

INSTRUCTION MANUAL Ver 1.0 (3810-0132D)

Indoor Mini Speed Dome Camera Series



CAUTION
RISK OF ELECTRIC
SHOCK DO NOT OPEN



CAUTION : TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT OPEN COVERS.
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONAL.



This lightning flash with arrowhead symbol is intended to alert the user to the presence of un-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This exclamation point symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING : TO PREVENT THE RISK OF FIRE OR ELECTRIC SHOCK HAZARD, DO NOT EXPOSE THIS CAMERA TO RAIN OR MOISTURE.

Important Safeguard

1. Read Instructions

Read all of the safety and operating instructions before using the product.

2. Retain Instructions

Save these instructions for future reference.

3. Attachments/Accessories

Do not use attachments or accessories unless recommended by the appliance manufacturer as they may cause hazards, damage product and void warranty.

4. Water and Moisture

Do not use this product near water or moisture.

5. Installation

Do not place or mount this product in or on an unstable or improperly supported location. Improperly installed product may fall, causing serious injury to a child or adult, and damage to the product. Use only with a mounting device recommended by the manufacturer, or sold with the product. To insure proper mounting, follow the manufacturer's instructions and use only mounting accessories recommended by manufacturer.

6. Power source

This product should be operated only from the type of power source indicated on the marking label.

Precautions

■ Operating

- Before using, make sure power supply and others are properly connected.
- While operating, if any abnormal condition or malfunction is observed, stop using the camera immediately and then contact your local dealer.

■ Handling

- Do not disassemble or tamper with parts inside the camera.
- Do not drop or subject the camera to shock and vibration as this can damage camera.
- Care must be taken when you clean the clear dome cover. Especially, scratch and dust will ruin your quality of camera.

■ Installation and Storage

- Do not install the camera in areas of extreme temperature, which exceed the allowable range.
- Avoid installing in humid or dusty places.
- Avoid installing in places where radiation is present.
- Avoid installing in places where there are strong magnetic fields and electric signals.
- Avoid installing in places where the camera would be subject to strong vibrations.
- Never expose the camera to rain and water.

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Features

■ Camera Specifications

- CCD Sensor : 1/4" Interline Transfer CCD
- Zoom Magnification : x10 Optical Zoom, x10 Digital Zoom (Max. x100 Zoom) → x10 Zoom Model
- Day & Night Function
- Various Focus Mode : Auto-Focus / Manual Focus / Semi-Auto Focus.
- Independent & Simultaneous Camera Characteristic Setup in Preset operation

■ Powerful Pan/Tilt Functions

- Max. 360°/sec high speed Pan/Tilt Motion
- Using Vector Drive Technology, Pan/Tilt motions are accomplished in a shortest path. As a result, time to target view is reduced dramatically and the video on the monitor is very natural to watch.
- For jog operation using a controller, since ultra slow speed 0.05°/sec can be reached, it is very easy to locate camera to desired target view. Additionally it is easy to move camera to a desired position with zoom-proportional pan/tilt movement.

■ **Preset, Pattern, Swing, Group, Privacy Mask and More...**

- Max. 127 Presets are assignable and characteristics of each preset can be set up independently, such as White Balance, Auto Exposure, Label and so on.
- Max. 8 set of Swing action can be stored. This enables to move camera repetitively between two preset positions with designated speed.
- Max. 4 of Patterns can be recorded and played back. This enables to move camera to follow any trajectory operated by joystick as closely as possible.
- Max. 8 set of Group action can be stored. This enables to move camera repetitively with combination of Preset or Pattern or Swing. A Group is composed of max. 20 entities of Preset/Pattern/Swings.
- Privacy Masks are assignable, not to intrude on other's privacy. (4 Privacy Zones)

■ **PTZ(Pan/Tilt/Zoom) Control**

- With RS-485 communication, max. 255 of cameras can be controlled at the same time.
- Pelco-D or Pelco-P protocol can be selected as a control protocol in the current version of firmware.

■ **OSD(On Screen Display) Menu**

- OSD menu is provided to display the status of camera and to configure the functions interactively.
- The information such as Camera ID, Pan/Tilt Angle, Alarm Input and Preset can be displayed on screen.

■ **Alarm I/O Functions**

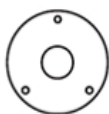
- 4 alarm sensor Inputs are available.
- To reject external electric noise and shock perfectly, alarm sensor Input is decoupled with photo coupler.
- The signal range of sensor input is from DC 5.0 to 12.0 volts to adopt various applications.
- If an external sensor is activated, camera can be set to move to the corresponding Preset position.

Product & Accessories

■ Product & Accessories



Main Body
&
Mounting Base



Rubber Gasket



Plastic Anker



TORX Screw



Manual



Clear Bubble



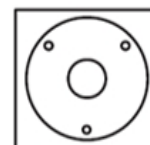
AC or DC
Adaptor (Option)



Machine Screw



L-Style TORX Wrench



Guide Pattern



Self-tapping Screw

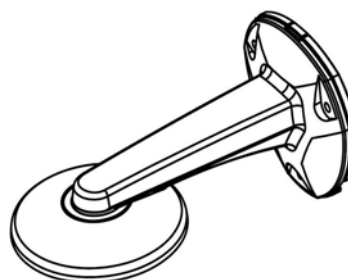


Terminal Block

■ Options

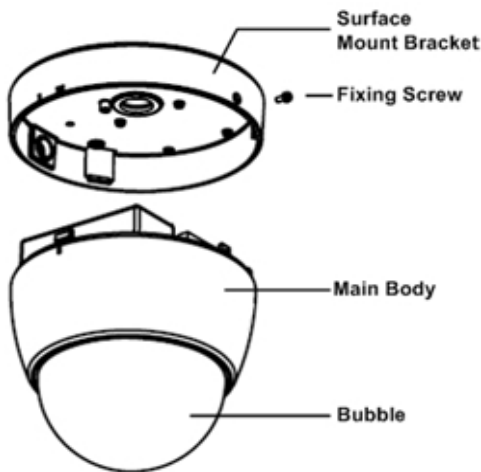


● Pendant Mount Bracket

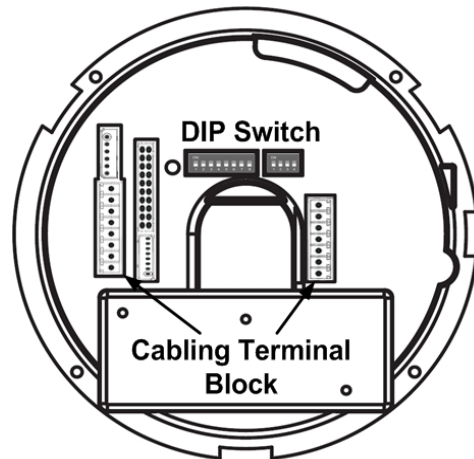


● Wall Mount Bracket

Parts Name & Functions



● Main Unit / Surface Mount Bracket

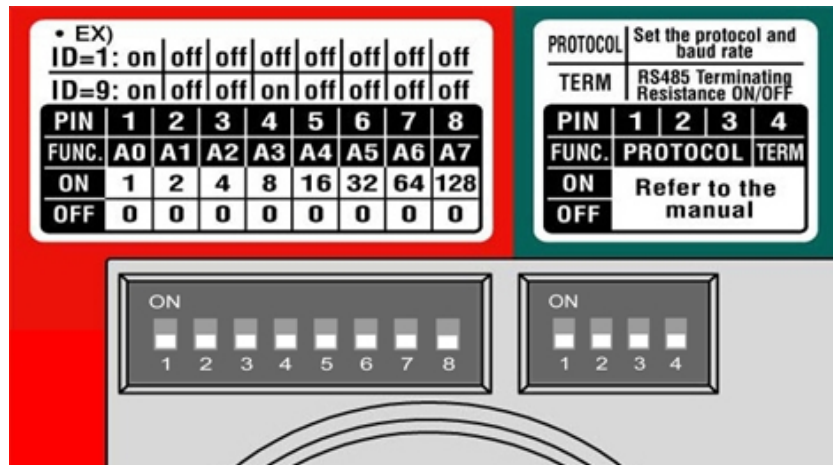


● Back of Main Unit

- Bubble
Do not detach protection vinyl from the bubble before finishing all installation process to protect the bubble from scratches or dust.
- Surface Mount Bracket
This is used to install the camera directly on the ceiling. After separating this cover first and then attach this directly to ceiling. Camera must be assembled at the last stage.
- Fixing Screw
Fixes main unit to surface mount bracket.
- Cabling Terminal Block
During installation, Power, Video, Communication, Alarm Input cables are connected on to this cabling terminal block.
- DIP Switch
Adjusts camera ID and protocols.

DIP Switch Setup

Before you install the camera, you should set the DIP switches to configure the camera ID, communication protocol.



■ Camera ID Setup

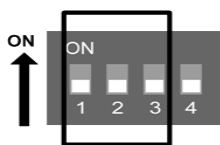


- ID number of camera is set using dip switch. The example is shown below.

Pin	1	2	3	4	5	6	7	8
ID Value	1	2	4	8	16	32	64	128
ex) ID=5	on	off	on	off	off	off	off	off
ex) ID=10	off	on	off	on	off	off	off	off

- The range of ID is 1~255. **Do not use 0 as camera ID.** Factory default of Camera ID is 1.
- If you want to control a certain camera, you must match the camera ID with Cam ID setting of DVR or Controller.

■ Communication Protocol Setup

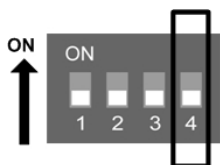


- Select the appropriate Protocol with DIP switch combination.

Switch State			Protocol
P0 (Pin 1)	P1 (Pin 2)	P3 (Pin 3)	
OFF	OFF	OFF	PELCO-D, 2400 bps
ON	OFF	OFF	PELCO-D, 9600 bps
OFF	ON	OFF	PELCO-P, 4800 bps
ON	ON	OFF	PELCO-P, 9600 bps
Others			Reserved

- If you want to control using DVR or P/T controller, their protocol must be identical to camera. Otherwise, you can not control the camera.
- If you changed camera protocol by changing DIP S/W, the change will be effective after you reboot the camera.
- Factory default of protocol is "Pelco-D, 2400 bps".

■ Termination Switch Setting



Termination switch(Pin 4) is used in cases listed below.

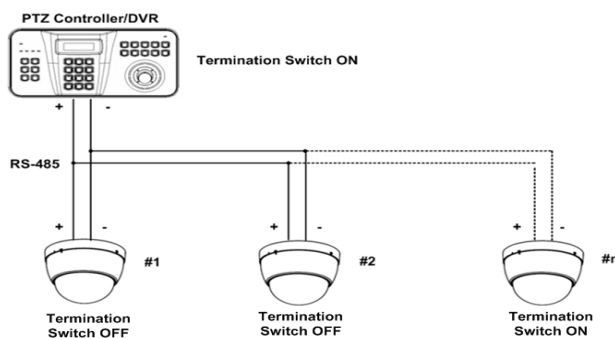
- **Long-distance communication between the controller and the camera (1-to-1 connection)**

When the connecting distance between the two units is especially long, communication errors may occur due to the impedance of transmission cable. In this case, set the termination switch of both units to ON.

- **Controlling multiple cameras (Multiple connection)**

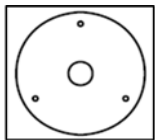
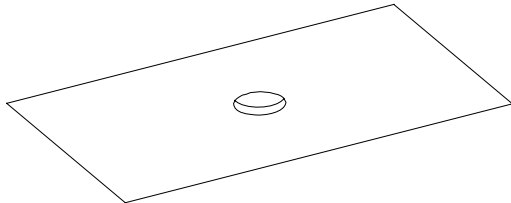
The camera may not operate correctly if multiple cameras are connected and controlled. In this case, set the termination switch of the controller and the last connected camera to ON and the switch of other cameras is OFF.

Ex) Using the Terminating Resistance

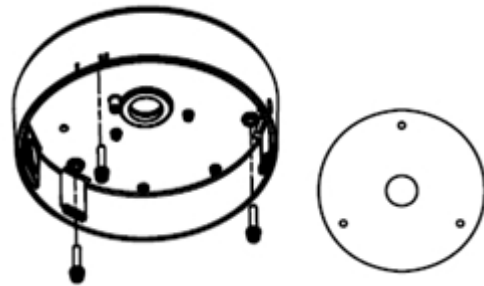


Direct Installation on the Ceiling

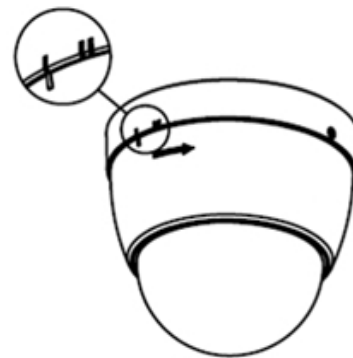
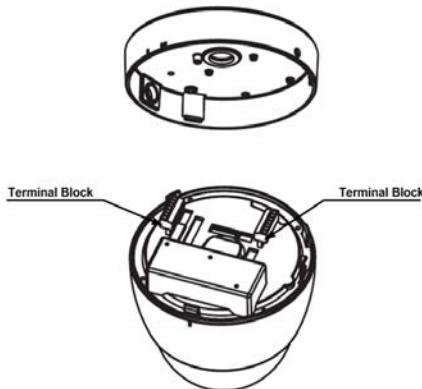
- ① To pass cables to upside of ceiling, please, make about 50~60mm hole on the ceiling panel.
- ② Detach the marked part from the rubber gasket and screw the surface mount bracket to the ceiling with fixing screws.



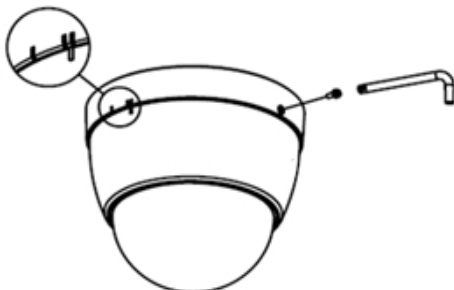
You can use "Guide Pattern" for the making holes.



- ③ Wire cables to terminal block and connect the terminal blocks to main unit.
- ④ Insert the main body into the surface mount bracket with the molding lines on each part being aligned and turning clockwise.

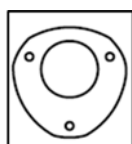
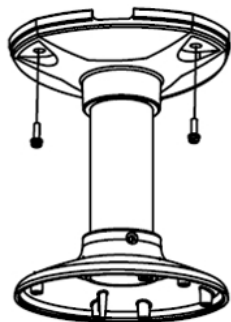


- ⑤ Insert the fixing screw tightly and detach the protection vinyl from dome cover.



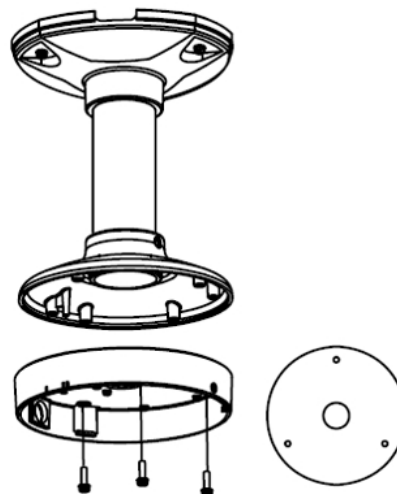
Installation using Pendant Mount Bracket

- ① Screw pendant mount to ceiling with screws.

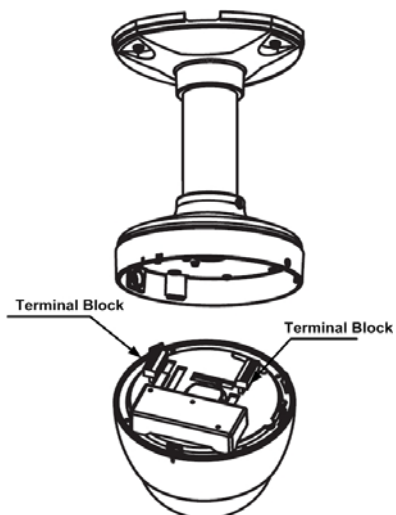


You can use "Guide Pattern" for the making holes.

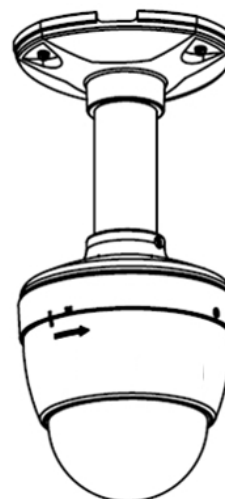
- ② Detach the marked part from the rubber gasket and screw the mounting base to the pendant mount bracket with fixing screws.



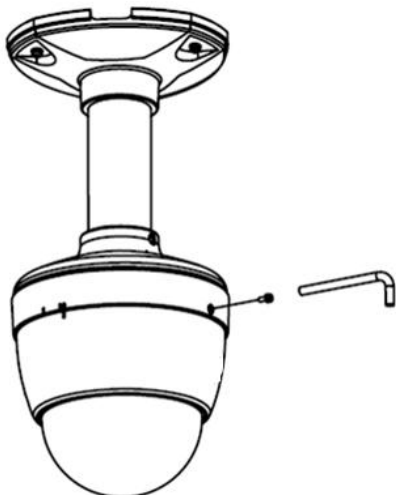
- ③ Wire cables to terminal block and connect the terminal blocks to main unit.



- ④ Insert the main body into the pendant mount bracket with the molding lines on each part being aligned and turning clockwise.

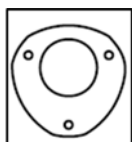
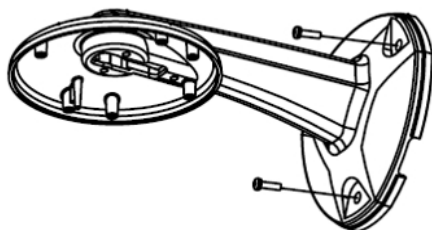


- ⑤ Insert the fixing screw tightly and detach the protection vinyl from dome cover.



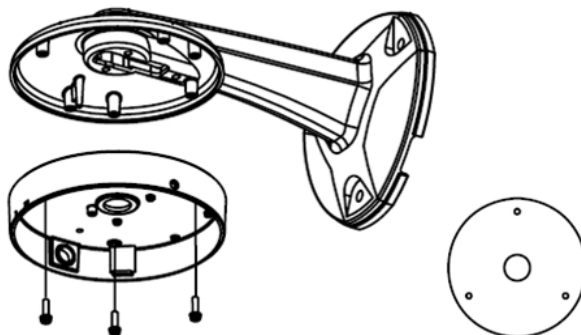
Installation using Wall Mount Bracket

- ① Screw wall mount bracket to wall with 3 screws.



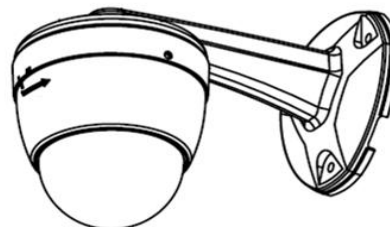
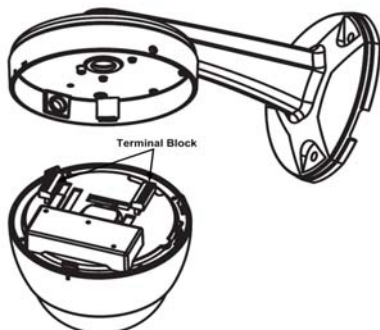
You can use "Guide Pattern" for the

- ② Detach the marked part from the rubber gasket and screw the mounting base to the wall mount bracket with fixing screws.

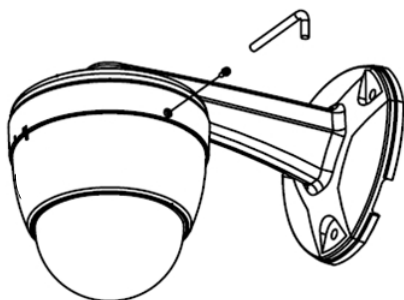


2. INSTALLATION

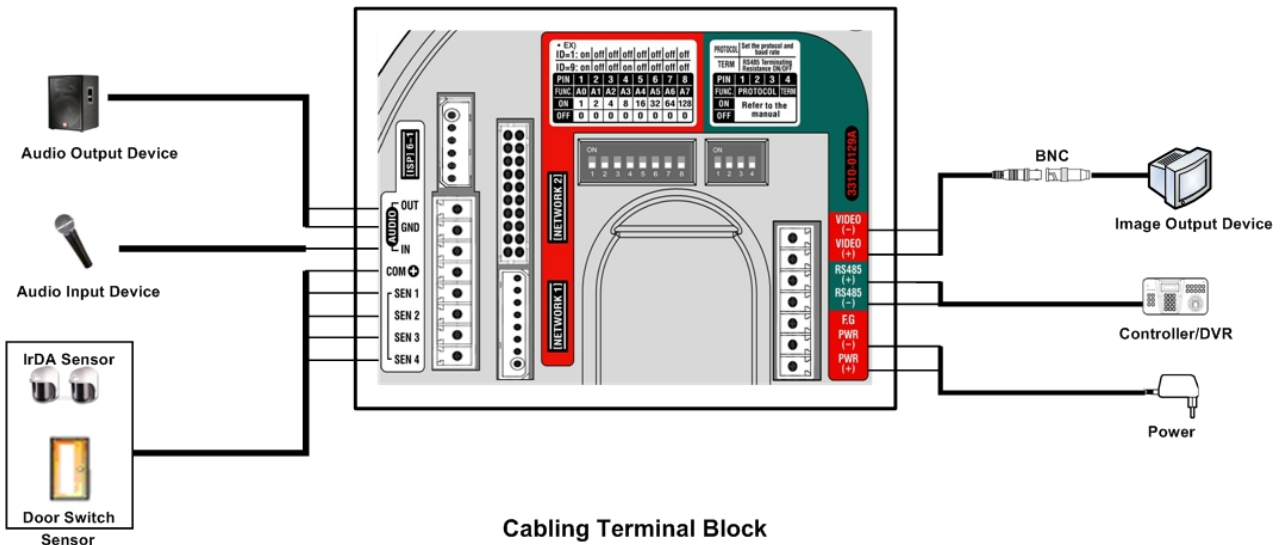
- ③ Wire cables to terminal block and connect the terminal blocks to main unit.
- ④ Insert the main body into the wall mount bracket with the molding lines on each part being aligned and turning clockwise.



- ⑤ Insert the fixing screw tightly and detach the protection vinyl from dome cover.



Cabling



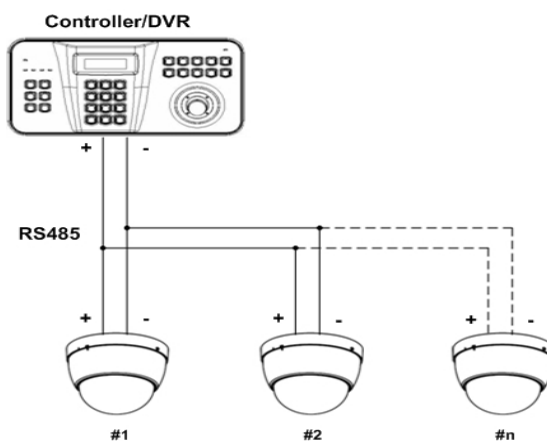
■ Power Connection

- Please, check the voltage and current capacity of rated power carefully. Rated power is indicated in the back of main unit.

Rated Power	Input Voltage Range	Current Consumption
DC 12V	DC 11V ~ 18V	1 A
AC 24V	AC 17V ~ 29V	0.8 A

■ RS-485 Communication

- For PTZ control, connect this line to keyboard and DVR. To control multiple cameras at the same time, RS-485 communication lines of them is connected in parallel as shown below.



■ Audio Input/Output Connection (Reserved for network model)

- Connection with audio input/output device.

■ Video Connection

- Connect with BNC coaxial cable

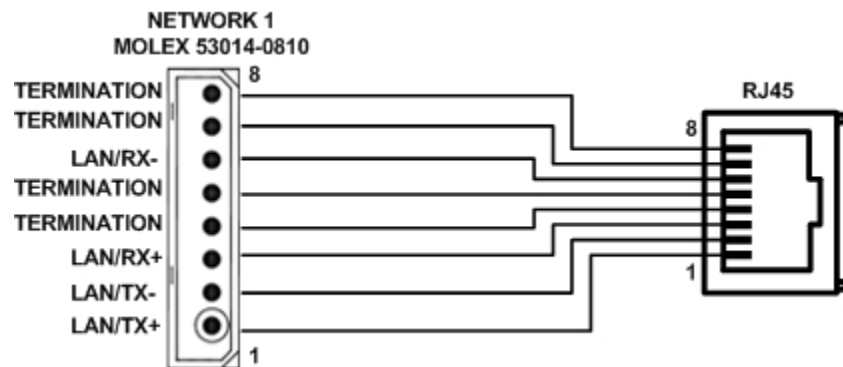
■ Network Connection (Reserved for network model)

Notice) Network model is now preparing.

● NETWORK 1

Connect with LAN cable.

If LAN cable is not connected properly, This product can not be operate.

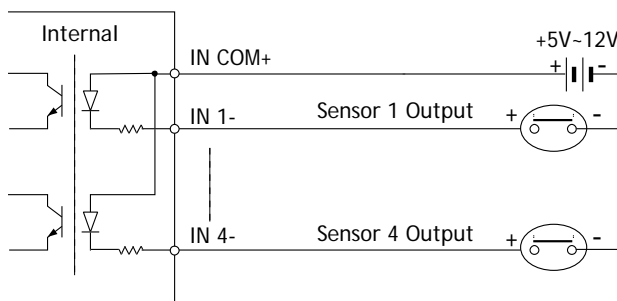


● NETWORK 2 (Reserved for supplier.)

DO NOT CONNECTED ANY DEVICE.

■ Alarm Input Connection

- Sensor Input



Before connecting sensors, check driving voltage and output signal type of the sensor. Since output signal types of the sensors are divided into Open Collector and Voltage Output type in general, the cabling must be done properly after considering these typed.

Signal	Description
IN COM+	Connect (+) cable of electric power source for Sensors to this port as shown in the circuit above.
IN1-, IN2-, IN3-, IN4-	Connect output of sensors for each port as shown in the circuit above.

If you want to use Alarm Input, the types of sensor must be selected in OSD menu. The sensor types are Normal Open and Normal. If sensor type is not selected properly, the alarm can be activated reversely.

Normal Open	Output Voltage is high state when sensor is activated
Normal Close	Output Voltage is high state when sensor is not activated

Check points before operation

- Before power is applied, please check the cables carefully.
- The camera ID of the controller must be identical to that of the target camera. The camera ID can be checked by reading DIP switch of the camera.
- If your controller supports multi-protocols, the protocol must be changed to match to that of the camera.
- If you changed camera protocol by changing DIP switch, the change will be effective after you reboot the camera.
- Since the operation method can be different for each controller available, refer to the manual for your controller if camera can not be controlled properly. The operation of this manual is based on the standard Pelco® Controller.

Preset and Pattern Function Pre-Check

- Check how to operate preset and pattern function with controller or DVR in advance to operate camera function fully when using controller or DVR.
- Refer to the following table when using standard Pelco® protocol controller.

<Go Preset>	Input [Preset Number] and press [Preset] button shortly.
<Set Preset>	Input [Preset Number] and press [Preset] button for more than 2 seconds.
<Run Pattern>	Input [Pattern Number] and press [Pattern] button shortly.
<Set Pattern>	Input [Pattern Number] and press [Pattern] button for more than 2 seconds.

- If controller or DVR has no pattern button or function, use shortcut keys with preset numbers. For more information, refer to “Reserved Preset” in this manual.

Starting OSD Menu

- **Function** Using the OSD menu, Preset, Pattern, Swing, Group and Alarm Input function can be configured for each application.
- **Enter Menu** <Go Preset> [95]

Reserved Preset

- **Description** Some Preset numbers are reserved to special functions.
- **Function**

<Go Preset> [95]	Enters into OSD menu.
<Go Preset> [131~134]	Runs Pattern Function 1 ~ 4
<Go Preset> [141~148]	Runs Swing Function 1 ~ 8
<Go Preset> [151~158]	Runs Group Function 1 ~ 8

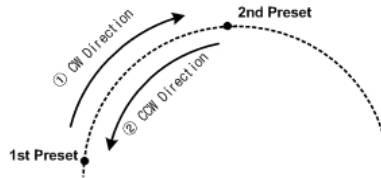
Preset

- **Function** Max. 127 positions can be stored as Preset position. The Preset number can be assigned from 1 to 128, but 95 is reserved for starting OSD menu.

Camera characteristics (i.e. White Balance, Auto Exposure) can be set up independently for each preset. Label should be blank and "Camera Adjust" should be set to "GLOBAL" as default. All characteristics can be set up in OSD menu.
- **Set Preset** <Set Preset> [1~128]
- **Run Preset** <Go Preset> [1~128]
- **Delete Preset** To delete Preset, use OSD menu.

Swing

- **Function** By using Swing function, you can make camera to move between 2 Preset positions repeatedly. When swing function runs, camera moves from the preset assigned as the 1st point to the preset assigned as the 2nd point in CW(Clockwise) direction. Then camera moves from the preset assigned as the 2nd point to the preset assigned as the 1st point in CCW(Counterclockwise) direction.



In case that the preset assigned as the 1st point is same as the preset assigned as the 2nd point, camera turns on its axis by 360° in CW(Clockwise) direction and then it turns on its axis by 360° in CCW(Counterclockwise) direction. Speed can be set up from 1°/sec to 180°/sec.

- **Set Swing** To set Swing, use OSD menu.
- **Run Swing** Method 1) <Run Pattern> [Swing NO.+10] ex) Run Swing 3 : <Run Pattern> [13]
Method 2) <Go Preset> [Swing NO + 140] ex) Run Swing 3 : <Go Preset>[143]
- **Delete Swing** To delete Swing, use OSD menu.

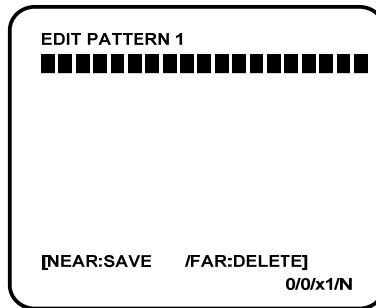
Pattern

- **Function** Pattern Function is that a camera memorizes the path (mostly curve path) by joystick of controller for assigned time and revives the path exactly as it memorized.
4 Patterns are available and Maximum 1200 communication commands can be stored in a pattern.

- **Set Pattern** Pattern can be created by one of following two methods.

Method 1) <Set Pattern> [Pattern NO.]

- Pattern editing screen is displayed as bellow.



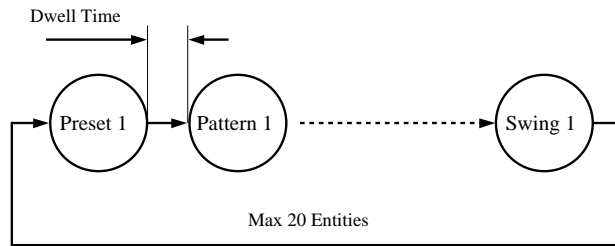
- Movement by Joystick and preset movement can be memorized in a pattern.
- The rest memory size is displayed in progress bar.
- To save the recording, press **NEAR** key and to cancel, press **FAR** key.

Method 2) OSD Using OSD Menu: See the section "How to use OSD Menu".

- **Run Pattern** Method 1) <Run Pattern> [Pattern NO.] ex) Run Pattern 2 : <Run Pattern> [2]
Method 2) <Go Preset> [Pattern NO+130] ex) Run Pattern 2 : <Go Preset>[132]
- **Delete Pattern** To delete Pattern, use OSD menu.

Group


- **Function** The group function allows running sequence of Presets, Pattern and/or Swings. Max 8 group can be stored. Each group can have max 20 action entities which can be preset, pattern or swing. Preset speed can be set up and the repeat number of Pattern & Swing can be set up in Group setup. Dwell time between actions can be set up also.



- **Set Group** Use OSD Menu to create a Group.
- **Run Group**
 - Method 1) <Run Pattern> [Group NO.+20] ex) Run Group 7 : <Run Pattern> [27]
 - Method 2) <Go Preset>[Group NO+150] ex) Run Group 7 : <Go Preset>[157]
- **Delete Group** To delete Group, use OSD menu.

Other Functions

- **Power Up Action** This function enables to resume the last action executed before power down. Most of actions such as Preset, Pattern, Swing and Group are available for this function but Jog actions are not available to resume.

- **Auto Flip** In case that tilt angle arrives at the top of tilt orbit (90°), zoom module camera keep moving to opposite tilt direction (180°) to keep tracing targets. As soon as zoom module camera passes through the top of tilt direction(90°), images should be reversed automatically and  appears in screen. If this function is set to OFF, tilt movement range is 0 ~ 95°.

- **Parking Action** This function enables to locate the camera to specific position automatically if operator doesn't operate the controller for a while. The Park Time can be defined as an interval from 1 minute to 4 hours.

- **Alarm Input** 4 Alarm Inputs are used. If an external sensor is activated, camera can be set to move to corresponding preset position. It is noted that the latest alarm input is effective if multiple sensors are activated.

- **Privacy Zone Mask** To protect privacy, Max. 4 Privacy Masks can be created on the arbitrary position to hide objects such as windows, shops or private house. With Spherical Coordinates system, powerful Privacy Zone Mask function is possible.

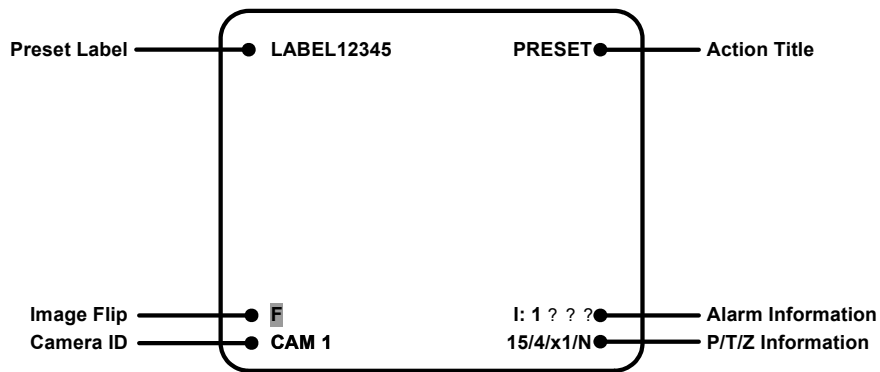
- **GLOBAL/LOCAL Image Setup** WB(White Balance) and AE(Auto Exposure) can be set up independently for each preset. There are 2 modes, "Global" mode & "Local" mode. The Global mode means that WB or AE can be set up totally and simultaneously for all presets in "ZOOM CAMERA SETUP" menu. The Local mode means that WB or AE can be set up independently or separately for each preset in each preset setup menu. Each Local WB/AE value should activate correspondingly when camera arrives at each preset location.

During jog operation, Global WB/AE value should be applied. All Local WB/AE value do not change although Global WB/AE value changes.

- **SemiAuto Focus** This mode exchanges focus mode automatically between Manual Focus mode and Auto Focus mode by operation. Manual Focus mode activates in preset operation and Auto Focus mode activates during jog operation. With Manual mode at presets, Focus data is memorized in each preset in advance and camera calls focus data in correspondence with presets as soon as camera arrives at a preset. It should shorten time to get focuses.

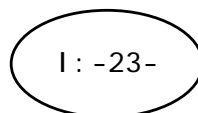
Focus mode changes to Auto Focus mode automatically when jog operation starts.

OSD Display of Main Screen



- P/T/Z Information Current Pan/Tilt angle in degree, zoom magnification and a compass direction.
- Camera ID Current Camera ID(Address).
- Action Title Followings are possible Action Titles and their meaning.
 - "SET PRESET xxx" When Preset xxx is stored
 - "PRESET xxx" When camera reach to Preset xxx
 - "PATTERN x" When Pattern x is in action
 - "SWGx/PRESET xxx" When Swing x is in action
 - "UNDEFINED" When undefined function is called to run
- Preset Label The Label stored for specific Preset.
- Alarm Input This information shows current state of Alarm Input. If an Input point is **ON** state it will show a number corresponding to each point. If an Input point is **OFF** state, '-' will be displayed.

Ex) Point 2 & 3 of inputs are **ON**, OSD will show as below

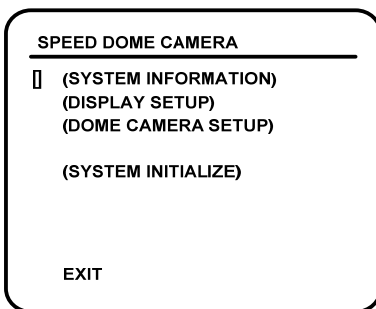


- Image Flip Shows that images are currently reversed by Auto Flip Function.

General Rules of Key Operation for Menu

- The menu items surrounded with < > always has its sub menu.
- For all menu level, to go into sub menu, press **NEAR** key.
- To go to up-one-level menu, press **FAR** key.
- To move from items to item in the menu, use joystick in the **UP/DOWN** or **LEFT/RIGHT**.
- To change a value of an item, use **UP/DOWN** of the joystick in the controller.
- Press **NEAR** key to save values and Press **FAR** key to cancel values.

Main Menu

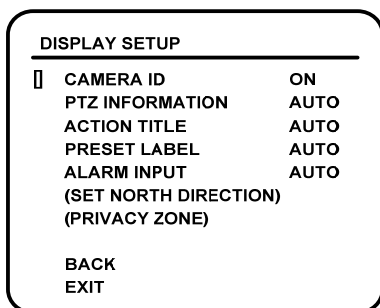


- System Information Displays system information and configuration.
- Display Setup Enable/Disable of OSD display on Main Screen.
- Dome Camera Setup Configure various functions of this camera.
- System Initialize Initializes system configuration and sets all data to factory default configuration.

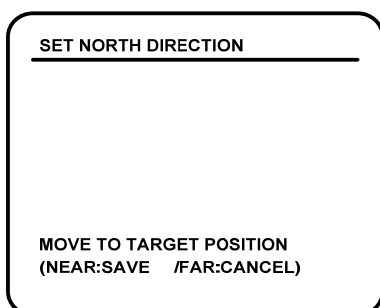
Display Setup

This menu defines Enable/Disable of OSD display on Main Screen. If an item is set to be AUTO, the item is displayed only when the value of it is changed.

- Camera ID [ON/OFF]
- PTZ Information [ON/OFF/AUTO]
www.ernitec.com
- Action Title [ON/OFF/AUTO]
- Preset Label [ON/OFF/AUTO]

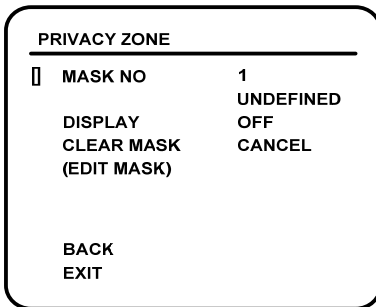


■ Compass Direction Setup



Set North to assign compass direction as criteria. Move camera and press **NEAR** button to save.

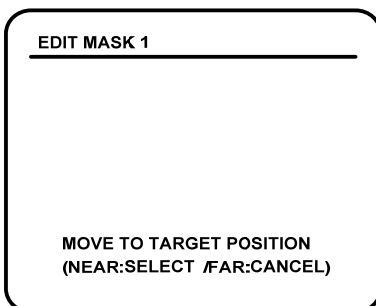
Privacy Zone Mask Setup



Select area in image to mask.

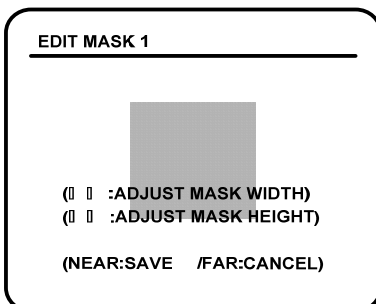
- Mask No [1~4]
Select Mask number. If the selected mask has already data, camera moves as it was set. Otherwise, "UNDEFINED" will be displayed under "Mask NO".
- Display [ON/OFF]
Sets if camera makes mask shows or not on images.
- Clear Mask [CANCEL/OK]
Deletes data in the selected mask NO.

■ Privacy Zone Area Setup



Move camera to area to mask. Then the menu to adjust mask size will be displayed.

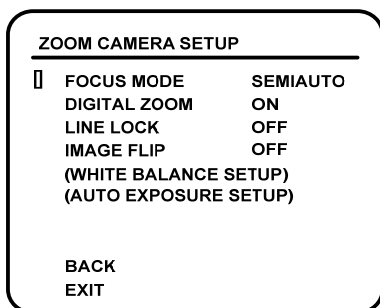
■ Privacy Zone Size Adjustment



Adjust mask size. Use joystick or arrow buttons to adjust mask size.

- ←→ (Left/Right) Adjusts mask width.
- ↑↓ (Up/Down) Adjusts mask height.

Zoom Camera Setup



Setup the general functions of zoom camera module.

- Focus Mode [AUTO/MANUAL/SEMIAUTO]

Sets camera focus mode.

○ SEMIAUTO Mode

This mode exchanges focus mode automatically between Manual Focus mode and Auto Focus mode. Manual Focus mode activates in preset operation and Auto Focus mode activates when jog operation starts.

With Manual mode at presets, Focus data is memorized in each preset in advance and camera calls focus data in correspondence with presets as soon as camera arrives at a preset.

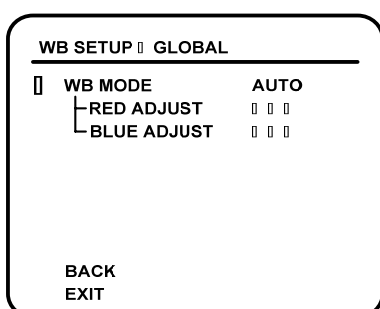
- Digital Zoom [ON/OFF]

Sets digital zoom function to ON/OFF. If this is set to OFF, optical zoom function runs but zoom function stops at the end of optical zoom magnification.

- Line Lock [ON/OFF]

If Line lock sync is ON, video signal is synchronized with AC power. Video can be fluctuated after setting is changed.

■ White Balance Setup



- WB Mode [AUTO/MANUAL]

In Manual mode, Red and Blue level can be set up manually

- Red Adjust [10~60]

- Blue Adjust [10~60]

■ Auto Exposure Setup

AE SETUP ▯ GLOBAL	
▯ BACKLIGHT	OFF
DAY/NIGHT	(AUTO2)
BRIGHTNESS	25
IRIS	AUTO
SHUTTER	ESC
AGC	HIGH
SSNR	MIDDLE
SENS▯UP	(AUTO)
BACK	
EXIT	

- Backlight [ON/OFF]
Sets Backlight Compensation

- Day/Night [AUTO1/AUTO2(0~255)/DAY/NIGHT]
AUTO1 exchanges Day/Night mode faster than AUTO2. You are able to adjust Day/Night sensitive level if you have selected AUTO2 mode. If Day&Night sensitive level has the higher value, it excute that change Day&Night in the lower luminance.

- Brightness [0~100]
Adjusts brightness of images. Iris, Shutter Speed and Gain are adjusted automatically in correspondence with this value.

- IRIS [AUTO/MANUAL(0~100)]
If Iris is set to Auto, Iris should have highest priority in adjusting AE and Shutter Speed should be fixed.
If Iris is set to Manual, Iris should be fixed and Iris has lower priority in adjusting AE, in comparison with others.

- Shutter Speed [ESC/A.Flicker/Manual(×128~1/120000 sec)]
If Iris is set to Manual and Shutter Speed is set to ESC, Shutter Speed should have highest priority. If Shutter Speed is set to A.Flicker, to remove Flicker, Shutter Speed should be set to 1/100 sec. for NTSC and 1/120 for PAL.

- AGC [OFF/NORMAL/HIGH]
Enhances image brightness automatically in case that luminance level of image signal is too low.

- SSNR [OFF/LOW/MIDDLE/HIGH]
Enhances images by deducting noises when gain level of images is too high.

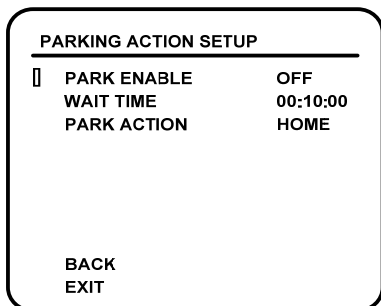
▯ Motion Setup

MOTION SETUP		
□	MOTION LOCK	OFF
	PWR UP ACTION	ON
	AUTO FLIP	ON
	JOG MAX SPEED	120/SEC
	JOG DIRECTION	INVERSE
	FRZ IN PRESET	OFF
	(PARKING ACTION SETUP)	
	(ALARM INPUT SETUP)	
	BACK	
	EXIT	

Setup the general functions of Pan/Tilt motions.

- **Motion Lock** [ON/OFF]
If Motion Lock is set to ON, it is impossible to set up and delete Preset, Swing, Pattern and Group. It is possible only to run those functions. To set up and delete those functions, enter into OSD menu.
- **Power Up Action** [ON/OFF]
Refer to "Other Functions" section.
- **Auto Flip** [ON/OFF]
Refer to "Other Functions" section.
- **Jog Max Speed** [1°/sec ~360°/sec]
Sets maximum jog speed. Jog speed is inversely proportional to zoom magnification. As zoom magnification goes up, pan/tilt speed goes down.
- **Jog Direction** [INVERSE/NORMAL]
If you set this to 'Inverse', the view in the screen is moving same direction with jog tilting. If 'Normal' is selected, the view in the screen is moving reversely.
- **Freeze in Preset** [ON/OFF]
At start point of preset movement, camera starts freezing the image of start point. Camera keeps displaying the image of start point during preset movement and does not display the images which camera gets during preset movement. As soon as camera stops at preset end point, camera starts displaying live images which it gets at preset end point.
This function availability should be different by models.

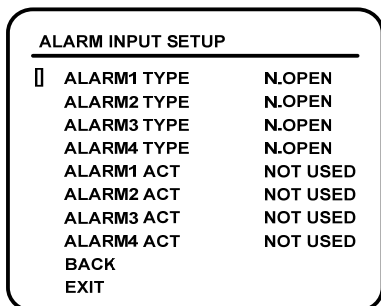
■ Parking Action Setup



If Park Enable is set to ON, camera runs assigned function automatically if there is no PTZ command during assigned "Wait Time".

- Park Enable [ON/OFF]
- Wait Time [1 minute ~ 4 hour]
The time is displayed with "hh:mm:ss" format and you can change this by 1 min unit.
- Park Action [HOME/PRESET/PATTERN/SWING/GROUP]
○ HOME
Camera moves to home position if there is

■ Alarm Input Setup



Match the Alarm sensor input to one of Preset positions. If an external sensor is activated, camera will move to corresponding preset position when this item is predefined.

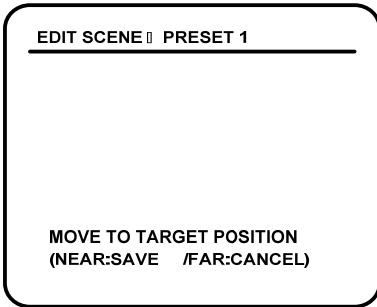
- Alarm × Type [Normal OPEN/Normal CLOSE]
Sets sensor input type.
- Alarm × Action [NOT USED/PRESET 1~128]
Assign counteraction Preset position to each Alarm input.

□ Preset Setup

- Preset Number [1~128]
If a selected preset is already defined, camera moves to pre-defined position and preset characteristics such as Label and Relay Outputs show on monitor. If a selected preset is not defined, "UNDEFINED"

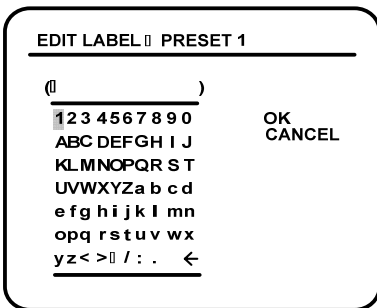
PRESET SETUP	
PRESET NO.	1
CLR PRESET (EDIT SCENE) (EDIT LABEL) CAM ADJUST	UNDEFINED CANCEL GLOBAL
BACK	
EXIT	

■ Edit Preset Scene



- ,1 Using Joystick, move camera to desired position.
- ,2 By pressing **NEAR** key, save current PTZ data.
- ,3 Press **FAR** key to cancel.

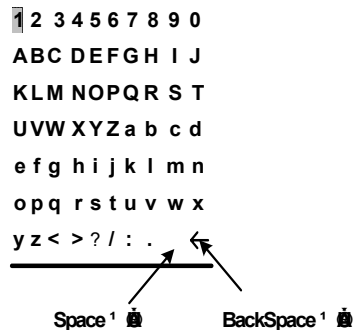
■ Edit Preset Label



- ① Edits label to show on monitor when camera arrives at presets. In Edit Label menu, a reverse rectangular is cursor. As soon as finishing selecting alphabet, cursor moves to the next digit.



- ② Using **LEFT/RIGHT/UP/DOWN** of joystick, move to an appropriate character from the Character set. To choose that character, press the **NEAR** key



If you want to use blank, choose Space character (" "). If you want to delete a character before, use back space character (" ←").

- ③ If you complete the Label editing, move cursor to "OK" and press **NEAR** key to save completed label. To abort current change, move cursor to "Cancel" and press **NEAR** key.

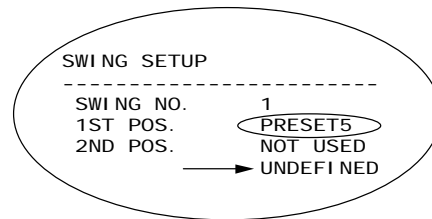
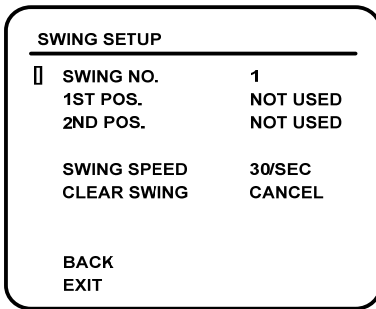
□ Swing Setup

- Swing Number [1~8]

Selects Swing number to edit. If a selected Swing has not defined, "NOT USED" is displayed in 1st Position and 2nd Position

- 1st Position [PRESET 1~128]

2nd Position Set up the 2 position for Swing function. If

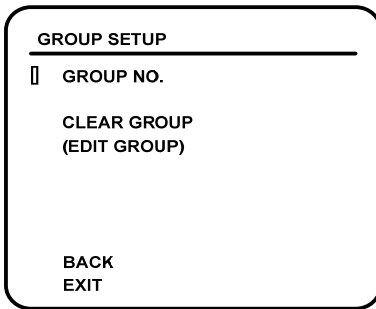


□ Pattern Setup

- Pattern Number [1~4]

Selects Pattern number to edit.

If a selected pattern number is not defined, "UNDEFINED" will be displayed under selected pattern number.



- Group Number [1~8]

Selects Group number to edit.

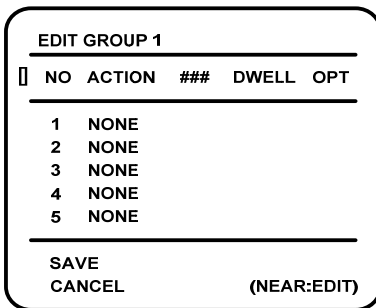
If a selected Group number is not defined, "UNDEFINED" will be displayed under selected Group number.

- Clear Group [CANCEL/OK]

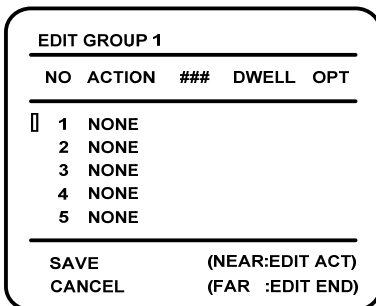
Deletes data in current Group

- Edit Group Starts editing Group.

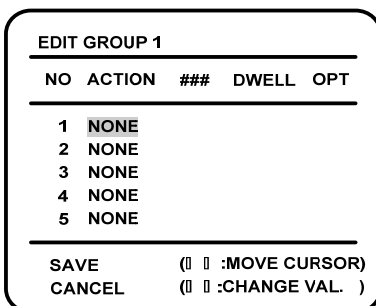
■ Edit Group



- ① Press **NEAR** key in "NO" list to start Group setup.



- ② Note that MAX. 20 Functions are allowed in a Group. Move cursor up/down and press **NEAR** key to set up.



- ③ Set up Action, Dwell time and Option. Note that selected item is displayed in reverse. Move cursor **LEFT/RIGHT** to select items and move cursor **UP/DOWN** to change each value.

- Action ### [NONE/PRESET/SWING/PATTERN]

- DWELL [0 second ~ 4 minutes]

Sets Dwell Time between functions

- OPT Option. It should be preset speed when preset is set in Action. It should be the number of repeat when Pattern or Swing is selected in Action

EDIT GROUP 1				
NO	ACTION	###	DWELL	OPT
1	PRESET	1	00:03	360
2	NONE			
3	NONE			
4	NONE			
5	NONE			

SAVE ([] :MOVE CURSOR)
CANCEL ([] :CHANGE VAL.)

- ④ Set up items such as Action, ###, Dwell and OPT.

EDIT GROUP 1				
NO	ACTION	###	DWELL	OPT
[] 1	PRESET	1	00:03	360
2	NONE			
3	NONE			
4	NONE			
5	NONE			

SAVE (NEAR:EDIT ACT)
CANCEL (FAR :EDIT END)

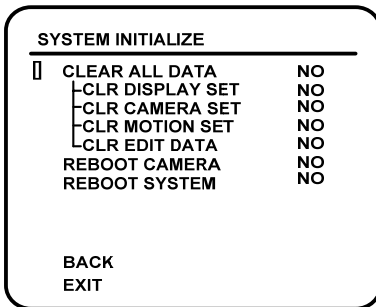
- ⑤ After finishing setting up a Action, press **NEAR** key to one-upper-level menu(Step ②). Move cursor **UP/DOWN** to select Action number and repeat Step ② ~ Step ④ to edit selected Group.

EDIT GROUP 1				
NO	ACTION	###	DWELL	OPT
1	PRESET	1	00:03	360
2	NONE			
3	NONE			
4	NONE			
5	NONE			

[] SAVE
CANCEL

- ⑥ After finishing setting up all Actions, press **FAR** key to exit. Then cursor should be moved to "SAVE". Press **NEAR** key to save data.

□ System Initialize



- Clear All Data Deletes all configuration data such as display, camera, motion setup and so on.
- Clear Display Set Initializes Display Configuration
- Clear Camera Set Initializes Camera Configuration
- Clear Motion Set Initializes Motion Configuration
- Clear Edit Data Deletes Preset Data, Swing Data, Pattern Data and Group Data
- Reboot Camera Reboots Zoom Camera module
- Reboot System Reboots Speed Dome Camera

■ Initial Configuration Table

● Display Configuration		● Camera Configuration	
Camera ID	ON	Focus Mode	SemiAuto
PTZ Information	AUTO	Digital Zoom	ON
Action Title	AUTO	Line Lock	OFF
Preset Label	AUTO	Image Flip	OFF
Alarm Input	AUTO	White Balance	AUTO
North Direction	Pan 0°	Backlight	OFF
Privacy Zone	Undefined	Day&Night	AUTO2
		Brightness	25
		Iris	AUTO
		Shutter	ESC
		AGC	HIGH
		SSNR	MIDDLE
		SENS-UP	AUTO (4 Frame)
● Motion Configuration		● User Edit Data	
Motion Lock	OFF	Preset 1~128	Undefined
Power Up Action	ON	Swing 1~8	Undefined
Auto Flip	ON	Pattern 1~4	Undefined
Jog Max Speed	120°/sec	Group 1~8	Undefined
Jog Direction	INVERSE		
Freeze In Preset	OFF		
Park Action	OFF		
Alarm Action	OFF		

5. SPECIFICATIONS

□ x10 Zoom Model

Model		x10 Zoom Model	
Video Signal System		NTSC	PAL
Camera	CCD	1/4" Interline Transfer CCD	
	Max. Pixels	811(H)×508(V) 410K	795(H)×596(V) 470K
	Effective Pixels	768(H)×494(V) 380K	752(H)×582(V) 440K
	Horizontal Res.	500 TV Line(Color), 570 TV Line(B/W)	
	S/N Ratio	50 dB (AGC Off)	
	Zoom	×10 Optical Zoom, ×10 Digital Zoom	
	Focal length	F1.8, f=3.8~38mm	
	Min. illumination	0.7 Lux (Color) / 0.02 Lux (B/W), 50 IRE	
	Day & Night	Auto / Day / Night(ICR)	
	Focus	Auto / Manual / SemiAuto	
	Iris	Auto / Manual	
	Shutter Speed	x128 ~ 1/120,000 sec	
	AGC	Normal / High / Off	
	White Balance	Auto / Manual(Red, Blue Gain Adjustable)	
	BLC	Low / Middle / High / Off	
	Flickerless	Selectable	
	SSNR	Low / Middle / High / Off	
Pan/Tilt	Range	Pan : 360°(Endless)	
		Tilt : 180° (Auto-Flip), 95° (Normal)	
	Pan/Tilt Speed	Preset : 360°/sec	
		Manual : 0.05 ~ 360°/sec (proportional to zoom)	
		Swing : 1~ 180°/sec	
	Preset	127 Preset (Label, Camera Image Setting)	
	Pattern	4 Pattern, 1200 commands(about 5 minute)/Pattern	
	Swing	8 Swing	
Group	8 Group (20 action entities per Group)		
Other Functions	Auto Flip, Auto Parking, Power Up Action etc.		
General	Communication	RS-485	
	Protocol	Pelco-D, Pelco-P selectable	
	Privacy Zone	4 Zone	
	Alarm Input	4 Input	
	OSD	Menu / PTZ information etc	
	Rated Power**	DC Power Model : DC 12V / 1.0A	
		AC Power Model : AC 24V / 0.8A	
	Dimension	Dome : Ø115	
		Housing : Ø147.5 × 141(H) mm	
Weight	about 1 Kg		
Operating Temp.	0°C ~ 40°C		

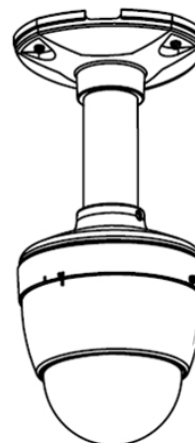
* Specifications of this product can be subjected to change without notice.

** Check the voltage and current capacity of rated power carefully.

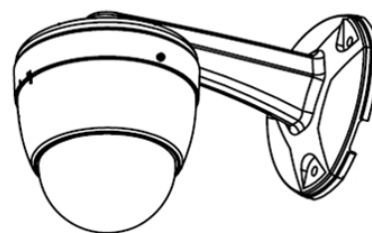
■ Appearance



● Main Unit



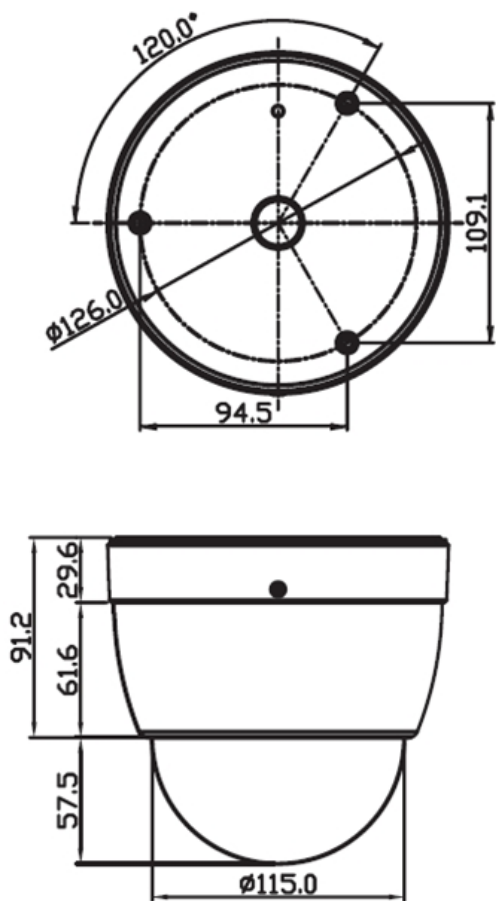
● Pendant



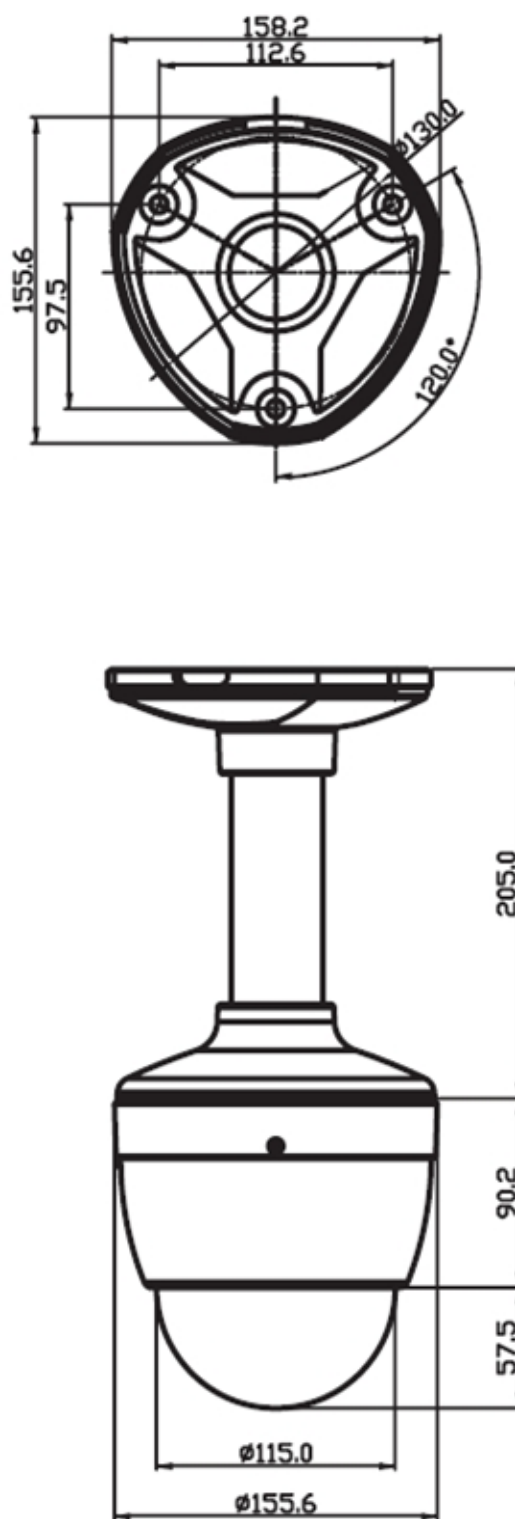
● Wall Mount

□ Dimension

- Main Unit & Surface Mount Bracket

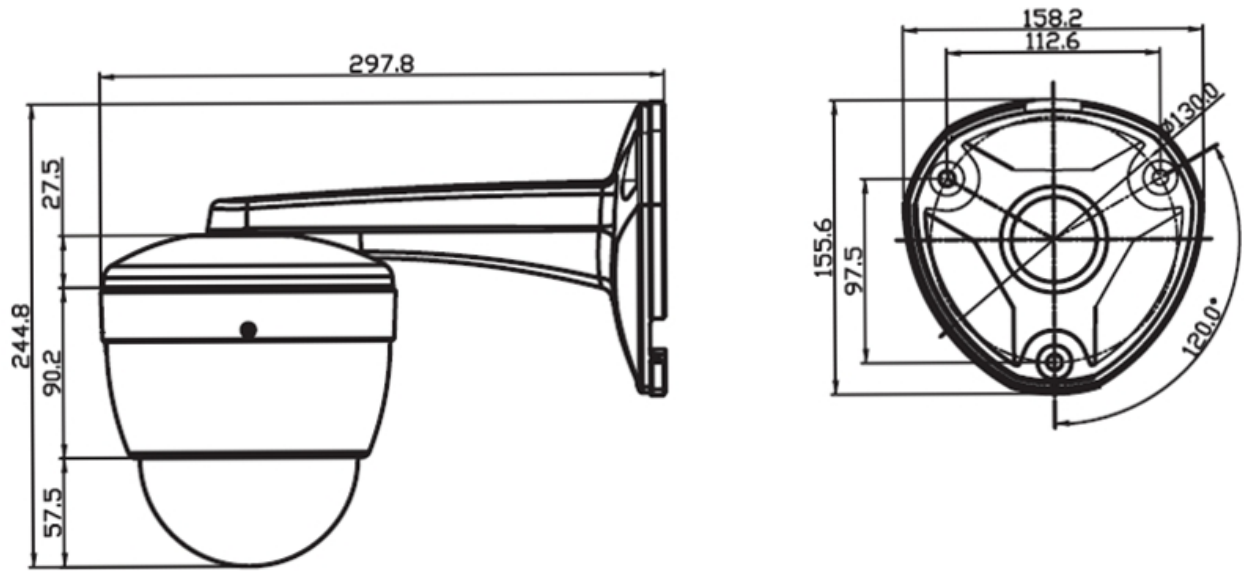


- Ceiling Mount Bracket



5. SPECIFICATIONS

- Wall Mount Bracket



Unit (mm)