
- ④ Switch AREA DEFINE option from OFF to ON.

6. Functional Description

- ⑤ Switch AREA NEW SET option from OFF to ON.
- ⑥ New ZONE is appeared in the center of the screen. Move the ZONE with UP, DOWN, LEFT, RIGHT Key.
- ⑦ Move to EXIT and press the IRIS OPEN KEY to save.

< Notes (ZONE setting) >

8 points of PRIVACY ZONE area are in the middle of the screen. Therefore, when the tilt is positioned at upside limit(0°~45° or 135°~180°), PRIVACY ZONE cannot be set in the area which is displayed above the center.

(5) ALARM SET

1. ALARM DISPLAY	OFF/MID/UP/DOWN
2. ALARM IN	<SET>
3. ALARM OUT	OFF/ON
4. TIME OUT	1 ~ 10Sec
EXIT	

ALARM DISPLAY

When alarm inputs, Alarm No. is displayed.
Avoid the repetition of the same name with MD, CAMERA NAME, etc.

ALARM IN

4 Alarm inputs are set up. When alarm inputs from sensor, it moves to the corresponding preset. Preset setting of ALARM IN is as follows:

- ① When you press the IRIS OPEN Key after moving to the ALARM IN menu, the menu below appears as follows:

1. IN1 PRESET NUM	OFF/1 ~128
2. IN2 PRESET NUM	OFF/1 ~128
3. IN3 PRESET NUM	OFF/1 ~128
4. IN4 PRESET NUM	OFF/1 ~128
EXIT	

- ② Register Preset No. to the IN1 ~ IN4 line.
OFF : As though Alarm inputs, it does not move.
1~128 : Whenever Alarm inputs, move to the corresponding preset.
(In the TOUR, SCAN, PATTERN, it moves to the preset)

- ③ Move to EXIT and press IRIS OPEN KEY to save.

ALARM OUT

One Alarm Input corresponds to the 2 Alarm Outputs.

TIME OUT

When Preset No. is set to IN1 ~ IN4, it stays during TIME OUT after moving preset and then it returns to the existing setting. (On the tour operation, if ALARM inputs, it moves to the corresponding preset and it stays during TIME OUT. And then it executes from the first TOUR operation)

< Notes (ALARM) >

- ① Although Preset No. of IN1 ~ IN4 is set up, it does not move when the corresponding PRESET DEFINE is set to OFF.
- ② External ALARM signal should maintain over 200ms and then ALARM is corresponding.
- ③ IN1 out of IN1 ~ IN4 has the priority of ALARM responses. (While 4 ALARM inputs, response comes first from IN1)
- ④ ALARM responds only when the ground connected.

6. Functional Description

(6) INITIALIZE SET

1. POWER ON RESET
2. PAN/TILT INIT
3. CAMERA INIT
4. AUTO SEQ INIT
5. PRIVACY ZONE INIT
6. FACTORY INIT
EXIT

The selection Key : UP, DOWN
The execution Key : IRIS OPEN KEY

POWER ON RESET

Camera is initialized to the first status of power input.

PAN/TILT INIT

- ① It initializes the PAN/TILT menu.
- ② It initializes the position of PAN/TILT.

< Notes >

6. PROTOCOL: P-D/P-P

When it is initialized at the status of protocol, PELCO-P, the power of the PTZ camera should be off/on for PELCO-D operation.

CAMERA INIT

It initializes only CAMERA setting menu.

AUTO SEQ INIT

- ① It initializes only AUTO SEQ menu.
- ② It does not initialize the setting angle of the preset, the memory of pattern.

PRIVACY ZONE INIT

Max. 8 PRIVACY ZONES are initialized. (Any saved PRIVACY ZONE is removed)

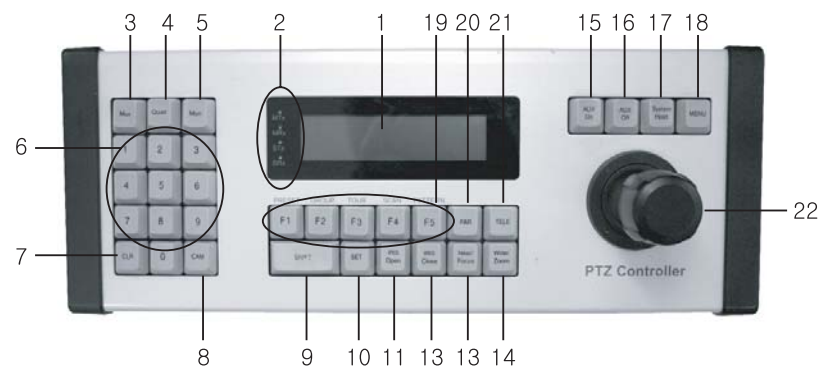
FACTORY INIT

A camera is initialized into the factory default setting.

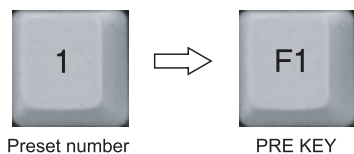
※ Simple PRESET setting by WTX-2000 ※

It operates without OSD menu.

Example) How to set Preset1



6. Functional Description

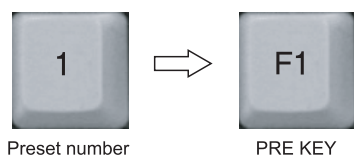


- ① Place PAN/TILT/ZOOM to the desired place by Joystick (No.22).
- ② Press Keypad No. 1.
- ③ Press the F1 Key more than 2 seconds.
- ④ Setting is done.

< Notes >

- ① Setting the preset by the shortcut key can be made from No. 1 to No. 64.
- ② The value of BRIGHTNESS, WDR, ATW goes to FACTORY DEFAULT SETTING.

※ Simple PRESET moving by WTX-2000 ※



It operates without OSD menu.
After pressing Preset Number, press the F1 key shortly and it moves to the corresponding PRESET. However, It is valid only up to Preset No. 32 which PRESET DEFINE is set to ON.

※ Simple SCAN operation by WTX-2000 ※

It operates without OSD menu.
After pressing Key Pad Number from 1 to 5, press the F4 key shortly.
It is valid only when SCAN DEFINE is set to ON and the appropriate SCAN menu is set properly.

※ Simple PATTERN operation by WTX-2000 ※

It operates without OSD menu.
After pressing Key Pad Number from 1 to 5, press F5 key shortly.
It is valid only when PATTERN DEFINE is set to ON and the appropriate PATTERN menu is set properly.

※ Quick Operation Key Table ※

[PELCO D/P PROTOCOLS]

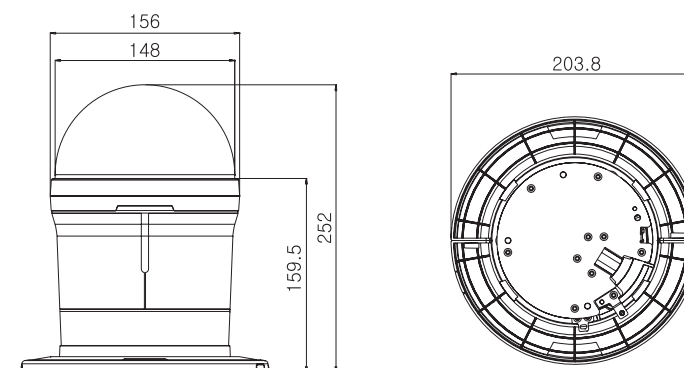
Number	Function
1~64+Preset	Setting Preset Press the preset buttons more than 2 seconds.
1~64+Preset	Executing Preset
66+Preset	Executing Scan
71+Preset	Executing Tour
81+Preset	Executing Pattern
95+Preset	IRIS OPEN (OSD Menu)
96+Preset	IRIS CLOSE

7. Troubleshooting guide

Before sending the camera out for repair, check the items below. If the problem persists after checking these items, contact your service center.

Problems	Troubleshooting
Nothing appears on the screen.	<ul style="list-style-type: none"> ● Please check the power connection. ● Please check the video signal line connection.
The video image is not clear.	<ul style="list-style-type: none"> ● Please check if the lens or the outer glass is clean. <ul style="list-style-type: none"> - Dirt or fingerprints on the lens can affect the image blooming or reflection. Gently wipe any dirt or fingerprints off the lens or the glass with a soft cloth. ● Please check and adjust contrast feature of the monitor. ● Please check if the camera is exposed directly toward a bright light, sunlight, or sun light reflecting area. Please move the camera's position in this case.
The screen is dark.	<ul style="list-style-type: none"> ● Please check and adjust contrast feature of the monitor. ● If there is any interim equipment, set the Hi-z position properly and check the terminals. ● Please check if the power supply is within the specification. <ul style="list-style-type: none"> - When the cable connection requires a long distance, there may need a higher power supply or an additional power/video amplification.
The camera's surface is too hot and black stripes appear on the screen.	<ul style="list-style-type: none"> ● Please check if the power supply is regulated and is within the standard requirement of the product.
The screen is flickering.	<ul style="list-style-type: none"> ● Please check if the camera is facing directly toward sunlight or fluorescent light.

8. Dimension (mm)



9. Specifications

	Wide Dynamic 30x Zoom Speed Come Camera
Image sensor	1/4" Color SuperHAD CCD, 410,000 pixels
Effective Pixels	NTSC : 768(H) x 494(V) PAL : 752(H) x 582(V)
H.Resolution	NTSC : 520 TV Lines (Day) / 570 TV Lines (Night) PAL : 500 TV Lines (Day) / 550 TV Lines (Night)
Synchronizing system	Internal / LineLock
Scanning system	NTSC 525 Lines PAL 625 Lines 2:1 Interlaced
Video output	1.0Vp-p Composite, 75 Ohms
S/N ratio	More than 50 dB (AGC Off)
Min. illumination	0.003Lux at F1.6 (Color), 0.0006Lux at F1.6 (B/W)
OSD	On / Off
Digital zoom	On / Off (2X,4X,8X)
Day & Night	Color / B/W / Auto (ICR filter change)
Back Light Compensation	Normal / BLC / WDR (52dB)
Shutter Speed	Auto/Manual (NTSC : 1/60 ~ 1/120,000), (PAL : 1/50 ~ 1/120,000)
White Balance	AWC / Manual / ATW(1,800°K~10,500°K)
Gain Control	Low / Middle / High / Off
Sens-up	ON / OFF (2X ~128X)
SSNR	Low / Middle / High / Off
Privacy	On / Off (8 programmable zones)
Preset	128 points
Digital Flip	On / Off
Focus control	Auto / Manual
Iris control	Auto / Manual
Motion detection	On / off (Built-in alarm output connector)
Protocol	RS-485 (Pelco-D, P)
Power source	24VAC (or 12VDC optional)
Operating current	20W Max.
Lens	Auto Focus Digital zoom
Zoom ratio	30X, f3.3~99mm (F1.6)
Angle of view	H : 51.26°(Wide) ~ 2.39°(Tele), V : 39.03°(Wide) ~ 1.80°(Tele)
Aperture ratio	F.1.6 ~ F.3.7
Pan/Tilt angle	Pan : 360°(200°/sec) / Tilt : 0° ~ 180°(200°/sec)
Operating Temperature	14°F ~122°F (-10°C ~ +50°C)
Humidity	Within 90% RH
Measurement (mm)	156(Ø) x 252(H)
Weight (Approx.g)	2900

MEMO

MEMO

MEMO

MEMO

MEMO

MEMO

MEMO
