

Super Speed Dome

PTZ39X PTZ Outdoor Dome Camera

User's Manual

Before installing and using the camera, please read this manual carefully.
Be sure to keep it handy for future reference.

Safety Information



CAUTION
RISK OF ELECTRIC SHOCK.
DO NOT OPEN



CAUTION:

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER (BACK). THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol indicates that dangerous voltage consisting a risk of electric shock is present within this unit.



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 damage which may result in fire or electric shock hazard, do not expose this appliance to rain or moisture.

WARNING

1. Be sure to use only the standard adapter that is specified in the specification sheet. Using any other adapter could cause fire, electrical shock, or damage to the product.
2. Incorrectly connecting the power supply or replacing battery may cause explosion, fire, electric 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, fasten it securely and firmly. A falling camera may cause personal injury.
6. Do not place conductive objects (e.g. screw drivers, coins, metal things, etc.) or containers filled with water on top of the camera. Doing so may cause personal injury due to fire, electric shock, or falling objects.
7. Do not install the unit in humid, dusty, or sooty locations. Doing so may cause fire or electric 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 service center. Continued use in such a condition may cause fire or electric shock.
9. If this product fails to operate normally, contact the nearest service center. 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 electric shock.
11. When ambient temperature is below the freezing point, the dome cover will frost and the power will fail. In this case, install or reboot the system, and the frost will disappear 3 hours after turning on the power.
[Note that the lowest guaranteed operating temperature is -45°C/-49°F without wind.]

Safety Information

CAUTION

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 50°C), low temperature (below -10°C), or high humidity. Doing so may cause fire or electric shock.
3. If you want to relocate the already installed product, be sure to turn off the power and then move or reinstall it.
4. Remove the power plug from the outlet when there is a lightning. Neglecting to do so may cause fire or damage to the product.
5. Keep out of direct sunlight and heat radiation sources. It may cause fire.
6. Install it in a place with good ventilation.
7. Avoid aiming the camera directly towards extremely bright objects such as the sun, for this may damage the CCD image sensor.
8. The camera shall not be exposed to dripping or splashing, and no objects filled with liquids, such as vases, shall be placed on the camera.
9. The main plug used to disconnect the device shall stay readily operable at any time.

Safety Instructions

WARNING

1. Read these instructions.
2. Keep these instructions.
3. Regard all warnings.
4. Follow all instructions.
5. Do not use this camera near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, or other apparatuses that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for a replacement.
10. Protect the power cord from being walked on or pinched particularly at or near plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with cart, stand, tripod, bracket, or table specified by the manufacturer or sold with the camera.
13. Unplug this camera when a cart is used. Use caution when moving the cart that contains the camera to avoid injuries that can result from the camera falling over.
14. Refer all servicing to qualified service personnel. Servicing is required when the camera has been damaged in any way, such as power supply cord or plug is damaged, liquid has spilled on the the camera, objects have fallen into the camera, the camera has been exposed to rain or moisture, the camera does not operate normally, or the camera has dropped.



Contents

	2 Safety Information
	4 Safety Instructions
INTRODUCTION	6 Features
	7 Product & Accessories
	8 Parts Name
INSTALLATION	9 DIP Switch Setup
	11 Installation
	14 Cabling
OSD MENU	16 Check Points before Operation
	17 Functions
	18 OSD Display of Main Screen
	19 General Rules of Key Operation for Menu
	20 OSD - ROOT MENU & SYSTEM INFORMATION
	21 OSD - DISPLAY SETUP > CAMERA ID
	22 OSD - DISPLAY SETUP > PRIVACY ZONE
	24 OSD - MOTION SETUP
	26 OSD - FUNCTION SETUP > PRESET SETUP
	28 OSD - FUNCTION SETUP > SCAN SETUP
	29 OSD - FUNCTION SETUP > PATTERN SETUP
	30 OSD - FUNCTION SETUP > GROUP SETUP
	32 OSD - FUNCTION SETUP > SCHEDULE SETUP
	34 OSD - CAMERA SETUP > WB SETUP
	35 OSD - CAMERA SETUP > AE SETUP
	37 OSD - CAMERA SETUP > SPECIAL
	38 OSD - INTELLIGENCE > MASK AREA
	39 OSD - INTELLIGENCE > ALARM OUT
	40 OSD - SYSTEM SETUP
	42 OSD - SYSTEM INITIALIZE
SPECIFICATIONS	43 Dimension
	44 Specification PTZ39X

Features

CAMERA SPECIFICATIONS

- CCD Sensor: EX-View HAD™ CCD
- Zoom Magnification: ×39 Optical, ×12 Digital Zoom
- Wide Dynamic Range
- Day & Night Function: ICR (IR Cut filter Removal)
- Various Focus Mode: Auto Focus/Manual Focus/Semi-Auto Focus
- Independent or Global Camera Settings for Each Preset Location

POWERFUL PAN/TILT FUNCTIONS

- Maximum 360°/SEC High Speed Pan/Tilt Motion
- Vector Drive Technology: Pan/Tilt Motions are accomplished in the shortest path. As a result, time to target view is reduced dramatically and the video on the monitor is very natural to watch.
- Ultra low speed (0.05°/SEC) enables operator to locate camera to desired target view with accuracy and ease.
- Zoom-Proportional Pan/Tilt speed helps operator to move the camera easily.

PRESET, PATTERN, SCAN, GROUP, PRIVACY ZONE, SCHEDULE, AND MORE...

- Maximum 127 presets are assignable. Each of them have independent characteristics, such as white balance, auto exposure, label, alarm input/output, etc.
- Maximum 8 set of scans can be stored. This enables user to move camera repetitively between two preset positions with designated speed.
- Maximum 4 patterns can be recorded and played back. This enables the camera to follow any trajectory operated by the joystick as closely as possible.
- Maximum 8 set of group actions can be stored. This enables the camera to move repetitively between different combination of preset, pattern, or scan. A group is composed of maximum 20 entities of preset, pattern, or scan.
- Maximum 8 privacy zones can be set up to protect privacy of other people.
- 7 rules of schedule can be assigned by day and time. Appropriate actions (such as home, preset, scan, pattern, and group) can be defined for each rule. Also, it is possible to use weekday and all days to simplify the rule.

PTZ (PAN/TILT/ZOOM) CONTROL

- With RS485 communication, a maximum of 255 cameras can be controlled at the same time.
- Auto, Pelco-D, Pelco-P, Samsung, Panasonic, Kalatel, AD(American Dynamics) 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.
- Camera ID, Pan/Tilt/Zoom/Direction, Alarm Input/Output, Date/Time, Current Temperature, and Preset are displayed on screen.
- Each display item can be turned on or off independently.

ALARM I/O FUNCTIONS

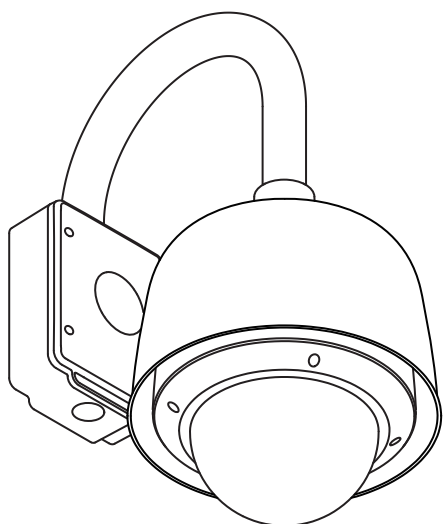
- 8 alarm sensor inputs and 4 relay output are available.
- To reject external electric noise and shock perfectly, alarm sensor input is decoupled with photo coupler.
- The signal range of sensor input is from DC 5.0 to 12.0 volts to adopt various applications.
- If an external sensor is activated, camera can be set to move to the corresponding preset position.
- Relay outputs can be assigned to work with a certain preset.

RESERVED PRESETS FOR SPECIAL PURPOSE

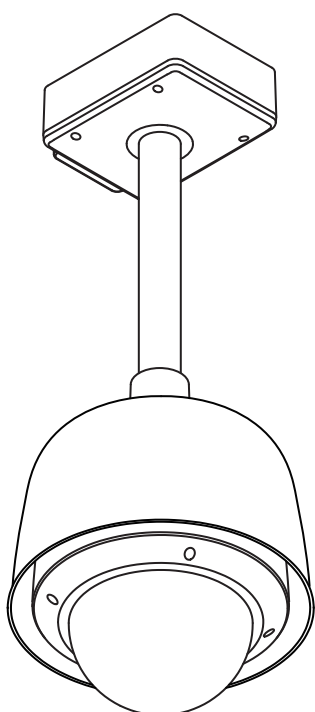
- Most of camera settings are directly changed by calling reserved presets, not entering into OSD menu. For more information, refer to "Reserved Presets"(page 18) of this manual.

Product & Accessories

Product

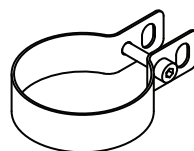


Wall Mount

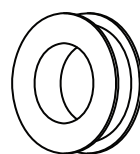


Pendant Mount

Accessories



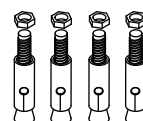
Housing Safety
Cable Hanger



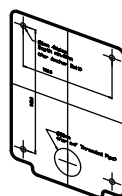
Waterproof Tape



Hexagonal Wrench



Anchor Bolt (4pcs)



Hole Template



User's Manual



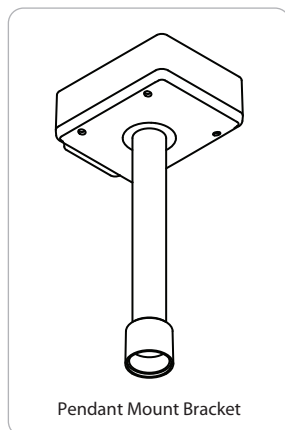
Safety Wire

Part Name

❶ Wall or Pendant Mount Bracket

The Wall or Pendant Mount Bracket is used to install the camera onto the wall or ceiling. It includes a built-in junction box.

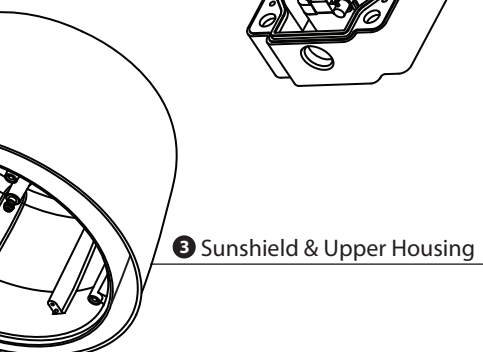
The junction box accommodates the inner box.



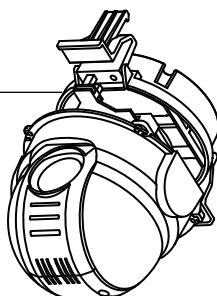
Housing Safety Cable Hanger

❶ Wall Mount Bracket

❷ Inner Box



PTZ Mechanism



❷ Inner Box

The inner box has many important roles. On top of the box, there are dip switches and terminal locks for power supply, video, audio, alarm input and alarm output.

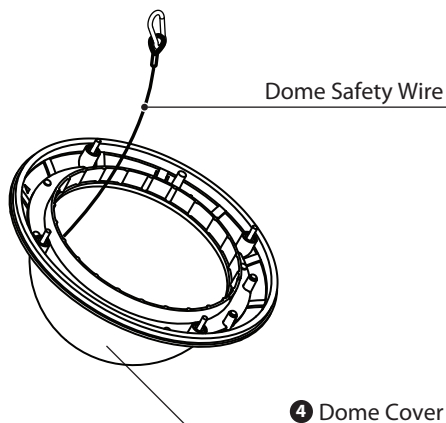
❸ Sunshield & Upper Housing

The Sunshield protects the bubble dome cover from sun rays and rainfall. The upper housing, which is attached to the sunshield, accommodates the PTZ mechanism. Also, the upper housing will be connected to both the mounting brackets and the dome cover.

❹ Dome Cover

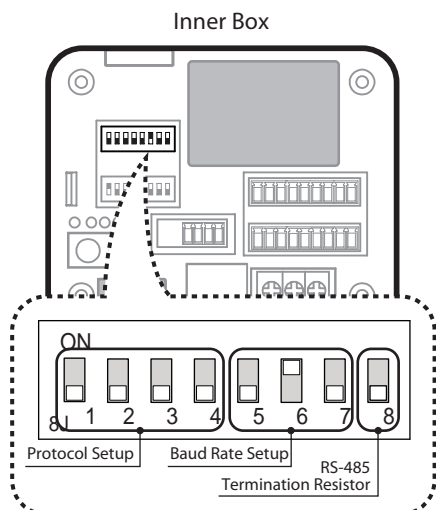
Do not detach the protection vinyl from dome cover until the installation process is completed. The vinyl will protect the dome cover from scratches and dust. The dome cover has a built-in fan and heater to remove moisture from the bubble dome.

Dome Safety Wire

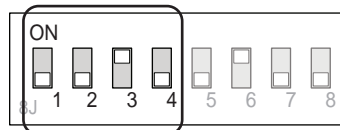


DIP Switch Setup

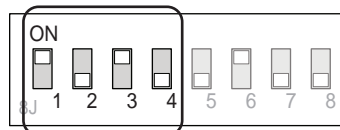
- ⚠ Before installing the camera, you should first set the DIP Switch to configure the Camera ID (Communication Protocol).



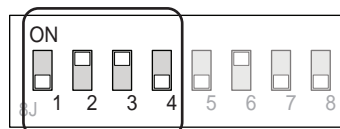
5 PANASONIC



6 GE(Kalatel)



7 AD (American Dynamics)



- If you set the protocol as AUTO, camera will automatically recognize the type of protocol being used; however, this will not recognize the AD protocol.)

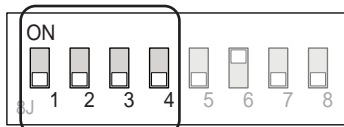
- If you want to control the camera using the DVR or a system keyboard, the protocol must be identical to the camera protocol. Otherwise, you will not be able to control the camera.

- If you change the camera protocol by adjusting the DIP switch, the change will be effective after you reboot the camera.

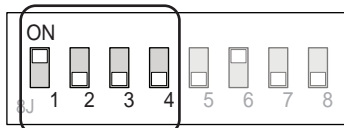
1. Communication Protocol Setup

Configure the appropriate protocol using the DIP switch combination.

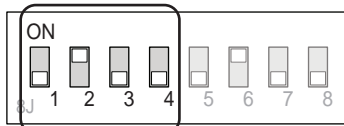
1 AUTO- Factory Default



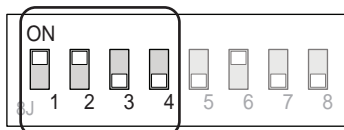
2 PELCO-D



3 PELCO-P



4 SAMSUNG

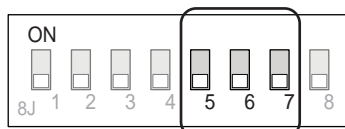


DIP Switch Setup

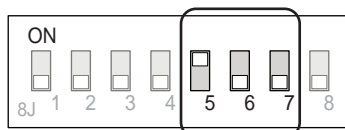
2. Communication Baud Rate Setup

Select the appropriate Baud Rate using the following DIP switch combination.

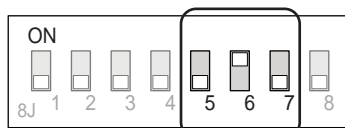
1 2400 BPS



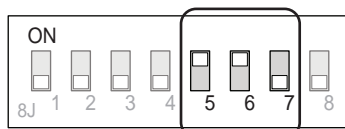
2 4800 BPS



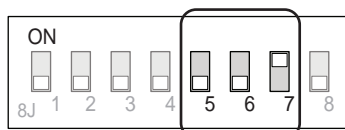
3 9600 BPS - Factory Default



4 19200 BPS



5 38400 BPS



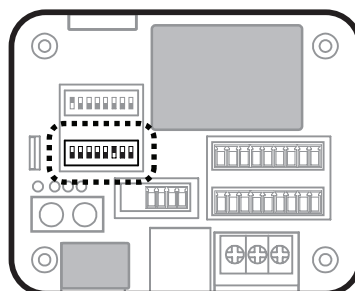
3. RS-485 Termination Resistor



- Pin 8 is used to turn ON / OFF the RS-485 termination. Normally, it should be set as OFF.
- When you have trouble with long daisy chain style connection, turn ON this termination switch for the last camera.

4. Camera ID Setup

Inner Box

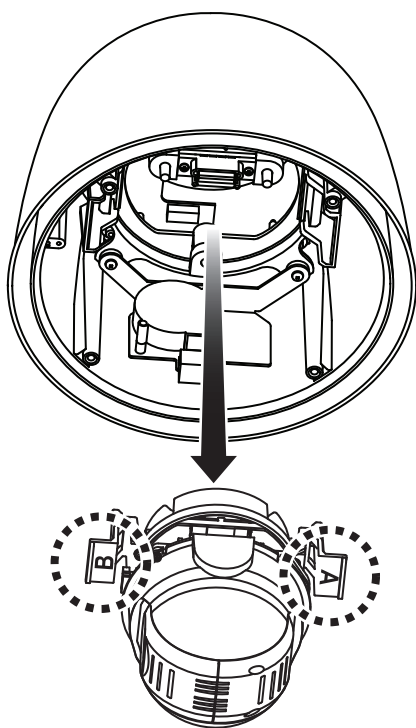


The ID number of camera is set using binary number. The examples are shown below.

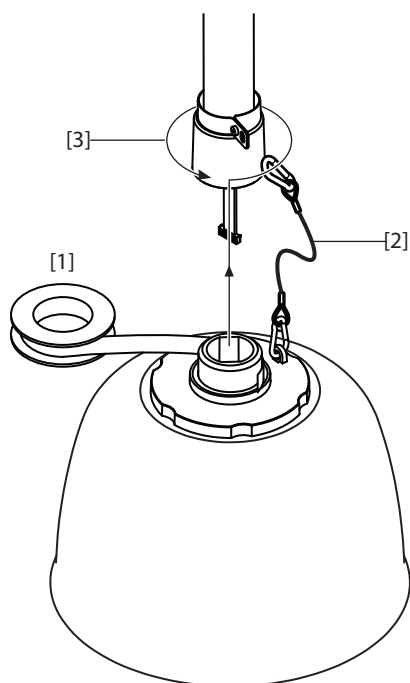
Pin	1	2	3	4	5	6	7	8
ID Value	1	2	4	8	16	32	64	128
ex) ID=5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
ex) ID=10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF

- If you want to control a certain camera, you must match the Camera ID with the CAM ID setting of your DVR or keyboard controller.
- The range of Camera ID is 0~255. Factory default of Camera ID is 1.

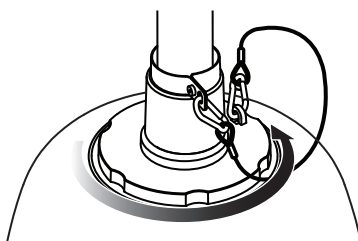
Installation



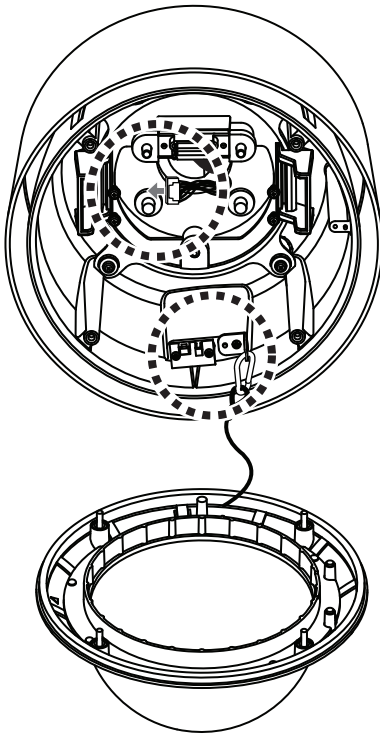
- 5** You have to detach the PTZ mechanism from the upper housing to plug the cable connector. To detach PTZ mechanism, press down and hold against both sides of the black handles on the PTZ mechanism.



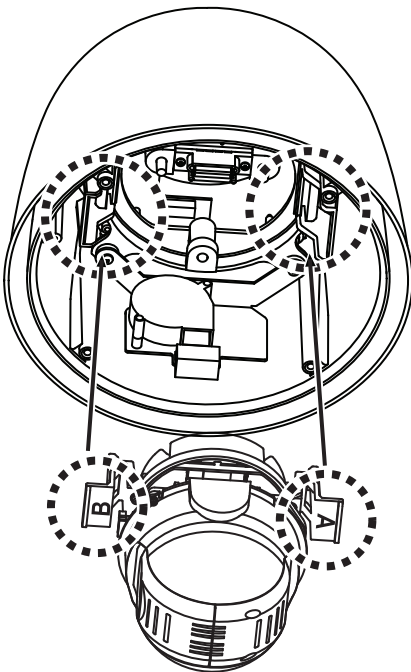
- 6** [1] Wind the waterproof tape around the pipe of the upper housing.
[2] Hook the safety wire to the hole of the safety cable hanger.
[3] Attach the upper housing to wall mount bracket by turning it at least seven times.
⊠ To secure the upper body orientation, turn the handle of double nuts clockwise until it is tight.



Installation

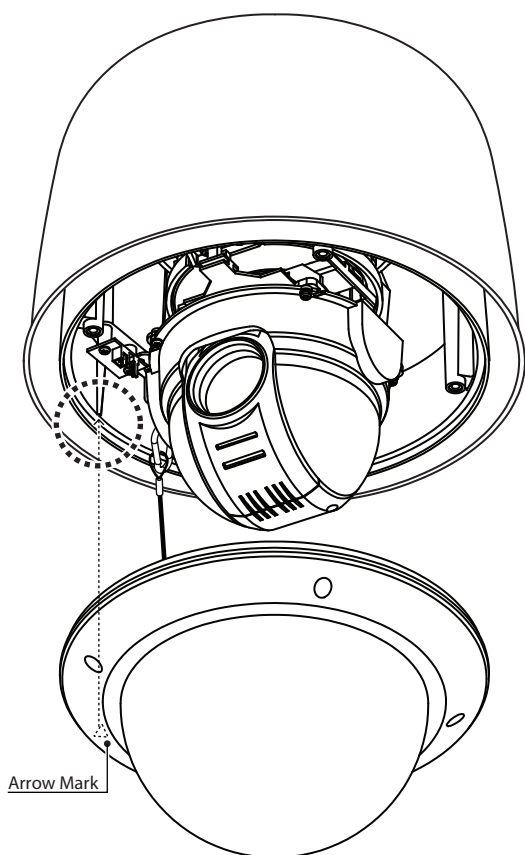


- 7 Plug the main cable into the main connector that is located on the upper housing and press the main cable until it sounds snap to lock.
- 8 Plug safety wire into the connectors located on the upper housing.

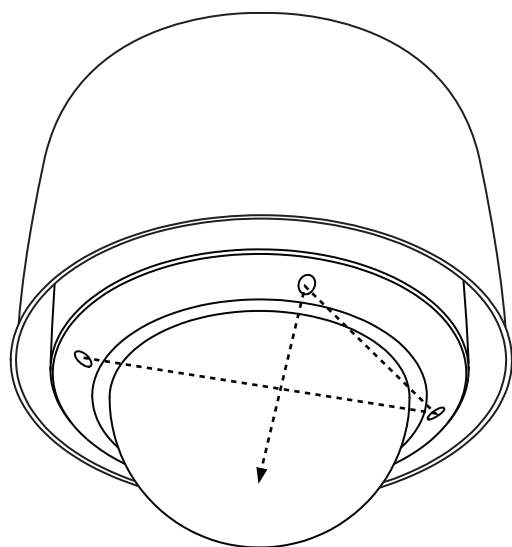
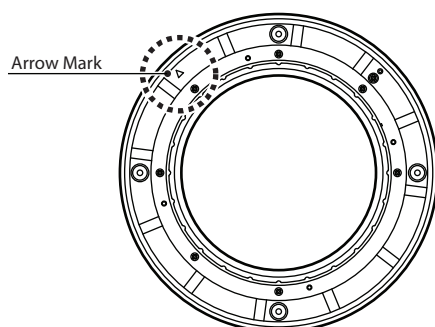


- 9 Plug the cable connector from the junction box properly. Align the one touch connectors in the upper housing with that of the PTZ mechanism and force into place.
- 10 To lock the PTZ mechanism to the upper housing, press the two black handles and push the PTZ mechanism into the upper housing until it sounds snap.

Installation



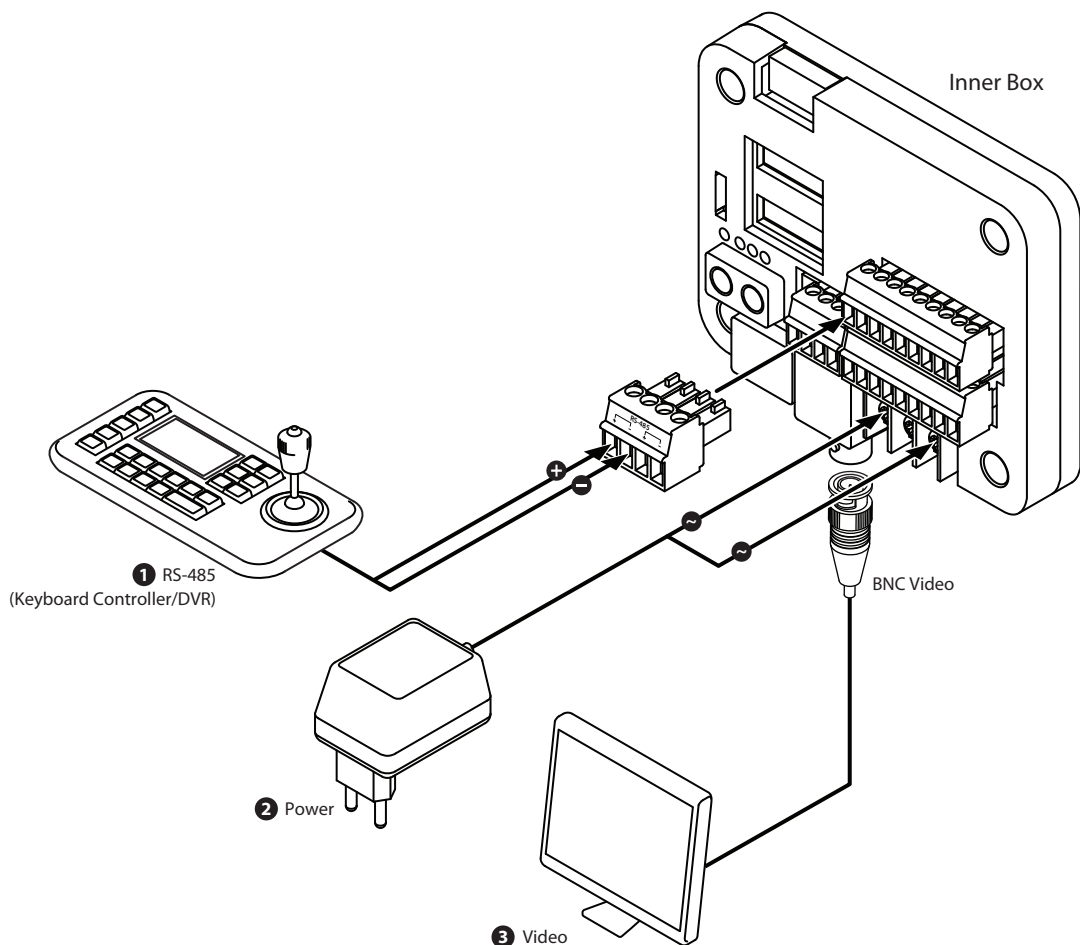
- 11** Close the dome cover carefully. Match the "Arrow Mark" to find the right location.



- 12** Tighten the four screws on the dome cover in the same sequence shown in the picture.

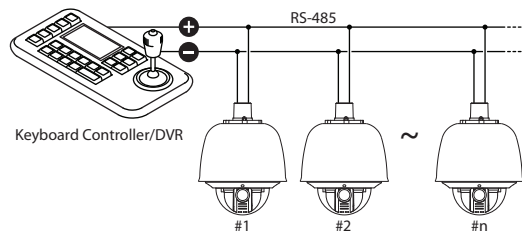
⊠ To maintain the best sealing, the torque of each screw must be in the range between 0.5 ~ 1.0 N·m (0.3 ~ 0.73 lbf·ft).

Cabling



1 RS-485 Communication (DVR/Keyboard)

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



2 Power Connection

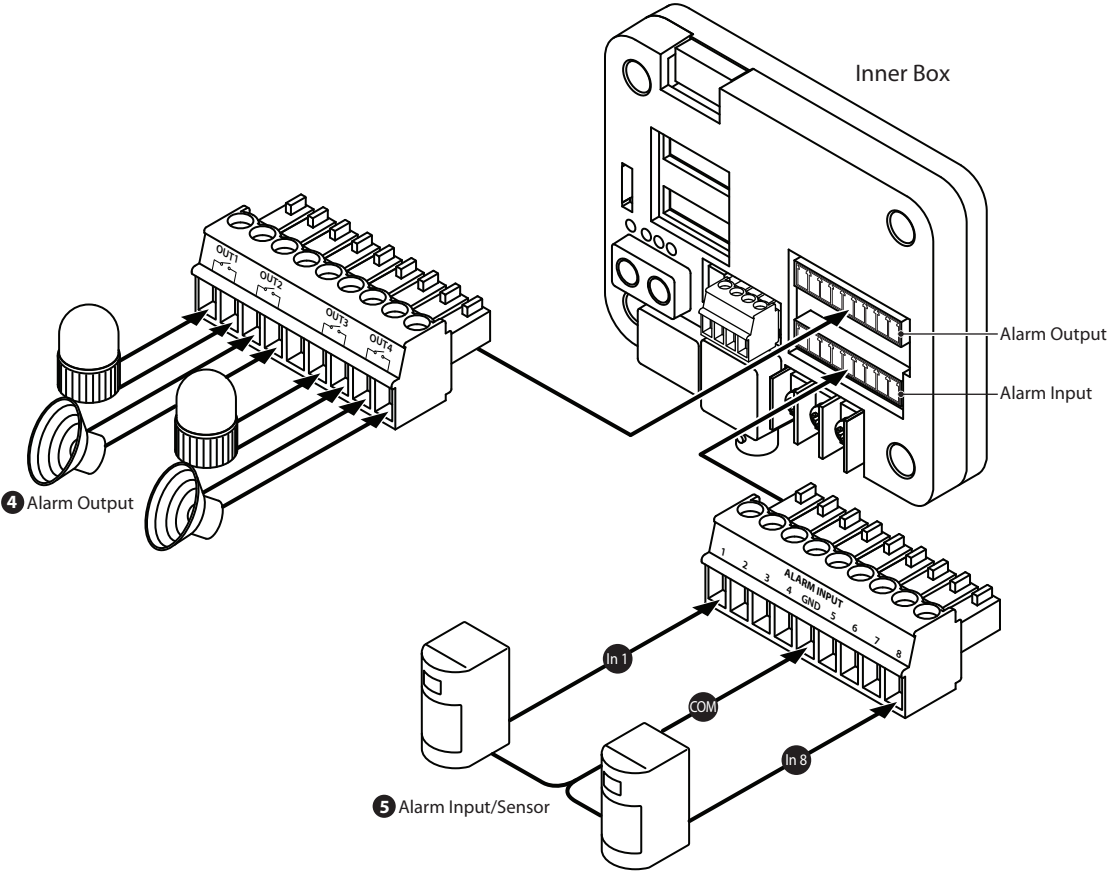
Please check the voltage and the current capacity of rated power carefully.

Rate Power	Input Voltage Range	Current Consumption
AC 24V	AC 19V ~ 29V	2.5A

3 Video Connection

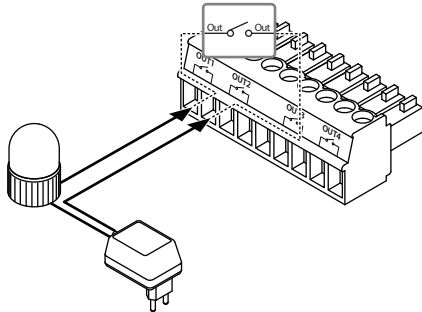
Connect with BNC coaxial cable.

Cabling



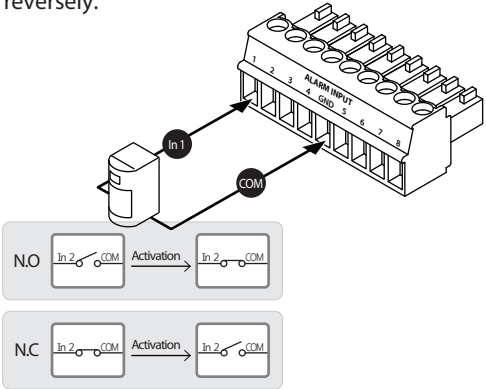
4 Alarm Output

The 4 alarm outputs are the relay contact type. Therefore, you do not have to worry about the polarity, AC/DC, and isolations between channels. However, regard the power capacity of relay contact written above.



5 Sensor Input

To use alarm input, select the type of sensor to you wish to use. The sensor types are "Normal Open" and "Normal Close." If sensor type is not selected properly, the alarm can be activated reversely.



⊗ It is noted that short circuit between GND and Input Pin means alarm activation.

Check Points Before Operation

1. Before power is applied, please check the cables carefully.
2. The camera ID of the controller must be identical to that of the camera you wish to control. You can check the camera ID in the system information of the OSD menu.
3. If your controller supports multi-protocols, the protocol must be changed to match that of the camera.
4. If you changed camera protocol by changing DIP switch, the change will be effective after you reboot the camera.
5. 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.

❶ Preset and Pattern Function Pre-check

Check how to operate preset, pattern, scan, and group functions with keyboard controller or DVR in advance to operate the PTZ camera with it.

(Refer to your keyboard or DVR manual.)

If keyboard controller/DVR has no pattern key or function, use shortcut keys with preset numbers. For more information, refer to "Reserved Preset" below.

❷ Reserved Preset

Some preset numbers are reserved for special functions.

Preset key + 95: Opens OSD menu
Preset key + 131~134: Runs pattern function 1 ~ 4
Preset key + 141~148: Runs scan function 1 ~ 8
Preset key + 151~158: Runs group function 1 ~ 8
Preset key + 161~164: Sets relay 1~ 4 output to OFF
Set key + 161~164: Sets relay 1~ 4 output to ON
Preset key + 165: Sets auto calibration to ON
Preset key + 166: Sets auto calibration to OFF
Preset key + 167: Zoom proportional jog ON
Set key + 167: Zoom proportional jog OFF
Preset key + 170: Sets camera BLC mode to OFF
Preset key + 171: Sets camera BLC mode to HIGH
Preset key + 174: Sets camera focus mode to AUTO
Preset key + 175: Sets camera focus mode to MANUAL
Preset key + 176: Sets camera focus mode to SEMI-AUTO
Preset key + 177: Sets day & night mode to AUTO
Preset key + 178: Sets day & night mode to NIGHT
Preset key + 179: Sets day & night mode to DAY
Preset key + 190: Sets OSD display mode to AUTO
(except privacy mask)
Preset key + 191: Sets OSD display mode to OFF
(except privacy mask)
Preset key + 192: Sets OSD display mode to ON
(except privacy mask)
Preset key + 193: Sets all privacy mask display to OFF
Preset key + 194: Sets all privacy mask display to ON
Preset key + 200: Sets digital zoom to ON
Preset key + 201: Sets digital zoom to OFF

❸ Auto Calibration

If the camera is continuously subject to very high temperatures (over 50°C or 122°F) for a long period, the camera can lose focus and produce blurry images. In this case, it is recommended to turn on AUTO CALIBRATION by running preset 165.

If you execute AUTO CALIBRATION, the camera will calibrate its focus for 10 seconds every 24 hours. To turn OFF this function, please, run preset 166.

❹ Open OSD Menu

Using the OSD menu, preset, pattern, scan, group, and alarm input function can all be configured for your application. Run preset 95 to open your OSD menu and begin configuring your camera.

Functions

① Preset

Maximum 127 positions can be stored as preset positions. The numbers 1 to 128 can be assigned as preset numbers, but 95 is reserved for starting the OSD menu.

See section ROOT MENU > FUNCTION SETUP > PRESET SETUP.

1. Set Preset

Method 1) Use keyboard controller:

☒ Refer to your system keyboard manual.

Method 2) Use OSD menu.

2. Run Preset

Method 1) Use keyboard controller:

Preset key + Number key (1~128)

3. Delete Preset

To delete preset, use OSD menu.

② Scan

The scan function allows camera to move repeatedly between 2 preset positions.

See section ROOT MENU > FUNCTION SETUP > SCAN SETUP.

1. Set Scan

To set scan, use OSD menu.

2. Run Scan

Method 1) Scan key + Scan no. (1~8) + Enter key

Ex. Run scan 2 = Scan key + [2] + Enter key

Method 2) Preset key + [Scan no. (1~8) + 140]

Ex. Run scan 2 = Preset key + [142]

3. Delete Scan

To delete scan, use OSD menu.

③ Pattern

Pattern function allows the camera to memorize a path created by a joystick controller and then revive the path exactly as it memorized for an assigned time.

See section ROOT MENU > FUNCTION SETUP > PATTERN SETUP.

1. Set Pattern

To set pattern, use OSD menu.

2. Run Pattern

Method 1) Pattern key + Pattern no. (1~4) + Enter key

Ex. Run pattern 2 = Pattern key + [2] + Enter key

Method 2) Preset key + [Pattern no. (1~4) + 130]

Ex. Run pattern 2 = Preset key + [132]

3. Delete Pattern

To delete pattern, use OSD menu.

☒ When the pattern is saved or executed, the pan/tilt is operated with AUTO FLIP-OFF.

④ Group

The group function allows you to run a sequence of presets, pattern, and/or scans.

See section ROOT MENU > FUNCTION SETUP > GROUP SETUP.

1. Set Group

To set group, use OSD menu.

2. Run Group

Method 1) Group key + Group no. (1~8) + Enter key

Ex. Run group 2 = Group key + [2] + Enter key

Method 2) Preset key + [Group no. (1~8) + 150]

Ex. Run group 2 = Preset key + [152]

3. Delete Group

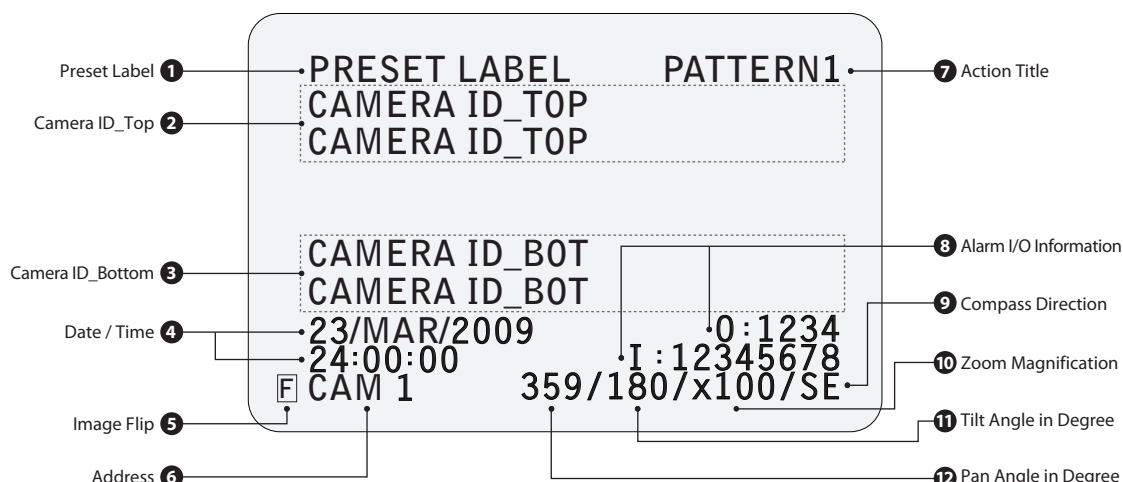
To delete group, use OSD menu.

⑤ Schedule

The schedule function allows you to run an appropriate function like preset, scan, group, pattern, home, or move at a designated day and time.

See section ROOT MENU > FUNCTION SETUP > SCHEDULE SETUP.

OSD Display of Main Screen



1 Preset Label

- The label stored for a specific preset.
- See section ROOT MENU > FUNCTION SETUP > PRESET SETUP > LABEL.

2 Camera ID_Top

- If CAMERA ID is set to TOP, Camera ID will display in this area.
- See section ROOT MENU > DISPLAY SETUP > CAMERA ID.

3 Camera ID_Bottom

- If CAMERA ID is set to BOT, Camera ID will display in this area.
- See section ROOT MENU > DISPLAY SETUP > CAMERA ID.

4 Date / Time

- Shows the current date and time.
- See section ROOT MENU > SYSTEM SETUP > DATE/TIME SETUP.

5 Image Flip

- Indicates the images that has been reversed by the auto flip function.
- See section ROOT MENU > CAMERA SETUP > IMAGE FLIP.

6 Address

- Shows the current RS-485 address information.
- See section ROOT MENU > SYSTEM INFORMATION.

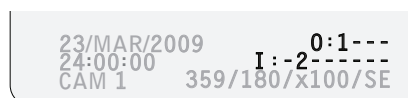
7 Action Title

The following are examples of action titles with their descriptions.

Action Title	Description
SET PRESET 123	Store preset 123.
PRESET 123	It reached preset 123.
PATTERN 9	The camera is running pattern 9.
SCN 1/PRESET 123	The camera is running scan 1.
RANGE OVER	The action received is not within the range supported.
UNDEFINED	The action received is not defined.

8 Alarm I/O Information

- This information shows the current status of alarm input and output.
- "I" means input, and "O" means output.
- If the alarm input is ON, it will show the number of the input. If an input is OFF, "-" will be displayed. "O:1 - - -" means output 1 is ON and other outputs are OFF.
- Ex. When input 2 is ON and output 1 is ON, OSD will display as below.



9 Compass Direction

- Shows the current compass direction of the camera.
- The direction is shown as N(North), S(South), E(East), W(West), NE(Northeast), NW(Northwest), SE(Southeast), SW(Southwest).
- See section ROOT MENU > SYSTEM SETUP > SET NORTH DIRECTION.

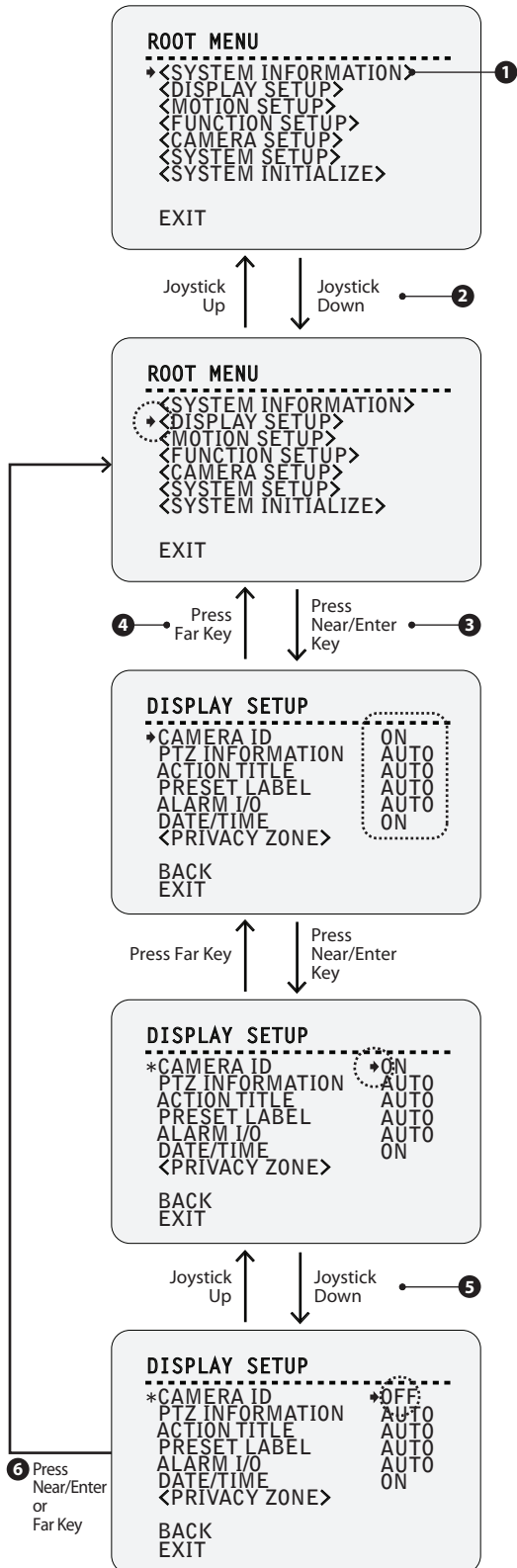
10 Zoom Magnification

Shows the current zoom magnification.

11 12 Tilt / Pan Angle in Degree

Shows the current tilt (0 ~ 180) and pan(0 ~ 359) angle.

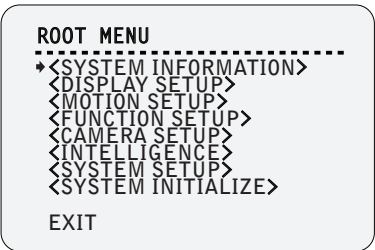
General Rules of Key Operation for Menu



- 1 The characters < > that surround the menu item indicate that there is a sub menu.
- 2 Move among the different selections in the menu list using the joystick in the Up/Down or Left/Right direction.
- 3 To enter a sub-menu, press Near or Enter key.
- 4 To go back a menu, press Far key.
- 5 To change a value of an item, move the joystick in the Up/Down direction.
- 6 Press Near or Enter key to save values and press Far key to cancel values.

OSD - ROOT MENU & SYSTEM INFORMATION

1



1 ROOT MENU

<SYSTEM INFORMATION>

Shows system information and current system configuration.

<DISPLAY SETUP>

Enable/Disable OSD display on main screen.

<MOTION SETUP>

Configures motion related settings.

<FUNCTION SETUP>

Configures various functions such as preset, scan, pattern, group, and schedule.

<CAMERA SETUP>

Configures camera related functions and data.

<INTELLIGENCE>

Configures camera to detect an object moving or changing.

<SYSTEM SETUP>

Configures the basic system setup.

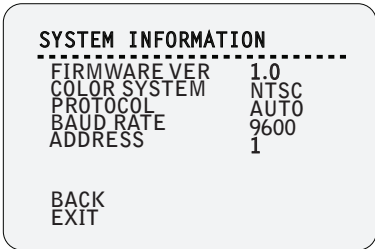
<SYSTEM INITIALIZE>

Initializes system configuration and sets all data to factory default configuration.

EXIT

Exits the OSD setting.

1



1 SYSTEM INFORMATION

FIRMWARE VER

Shows the current firmware version.

COLOR SYSTEM

Shows the current analog video system.

PROTOCOL

Shows the current PTZ control protocol.

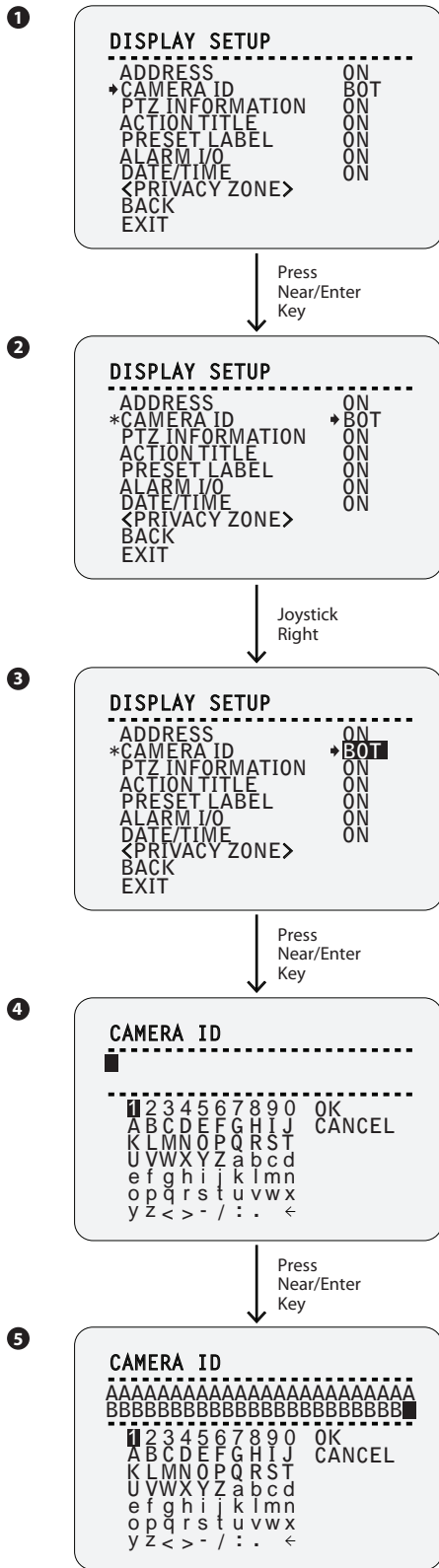
BAUD RATE

Shows the current baud rate of the PTZ control.

ADDRESS

Shows the current camera ID of the PTZ control.

OSD - DISPLAY SETUP > CAMERA ID



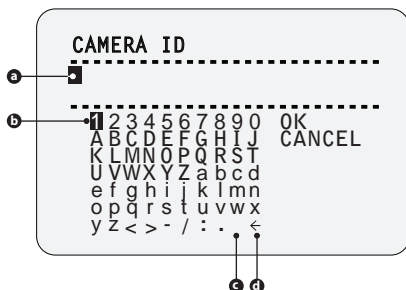
1 DISPLAY SETUP

This menu defines what is displayed on the OSD of the main screen. If an item is set to be AUTO, the item is displayed only when its is changed.

ADDRESS	ON / OFF
CAMERA ID	BOT / TOP / OFF
Select the camera ID location. Refer to "OSD Display of Main Screen."	
PTZ INFORMATION	ON / OFF / AUTO
ACTION TITLE	ON / OFF / AUTO
PRESET LABEL	ON / OFF / AUTO
ALARM I/O	ON / OFF / AUTO
DATE/TIME	ON / OFF
<PRIVACY ZONE>	Starts Privacy Zone Mask Setup Menu.

3 CAMERA ID - Alphabet Input

- Set the Camera ID to display on top (TOP) or bottom (BOT).
- Give the Camera ID a unique name. The menu will appear when TOP or BOT is selected.
- Maximum 48 characters, including space, are allowed.

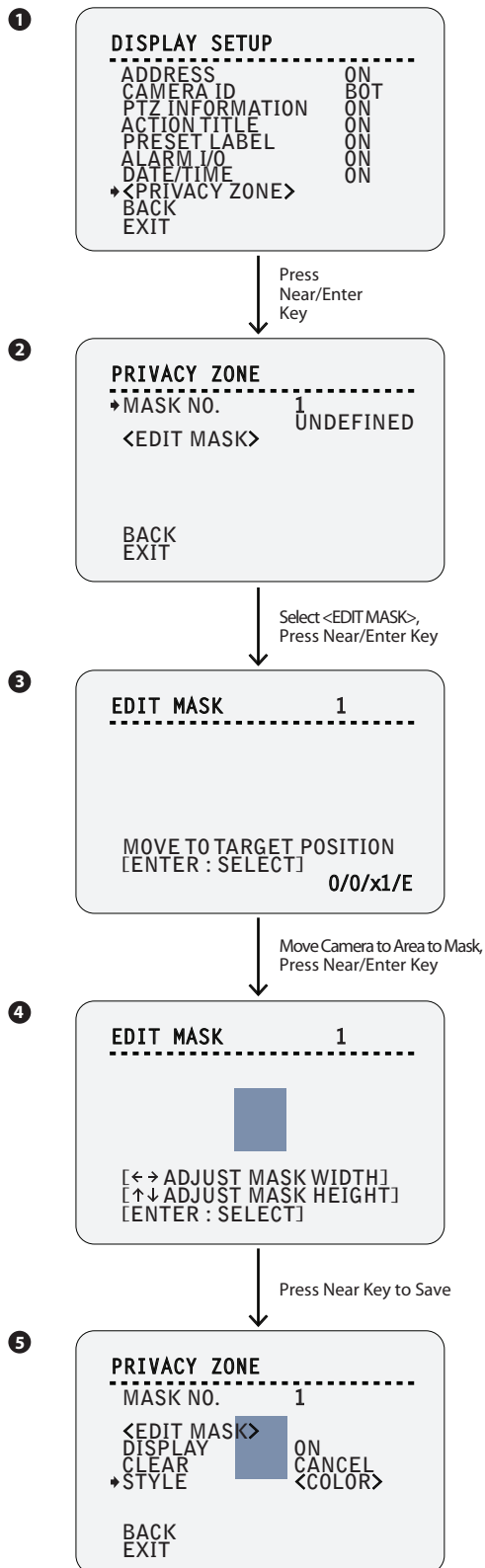


- a** Current Cursor Position: In the CAMERA ID menu, a black box functions as a cursor. As soon as a character is selected, the cursor moves to the next digit.
- b** Selecting Alphabet: Move the joystick Up/Down/Left/Right to the appropriate character from the character set you wish to select. To choose the character, press the Near or Enter key.
- c** Space: If you want to use blank, choose space character (" ").
- d** Backspace: If you want to delete a character in front, use backspace character ("←").

4 CAMERA ID - Complete Editing

When you complete the camera ID editing, move the cursor to OK and press Near key to save the completed camera ID. To disregard the current change, move the cursor to CANCEL and press the Near key.

OSD - DISPLAY SETUP > PRIVACY ZONE



1 DISPLAY SETUP

See the previous page.

3 EDIT MASK - Move to Target Position

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

- ☒ If the tilt angle is located in the range between 90° to 90°, you can not set up privacy zone mask.
- ☒ If a tilt angle over 90° (image flipped region) is designated, camera will automatically move to that position by moving the pan angle 180° and then adjusting the tilt angle as necessary.

4 EDIT MASK - Adjust Mask Size

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

- Move Joystick Left/Right(◀▶): Adjust Mask Width.
- Move Joystick Up/Down(▲▼): Adjust Mask Height.

- ☒ To hide a certain zone completely regardless of high speed pan/tilt motions, it is recommended that the size of mask must be 20% bigger than original target size.
- ☒ It is noted that during pan/tilt control like jog action, the object behind the privacy mask can be disclosed in a short period of time.

5 PRIVACY ZONE

Selects area in image to mask.

MASK NO. 1 ~ 12
Selects mask number. If the selected mask has already been saved, camera moves as it was set. Otherwise, "UNDEFINED" will be displayed under MASK NO.

DISPLAY ON / OFF
Sets the camera to display or hide the masks on images.

CLEAR MASK CANCEL / OK
Deletes data in the selected mask no.

STYLE <COLOR> / MOSAIC 1 ~ 4
Sets the style of the mask.
See the next page.

OSD - DISPLAY SETUP > PRIVACY ZONE

5

PRIVACY ZONE

MASK NO.1

<EDIT MASK>

DISPLAY

CLEAR

→STYLE

ON

CANCEL

<COLOR>

BACK

EXIT

Press
Near/Enter
Key

6

PRIVACY ZONE

MASK NO.1

<EDIT MASK>

DISPLAY

CLEAR

*STYLE

ON

CANCEL

→<COLOR>

BACK

EXIT

Press
Near/Enter
Key

7

PRIVACY ZONE

STYLE

COLOR

→Y-LEVEL0

RED ADJUST0

BLUE ADJUST0

BACK

EXIT

Press
Near/Enter
Key

8

PRIVACY ZONE

STYLE

COLOR

*Y-LEVEL→0

RED ADJUST0

BLUE ADJUST0

BACK

EXIT

7 PRIVACY ZONE - STYLE > COLOR

Sets the color of the mask.

Y-LEVEL 0 ~ 100

Set the Y-LEVEL of the mask.

RED ADJUST 0 ~ 100

BLUE ADJUST 0 ~ 100

OSD - MOTION SETUP

1

MOTION SETUP	
◆PRESET LOCK	OFF
PWR UP ACTION	ON
AUTO FLIP	ON
JOG MAX SPEED	140/SEC
JOG DIRECTION	NORMAL
FRZ IN PRESET	OFF
<PARKING ACTION SETUP>	
<ALARM INPUT SETUP>	
BACK	
EXIT	

↓
Press
Near/Enter
Key

2

PARKING ACTION SETUP	
◆PARK ENABLE	OFF
WAIT TIME	00:10:00
PARK ACTION	HOME
BACK	
EXIT	

1 MOTION SETUP

Configures the general functions of pan/tilt motions.


PRESET LOCK ON / OFF

If motion lock is set to ON, it will be impossible to setup or delete a preset, scan, pattern, and/or group. It will only be possible to run those functions. To setup and delete those functions, go to OSD menu.

PWR UP ACTION ON / OFF

This function enables you to resume the last action executed before the power went down. Most actions such as preset, pattern, scan, and group resume for this function, but jog action does not resume with this function.

AUTO FLIP ON / OFF

When the tilt angle arrives to the top of tilt orbit (90°), zoom module camera continues moving opposite of the tilt direction (180°) to continue tracing targets. As soon as zoom module camera passes through the top of the tilt direction (90°), images should be reversed automatically and  appears on the screen. If this function is set to OFF, tilt movement range is 0° ~ 90°.

JOG MAX SPEED 2/SEC ~ 200/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 NORMAL, the view on the screen is moving in the same direction with jog tilting. If INVERSE is selected, the view on the screen is moving reversely.

FRZ IN PRESET ON / OFF

When present movement begins, the camera captures the image of the beginning point. Camera will display the captured image during the present movement and will not display the images the camera receives during the movement. As soon as the camera stops at the preset end point, the camera begins to display the live images it receives at the end point.

<PARKING ACTION SETUP>

Opens PARKING ACTION SETUP screen.

<ALARM INPUT SETUP>

Opens ALARM INPUT ACTION screen.

2 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 00:00:05 ~ 04:00:00

The time is displayed in "HH:MM:SS" format, and the time can be changed by 1 second unit.

1. To place the cursor on the time marked as shown below, press
Near key.

00:10:00

2. Move joystick left/right to adjust hours, minutes and seconds.

3. Move joystick up/down to select the digit.

4. By pressing Near key, save the current setting.

PARKING ACTION HOME / PRESET 1~128 / SCAN 1~8 /
PATTERN 1~4 / GROUP 1~8

Ex. If HOME is selected for park action, camera will move to home position when there is no PTZ command during the assigned WAIT TIME.

OSD - MOTION SETUP

1

MOTION SETUP

PRESET LOCK OFF
PWR UP ACTION ON
AUTO FLIP ON
JOG MAX SPEED 140/SEC
JOG DIRECTION NORMAL
FRZ IN PRESET OFF
◀ PARKING ACTION SETUP ▶
▶ ALARM INPUT SETUP ▶
BACK
EXIT

↓
Press
Near/Enter
Key

2

ALARM INPUT SETUP

▶ ALARM 1 N.O NOT USED
ALARM 2 N.O NOT USED
ALARM 3 N.O NOT USED
ALARM 4 N.O NOT USED
ALARM 5 N.O NOT USED
ALARM 6 N.O NOT USED
ALARM 7 N.O NOT USED
ALARM 8 N.O NOT USED
BACK
EXIT

↓
Press
Near/Enter
Key

3

ALARM INPUT SETUP

▶ ALARM 1 **N.O** NOT USED
ALARM 2 N.O NOT USED
ALARM 3 N.O NOT USED
ALARM 4 N.O NOT USED
ALARM 5 N.O NOT USED
ALARM 6 N.O NOT USED
ALARM 7 N.O NOT USED
ALARM 8 N.O NOT USED
BACK
EXIT

↓
Joystick
Right

4

ALARM INPUT SETUP

▶ ALARM 1 N.O **NOT USED**
ALARM 2 N.O NOT USED
ALARM 3 N.O NOT USED
ALARM 4 N.O NOT USED
ALARM 5 N.O NOT USED
ALARM 6 N.O NOT USED
ALARM 7 N.O NOT USED
ALARM 8 N.O NOT USED
BACK
EXIT

↓
Joystick
Down

5

ALARM INPUT SETUP

▶ ALARM 1 N.O **PRESET 1**
ALARM 2 N.O NOT USED
ALARM 3 N.O NOT USED
ALARM 4 N.O NOT USED
ALARM 5 N.O NOT USED
ALARM 6 N.O NOT USED
ALARM 7 N.O NOT USED
ALARM 8 N.O NOT USED
BACK
EXIT

2 ALARM INPUT SETUP

If an external sensor is activated, camera will move to the corresponding action.

Alarm Type: N.O (Normal Open) / N.C (Normal Close)
Sets the sensor input type.

Alarm Action NOT USED / HOME / PRESET 1~128 /
 SCAN 1~8 / PATTERN 1~4 / GROUP 1~8

For each alarm input, you can assign the counteraction functions (Preset, Scan, Pattern, Group).

OSD - FUNCTION SETUP > PRESET SETUP

①

```

FUNCTION SETUP
-----
* <PRESET SETUP>
  <SCAN SETUP>
  <PATTERN SETUP>
  <GROUP SETUP>
  <SCHEDULE SETUP>

BACK
EXIT
    
```

Press
Near/Enter
Key

②

```

PRESET SETUP
-----
* PRESET NO. 1
  <EDIT SCENE> UNDEFINED

BACK
EXIT
    
```

Select <EDIT SCENE>,
Press Near/Enter Key

③

```

EDIT SCENE  -PRESET1
-----

MOVE TO TARGET POSITION
[NEAR:SELECT/FAR:CANCEL]
0/0/x1/E
    
```

Press
Near/Enter
Key

④

```

PRESET SETUP
-----
* PRESET NO. 1
  <EDIT SCENE>
  <LABEL>
  CLR PRESET  CANCEL
  CAM ADJUST  GENERAL
  ALARM OUT   ----
  BACK
  EXIT
    
```

① FUNCTION SETUP

Configure 5 special functions with this menu.

② PRESET SETUP - Undefined

127 presets (1 ~ 128) can be assigned excluding the number 95, which is reserved for OSD menu.

PRESET NO. 1 ~ 128 (Excluding 95)

If a selected preset is already defined, camera moves to pre-defined position and preset characteristics such as label and relay outputs appear on monitor. (Refer to screen ④) If a selected preset is not defined, UNDEFINED will appear on monitor.

<EDIT SCENE>

Redefine the current preset scene position (i.e. PTZ).

③ EDIT SCENE

1. Using the joystick, move camera to the desired position.
2. By pressing Near key, save the current PTZ data.
3. Press Far key to cancel.

④ PRESET SETUP

If the preset is defined, the information will be shown on the OSD menu with the setting, and the alarm device (if defined) will be activated.

PRESET NO. 1 ~ 128 (Excluding 95)

<EDIT SCENE>

<LABEL>

Edits Label to show on the monitor when the preset runs. Maximum 10 characters are allowed.

CAM ADJUST GENERAL / SPECIAL

- WB (White Balance) and AE (Auto Exposure) can be set independently for each preset.

- **GENERAL:** WB or AE can be set completely and simultaneously for all presets in ROOT MENU > CAMERA SETUP menu.

- **SPECIAL:** WB or AE can be set independently or separately for each preset in each preset setup menu.

- Each special WB/AE value should be activated correspondingly when camera arrives at each preset location. During jog operation, general WB/AE value should be applied.

- The special WB/AE value should not be changed when the general WB/AE value is changed. If SPECIAL is selected, the menu to set the special WB/AE appears on the monitor.

ALARM OUT ---- ~ 1 2 3 4

The status of four alarm outputs can be freely controlled in conjunction with preset run. The character "-" means the alarm output is OFF, and the number which represents the alarm means ON.

Ex. "- 2 3 -" means output relay 2 and 3 will be ON, and 1 and 4 will be OFF, when you run this preset.

OSD - FUNCTION SETUP > PRESET SETUP

1

```

PRESET SETUP
-----
PRESET NO.      1

<EDIT SCENE>
* <LABEL>
  CLR PRESET    CANCEL
  CAM ADJUST    GENERAL
  ALARM OUT     ----
  BACK
  EXIT
    
```

Press
Near/Enter
Key

2

```

LABEL          PRESET1
-----
1 2 3 4 5 6 7 8 9 0 OK CANCEL
A B C D E F G H I J
K L M N O P Q R S T
U V W X Y Z a b c d
e f g h i j k l m n
o p q r s t u v w x
y z < > - / : . <
    
```

Press
Near/Enter
Key

3

```

LABEL          PRESET1
-----
[SKY]          OK CANCEL
1 2 3 4 5 6 7 8 9 0
A B C D E F G H I J
K L M N O P Q R S T
U V W X Y Z a b c d
e f g h i j k l m n
o p q r s t u v w x
y z < > - / : . <
    
```

2 LABEL

Edits the label to show on monitor when camera arrives at presets.

```

LABEL          PRESET1
-----
1 2 3 4 5 6 7 8 9 0 OK CANCEL
A B C D E F G H I J
K L M N O P Q R S T
U V W X Y Z a b c d
e f g h i j k l m n
o p q r s t u v w x
y z < > - / : . <
    
```

- a** **Current Cursor Position:** In edit label menu, a black box acts as a cursor. As soon as you select a character, the cursor moves to the next digit.
- b** **Selecting Alphabet:** Using left/right/up/down of joystick, move to an appropriate character from the character set. To select the character, press the Near or Enter key.
- c** **Space:** If you want to use blank, choose space character (" ").
- d** **Backspace:** If you want to delete a character in front, use backspace character ("←").

3 LABEL - Complete Editing

If you complete the label editing, move the cursor to OK and press Near key to save the completed label. To disregard the current change, move the cursor to CANCEL and press the Near key

1

```

PRESET SETUP
-----
PRESET NO.      1

<EDIT SCENE>
<LABEL>
  CLR PRESET    CANCEL
  *CAM ADJUST  * <SPECIAL>
  ALARM OUT     ----
  BACK
  EXIT
    
```

Press
Near/Enter
Key

2

```

CAM ADJUST    -PRESET1
-----
* <WHITE BALANCE SETUP>
  <AUTO EXPOSURE SETUP>

  BACK
  EXIT
    
```

2 CAM ADJUST

Edits label to show on monitor when the camera arrives at presets.

<WHITE BALANCE SETUP>

See the section ROOT MENU > CAMERA SETUP > WB SETUP.

<AUTO EXPOSURE SETUP>

See the section ROOT MENU > CAMERA SETUP > AE SETUP.

OSD - FUNCTION SETUP > SCAN SETUP

1

FUNCTION SETUP

 <PRESET SETUP>
 *<SCAN SETUP>
 <PATTERN SETUP>
 <GROUP SETUP>
 <SCHEDULE SETUP>

 BACK
 EXIT

Press
Near/Enter
Key

2

SCAN SETUP

 *SCAN NO. 1
 1ST POS. NOT USED
 2ND POS. NOT USED

 SCAN SPEED 30/SEC
 CLEAR SCAN CANCEL

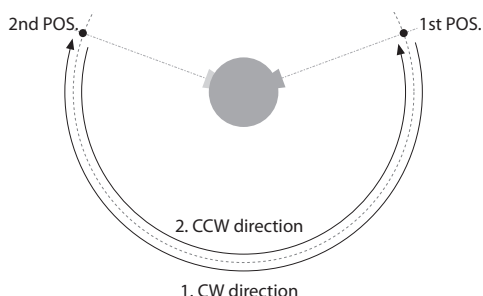
 BACK
 EXIT

2 SCAN SETUP

By using the scan function, you can make the camera to move between 2 preset positions repeatedly.

When the scan function runs, the camera moves from the preset assigned as the 1st point to the preset assigned as the 2nd point in CW (Clockwise) direction. Then the 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, the camera turns on its axis by 360° in CW direction and then it turns on its axis by 360° in CCW direction.



SCAN NO. 1 ~ 8

Selects the scan number to edit. If a selected scan has not defined, NOT USED is displayed in 1st position and 2nd position.

1ST POS. / 2ND POS. PRESET 1 ~ 128 / NOT USED

Set up the 2 position for scan function. If a selected preset is not defined, UNDEFINED will be displayed as shown below.

SCAN SETUP

 SCAN NO. 1
 *1ST POS. *PRESET 1
 2ND POS. NOT USED
 UNDEFINED
 SCAN SPEED 30/SEC

SCAN SPEED 1/SEC ~ 180/SEC

Sets the speed of the scan.

CLEAR SCAN CANCEL / OK

Deletes the current scan data.

OSD -

FUNCTION SETUP > PATTERN SETUP

FUNCTION SETUP

BACK
EXIT

PATTERN SETUP

BACK
EXIT

EDIT PATTERN 1

EDIT PATTERN 1

EDIT PATTERN 1

[NEAR:SAVE / FAR:DELETE]
0/0/x1/E

1. Move the camera with joystick controller or run preset function to memorize the path (mostly curve path) in a selected pattern.

OSD - FUNCTION SETUP > GROUP SETUP

1

FUNCTION SETUP

 <PRESET SETUP>
 <SCAN SETUP>
 <PATTERN SETUP>
 * <GROUP SETUP>
 <SCHEDULE SETUP>

BACK
 EXIT

Press
Near/Enter
Key

2

GROUP SETUP

 * GROUP NO. 1
 CLEAR GROUP
 <EDIT GROUP>

BACK
 EXIT

Select <EDIT GROUP>,
Press Near/Enter Key

3

EDIT GROUP 1

* NO. ACTION NO. DWELL OPT

1 NONE
 2 NONE
 3 NONE
 4 NONE
 5 NONE

SAVE
 CANCEL [NEAR:EDIT]

Press
Near/Enter
Key

4

EDIT GROUP 1

NO. ACTION NO. DWELL OPT

* 1 NONE
 2 NONE
 3 NONE
 4 NONE
 5 NONE

SAVE [NEAR:EDIT ACT]
 CANCEL [FAR :EDIT END]

Press
Near/Enter
Key

5

EDIT GROUP 1

NO. ACTION NO. DWELL OPT

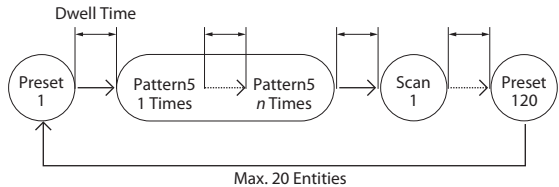
* 1 NONE
 2 NONE
 3 NONE
 4 NONE
 5 NONE

SAVE [←→:MOVE CURSOR]
 CANCEL [↑↓:CHANGE VAL.]

2 GROUP SETUP

The group function allows you to run sequence of presets, pattern, and/or scans. Maximum 8 groups can be stored. Each group can have a maximum of 20 action entities which can be preset, pattern, or scan.

The preset speed and the repeat number of pattern & scan can be configured in group setup. Dwell time between actions can also be adjusted.



GROUP NO. 1 ~ 8

Selects group number to edit. If a selected group number is not defined, UNDEFINED will be displayed under the selected group number.

CLEAR GROUP CANCEL / OK
Deletes the data in the current group.

<EDIT GROUP>
Starts editing the group function.

3 EDIT GROUP - Initial Screen

Press Near or Enter key in NO list to start group setup.

ACTION NO. NONE / PRESET 1~128(Excluding 95) /
PATTERN 1~4 / SCAN 1~4

DWELL TIME 00:03 ~ 04:00 (min:sec)
Sets dwell time between function by moving joystick up/down.

OPT PRESET: 2~360 / PATTERN & SCAN: 1~255
Represents preset speed (2~360) when preset is selected. It should be the number of repetition (1~255) when pattern or scan is selected for ACTION.

4 EDIT GROUP – Select Function Sequence

Note that maximum 20 functions are allowed in a group. Move cursor up/down and press Near or Enter key to set.

5 6 EDIT GROUP - Assign Function

Set up ACTION, DWELL and OPT. Note that selected item is displayed in reverse. Move cursor left/right to select items and move cursor up/down to change each value.

OSD - FUNCTION SETUP > GROUP SETUP

6

EDIT GROUP				1
NO.	ACTION	NO.	DWELL	OPT
1	PATTERN	1	00:03	1
2	NONE			
3	NONE			
4	NONE			
5	NONE			
SAVE				[← →: MOVE CURSOR]
CANCEL				[↑ ↓: CHANGE VAL.]

Press
Near/Enter
Key

7

EDIT GROUP				1
NO.	ACTION	NO.	DWELL	OPT
1	PATTERN	1	00:03	1
2	NONE			
3	NONE			
4	NONE			
5	NONE			
SAVE				[NEAR: EDIT ACT]
CANCEL				[FAR : EDIT END]

Press
Far Key

8

EDIT GROUP				1
NO.	ACTION	NO.	DWELL	OPT
1	PATTERN	1	00:03	1
2	NONE			
3	NONE			
4	NONE			
5	NONE			
SAVE				
CANCEL				

7 EDIT GROUP - Selects Function Sequence

When you finish setting up an ACTION, press Near or Enter key. Move cursor up/down to select another ACTION NO. and repeat to step 4 ~ step 6 to edit the selected group.

8 EDIT GROUP - Saves the Setting

After completing the setup of all ations, press Far key to exit. Then move the cursor to SAVE. Press Near or Enter key to save the data.

OSD - FUNCTION SETUP > SCHEDULE SETUP

1

```

FUNCTION SETUP
-----
<PRESET SETUP>
<SCAN SETUP>
<PATTERN SETUP>
<GROUP SETUP>
<SCHEDULE SETUP>

BACK
EXIT
    
```

Press
Near/Enter
Key

2

```

SCHEDULE SETUP
-----
* MASTER ENABLE          OFF
  DAY TIME  ACT NO ON
1 UNDEFINED
2 UNDEFINED
3 UNDEFINED
4 UNDEFINED
5 UNDEFINED
6 UNDEFINED
7 UNDEFINED
BACK
    
```

Joystick Down,
Press Near Key

3

```

SCHEDULE SETUP
-----
* MASTER ENABLE          OFF
  DAY TIME  ACT NO ON
1 UNDEFINED
2 UNDEFINED
3 UNDEFINED
4 UNDEFINED
5 UNDEFINED
6 UNDEFINED
7 UNDEFINED
BACK
    
```

Joystick
Down

4

```

SCHEDULE SETUP
-----
* MASTER ENABLE          OFF
  DAY TIME  ACT NO ON
1 ALL 00:00 HOM OFF
2 UNDEFINED
3 UNDEFINED
4 UNDEFINED
5 UNDEFINED
6 UNDEFINED
7 UNDEFINED
BACK
    
```

Assign Value

5

```

SCHEDULE SETUP
-----
* MASTER ENABLE          OFF
  DAY TIME  ACT NO ON
1 ALL 12:00 PRS 128 ON
2 UNDEFINED
3 UNDEFINED
4 UNDEFINED
5 UNDEFINED
6 UNDEFINED
7 UNDEFINED
BACK
    
```

2 SCHEDULE SETUP SCREEN

The schedule function allows running an appropriate function like preset, scan, pattern, group, home move at a designated day and time.

Ex. If you setup a rule "Tuesday at 9:00AM" and "Preset 1(say main gate)," the camera will move to the main gate every Tuesday at 9:00 AM. If you choose weekday, camera will move to main gate everyday except on weekends.

It is noted that due to the real time clock (ROOT MENU > SYSTEM SETUP > DATA/TIME SETUP), the time data will be kept regardless of a blackout. The initial time and day setup is essential to proper schedule function.

MASTER ENABLE	ON / OFF
Decide whether schedule function is active or not.	
DAY	UNDEFINED / ALL / WKD / SUN ~ MON
Set the day for scheduling.	
- Undefined : Inactivate.	
- All : Applies to every day of the week	
- WKD : Applies to every day except for Saturday and Sunday.	
- SUN-MON : Applies to designated day only.	
TIME	00:00 ~ 23:59 (hour:min)
Set the time.	
ACT NO	HOM(HOME) / PRS(Preset) 1~255(Excluding 95) / SCN(Scan) 1~8 / PTN(Pattern) 1~4 / GRO(Group) 1~8
Set the function and number.	
ON	ON / OFF
Turn ON / OFF this rule.	

4 5 SCHEDULE SETUP - Assign Value

Each field (DAY, TIME, ACT, NO, ON) can be selected by left/right keys and the values in the field are changed using up/down keys.

OSD - FUNCTION SETUP > SCHEDULE SETUP

SCHEDULE SETUP					

	MASTER	ENABLE			ON
	DAY	TIME	ACT	NO	ON
1	MON	01:20	HOM		ON
2	WED	07:00	PRS	12	ON
3	THU	11:40	SCN	3	ON
4	ALL	12:00	SCN	1	ON
5	UNDEFINED				
6	UNDEFINED				
7	UNDEFINED				
BACK					

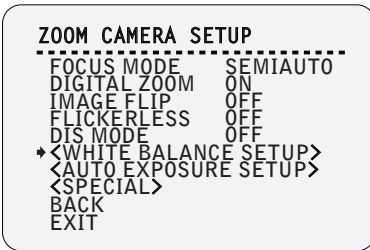
EX.

The second rule means camera will move to preset 12 at 7:00 every Wednesday.

- ☒ If the rules conflict with each other, the higher number will have priority over the others.
- ☒ If you assign an undefined function, there will be no action that takes place.
- ☒ Using reserved preset, you can make various schedules. For example, PRS179 and PRS178 are DAY and NIGHT mode respectively. (Refer to “Reserved Preset” list on page 18 in this manual.)

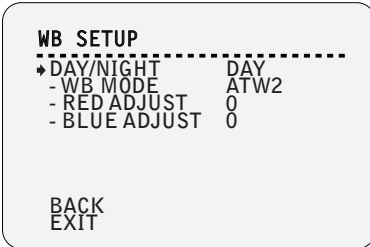
OSD - CAMERA SETUP > WB SETUP

1



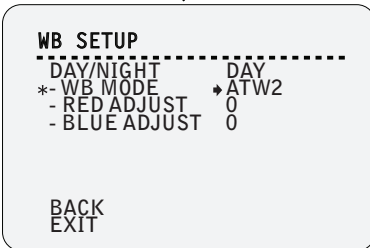
Press
Near/Enter
Key

2



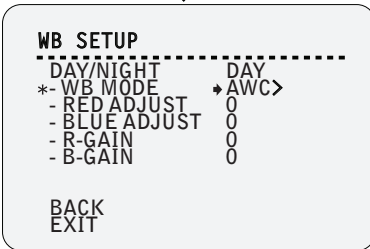
Joystick Down,
Press Near Key

3



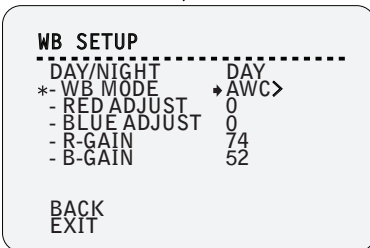
Joystick Down

4



Joystick Right

5



1 ZOOM CAMERA SETUP

DIS MODE ON / OFF
Sets the Digital Image Stabilization mode.

<SPECIAL>
Goes to SPECIAL SETUP screen.

2 WB SETUP - DAY

DAY/NIGHT DAY / NIGHT
The day/night mode can be set independently.

☒ Night mode will only be deactivated if AGC in CAMERA SETUP is set to OFF or FIX.

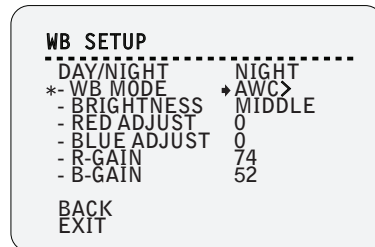
WB MODE ATW1 / ATW2 / AWC / 3200K / 5600K / OFF

- **ATW1:** The color temperature is adjusted automatically between 2500K and 9300K.
- **ATW2:** The color temperature is adjusted automatically between 2000K and 10000K.
- **AWC:** The color temperature is adjusted automatically once, then adjusted value of R-GAIN, B-GAIN are maintained. Gain value can be adjusted manually by the user. It can be fixed as 3200K or 5600K.
- **OFF:** Only activated when NIGHT is selected. At night, the setting will be same as day's setting.

RED/BLUE ADJUST -32 ~ +32
In every mode except OFF, users can adjust the red/blue color value to have the image they want.

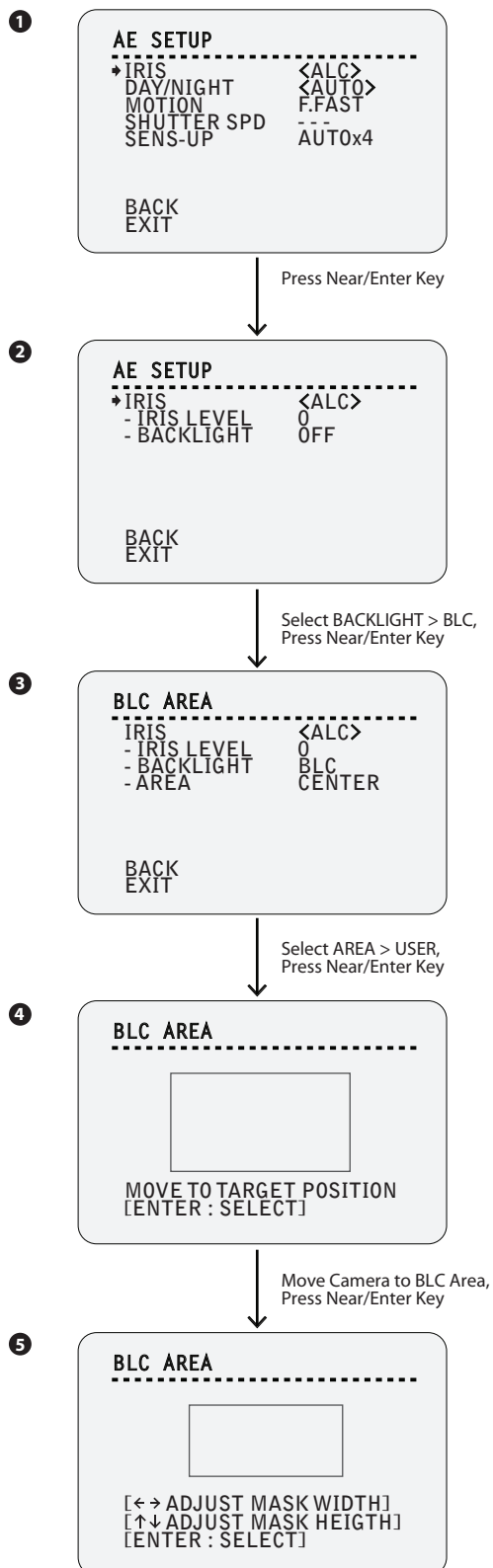
R/B - GAIN 0 ~ 1023
If AWC is on, the adjusted value will be marked. Also, the user can adjust the values even after it has been adjusted automatically.

6 WB SETUP - NIGHT



BRIGHTNESS LOW / MIDDLE / HIGH
When NIGHT is selected, it sets the criterion of the automatic day/night selection.
If set to LOW, the image has to be very dark to be recognized as night among 3 settings. If set to HIGH, the image will be recognized as night even though it is a little dark.

OSD - CAMERA SETUP > AE SETUP



1 AE SETUP

IRIS ALC / MANUAL

See below 2 AE SETUP - IRIS > ALC

DAY/NIGHT DAY / NIGHT / AUTO

Color filter or B/W filter can be selected. If DAY/NIGHT is set to <AUTO>, the DAY/NIGHT editing screen will appear. See the next page

2 DAY/NIGHT.

☒ This is changed to AGC or MOTION according to the SENS-UP setting.

AGC VERY LOW / LOW / MIDDLE / HIGH /
VERY HIGH / USER 1~16 / FIX 1~16

Enhances the brightness of the image by amplifying gain when the illumination is low.

MOTION S.SLOW / SLOW / NORMAL / FAST / F.FAST

If MOTION is set as S.SLOW, the shutter speed will be slower to obtain more light. There will be less noise but this can cause the ghost effect of the moving object.

If MOTION is set towards F.FAST, there will be more noise but this will reduce the ghost effect for any moving object.

SHUTTER SPD OFF / 1/100 ~ 1/10K

If this speed is faster, the moving object can be photographed without the ghost effect. However, the images can be dark if the scene lacks sufficient lighting.

☒ If SENS-UP is set to AUTO, SHUTTER SPD is deactivated.

SENS-UP OFF / AUTO x2 ~ AUTO x256 /
FIX x2 ~ FIX x256

Activates the slow shutter function when the luminance of image is too dark for the CCD to accumulate the amount of light it is set to obtain.

2 AE SETUP - IRIS > ALC

If ALC is selected, the iris will be controlled automatically.

IRIS LEVEL -32 ~ +32

BACKLIGHT OFF / BLC / WDR

This function improves the backlight effect, which is when the subject is dark on the monitor because the intensive backlight

- **BLC**: You can select the desired area you wish to brighten. If it is set on a bright area, note that the area will appear even more brighter.

- **WDR**: See 2 AE SETUP-IRIS > ALC > BACKLIGHT > WDR on the next page.

3 BLC AREA

AREA TOP / BOTTOM / LEFT / RIGHT / USER

If set to USER, the user can set the specific area.

See screen 4 5 on this page.

OSD - CAMERA SETUP > AE SETUP

1

AE SETUP	
IRIS	<ALC>
*DAY/NIGHT	+<AUTO>
MOTION	F.FAST
SHUTTER SPD	---
SENS-UP	AUTOx4
BACK EXIT	

Press
Near/Enter
Key

2

DAY/NIGHT	
+BURST	OFF
[DAY→NIGHT]	
-BRIGHTNESS	MIDDLE
-DWELL TIME	5 SEC
[NIGHT→DAY]	
-BRIGHTNESS	MIDDLE
-DWELL TIME	5 SEC
-MASK AREA	1 2
BACK EXIT	

2 DAY/NIGHT

The camera automatically detects the change by the brightness of the scene.

BURST ON / OFF

If BURST is set to ON, the burst signal is produced although the camera is hchange to B/W filter.

BRIGHTNESS LOW / MIDDLE / HIGH

As the camera switches from Color to B/W with BRIGHTNESS set as LOW, the images will appear darker. As the camera switches from B/W to Color with BRIGHTNESS set as HIGH, the image will appear brighter.

DWELL TIME 2 SEC / 3 SEC / 5 SEC / 10 SEC / 15 SEC / 20 SEC / 25 SEC / 30 SEC

When the switching criterions are satisfied, the filter is changed after the status is maintained during the dwell time.

MASK AREA 1 / 2

If the streetlights or traffic lights are present in a night scene, the mode might not change to B/W. In this incident, setting MASK AREA to those lights will correct the problem.

⊗ If BACKLIGHT is set to BLC, MASK AREA function is deactivated.

1

AE SETUP	
IRIS	<ALC>
- IRIS LEVEL	0
*- BACKLIGHT	+OFF
BACK EXIT	

Joystick Down

2

AE SETUP	
IRIS	<ALC>
- IRIS LEVEL	0
+ BACKLIGHT	WDR
- WEIGHT	MIDDLE
- WDR LEVEL	0
- WHITE BAL	INDOOR
BACK EXIT	

2 AE SETUP - IRIS > ALC > BACKLIGHT > WDR

In WDR mode, the brightness is adjusted in all area of the picture by combining high speed shutter and low speed shutter.

WEIGHT LOW / MIDDLE / HIGH

If WEIGHT goes to HIGH, the area applying high speed shutter is expanded.

WDR LEVEL -9 ~ +9

If WDR LEVEL goes up, the speed of the high speed shutter becomes faster.

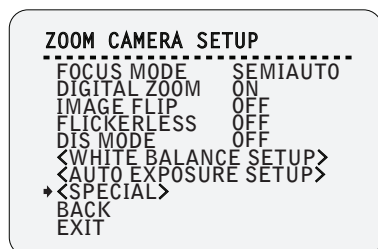
WHITE BAL INDOOR / OUTDOOR

If WHITE BAL is set to INDOOR, the color temperature adjusts based on the darker areas. If WHITE BAL is set to OUTDOOR, the color temperature adjusts based on the brighter areas.

⊗ When WDR is used, the internally operating VPS function stops.

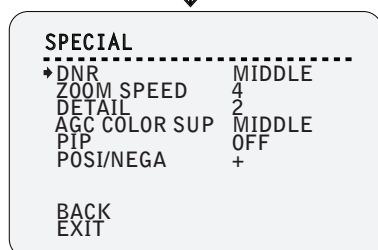
OSD - CAMERA SETUP > SPECIAL

①



Press
Near/Enter
Key

②



① ZOOM CAMERA SETUP

DIS MODE ON / OFF
Sets the Digital Image Stabilization mode.

<SPECIAL>
Opens SPECIAL SETUP menu.

② SPECIAL

Sets the special function related to the image.

DNR OFF / LOW / MIDDLE / HIGH / USER 1~16
Reduces the noise caused by AGC. If set towards HIGH, the noise will be reduced but the ghost effect on moving objects will be increased.

ZOOM SPEED 1 ~ 4
The speed it takes to adjust zoom in/zoom out. 1 is the slowest, and 4 is the fastest.

DETAIL 0 ~ 3
The distinction are separated into 4 levels.
If the level is high, the outline is clear but the noise is increased.

AGC COLOR SUP LOW / MIDDLE / HIGH
The color range of the noise caused by AGC can be reduced.
If set to HIGH, the color range of the noise will decrease, but the overall quality of the color will also decrease

PIP ON / OFF
Turn ON to display the sub-screen.
Sub-screen will appear on the bottom right side of the main display.
Even though the main display enables digital zoom, the sub-screen will only display with maximum optical zoom.

POSI/NEGA + / -
If set as +, the camera will produce the normal image; however, if set as -, the brightness signal and color signal of the produced image will be reversed.

OSD - INTELLIGENCE > MASK AREA

1

INTELLIGENCE

MOTION

ADVANCED

➔ MASK AREA

DISPLAY

SENSITIVITY

RESOLUTION

<ALARM OUT>

OFF

OFF

1 2 3 4

OFF

0

0

BACK

EXIT

Press
Near/Enter
Key

2

INTELLIGENCE

MOTION

ADVANCED

* MASK AREA

DISPLAY

SENSITIVITY

RESOLUTION

<ALARM OUT>

OFF

OFF

➔ 1 2 3 4

OFF

0

0

BACK

EXIT

Joystick Up or Down

3

INTELLIGENCE

MOTION

ADVANCED

* MASK AREA

DISPLAY

SENSITIVITY

RESOLUTION

<ALARM OUT>

OFF

OFF

➔ 1 2 3 4

OFF

0

0

BACK

EXIT

Press
Near/Enter
Key

4

INTELLIGENCE

MOVE TO TARGET POSITION

[ENTER : SELECT]

Press
Near/Enter
Key

5

INTELLIGENCE

[← → ADJUST MASK WIDTH]

[↑ ↓ ADJUST MASK HEIGHT]

[ENTER : SELECT]

1 INTELLIGENCE

MOTION OFF / DETECTION / TRACKING
Enable motion detection and tracking functions.

☒ If you set it to DETECTION, both the FIX/MOVE option of ADVANCED will be disabled.

☒ In the following situations, DETECTION and TRACKING may not work properly.

- when there is a sudden change of brightness
- when the device moves
- when a certain object's movement fills most of the framing area
- when there are difficulties in distinguishing the moving object and background

ADVANCED OFF / FIX/MOVE
This option enables you to detect motion and track the movement.

FIX/MOVE will mark a region if an existing object disappears or a new object appears and stays fixed for a certain period of time.

☒ In the following situations, FIX/MOVE may not work properly.

- when multiple motions continue arbitrarily
- when the object continues to move within the same position.
- when a new object suddenly appears and conceals another object that is moving.

MASK AREA 1 / 2 / 3 / 4
Selects the MASK AREA number that you wish to exclude from motion detection.

DISPLAY ON / OFF
Turn ON to display the motion detection and the detection of the configured advanced function.

SENSITIVITY 0 ~ 6
Sets the sensitivity of the motion sensor.

RESOLUTION 0 ~ 6
As the resolution setting gets higher, motion detection becomes more precise. Higher resolution settings allow the detection of smaller objects.

<ALARM OUT>
Opens ALARM OUT menu.

OSD - INTELLIGENCE > ALARM OUT

❶

INTELLIGENCE

MOTION OFF
ADVANCED OFF
MASK AREA 1 2 3 4
DISPLAY OFF
SENSITIVITY 0
RESOLUTION 0
➤<ALARM OUT>

BACK
EXIT

↓
Press
Near/Enter
Key

❷

ALARM OUT

➤MOTION ON
FIX/MOVE ON

BACK
EXIT

❷ ALARM OUT

When ALARM OUT is set to ON, the camera will produce alarm signals when motion is detected or when the configured advanced function is detected.

MOTION	ON / OFF
--------	----------

FIX/MOVE	ON / OFF
----------	----------

OSD - SYSTEM SETUP

1

SYSTEM SETUP

➔<DATE/TIME SETUP>

<RELAY TYPE>

<PASSWORD>

<SET HOME POSITION>

<SET NORTH DIRECTION>

LANGUAGE ENGLISH

BACK

EXIT

Press
Near/Enter
Key

2

DATE/TIME SETUP

➔DATE

01/JAN/2008(TUE)

TIME

00:00:01(H/M/S)

BACK

EXIT

3

RELAY TYPE SETUP

➔RELAY1

NORMAL OPEN

RELAY2

NORMAL OPEN

RELAY3

NORMAL OPEN

RELAY4

NORMAL CLOSE

BACK

EXIT

4

EDIT PASSWORD

1

1

2

3

4

5

6

7

8

9

0

OK

A

B

C

D

E

F

G

H

I

J

CANCEL

K

L

M

N

O

P

Q

R

S

T

DISABLE

U

V

W

X

Y

Z

a

b

c

d

e

f

g

h

i

j

k

l

m

n

o

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q

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v

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x

y

z

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/

:

.

<

1 SYSTEM SETUP

<DATE/TIME SETUP>

Opens DATE/TIME SETUP menu.

<RELAY TYPE>

Opens RELAY TYPE menu.

<PASSWORD>

Opens PASSWORD menu.

<SET HOME POSITION>

Opens SET HOME POSITION menu.

<SET NORTH DIRECTION>

Opens SET NORTH DIRECTION setup.

LANGUAGE

ENGLISH / ESPAÑOL / FRANÇAIS / DEUTSCH
/ ITALIANO / РУССКИЙ / PORTUGUÊS

Select a preferred language for the OSD display.

After selecting a language, press Near or Enter key.

2 DATE/TIME SETUP

After you press the Near or Enter key, move between the different fields using the left/right keys. Use the up/down keys to change the values of each field. To save the updated data, press the Near or Enter key again.

DATE

01 / JAN / 2000 ~ 31 / DEC / 2037

Date is displayed in dd/mm/yy format.

The day is automatically calculated when you set the date.

TIME

Time is displayed in HH:MM:SS format.

3 RELAY TYPE SETUP

RELAY1, 2, 3, 4

NORMAL OPEN / NORMAL CLOSE

Define the type of relay output for each of the four relays.

4 EDIT PASSWORD

Sets a password that consist of 4 characters. If this function is set as ENABLE, the password is required whenever you open the OSD Menu.

- ✖ The default password is "4321" and the master password is "- - > g."

OSD - SYSTEM SETUP

5

SET HOME POSITION

MOVE TO TARGET POSITION
[NEAR:SELECT/FAR:CANCEL]
0/0/x1/E

5 SET HOME POSITION

Home position means the origin of pan angle calculation. The value of pan angle displayed on the screen is based on this home position.

By using joystick, move the camera to the desired position and press Near key.

Home position does not effect the tilt angle.

If you change the location of the home position, all horizontal locations of your set functions such as preset, scan, pattern, group, and privacy zone mask will be shifted based on the new home position.

If there are no saved locations for preset, pattern, scan, and/or group, the camera will automatically move to the home position after rebooting.

If power up action is set as ON, camera will continue the last function that was executed right before reboot.

☒ Set Home Position?

When the camera block is replaced or the orientation of the camera is changed due to maintenance operations, it is very difficult to maintain the same pan orientation. All the data for the functions that depend on pan orientation, such as preset, scan, pattern, group, and privacy zone mask, are no longer useful. However, even in this case, you can reuse the data if you redefine the set home position to the previous home position.

6

SET NORTH DIRECTION

MOVE TO TARGET POSITION
[NEAR:SELECT/FAR:CANCEL]
0/0/x1/N

6 SET NORTH DIRECTION

By using the joystick, move the camera to the desired northern position and press Near or Enter key.

The direction will be displayed on the screen

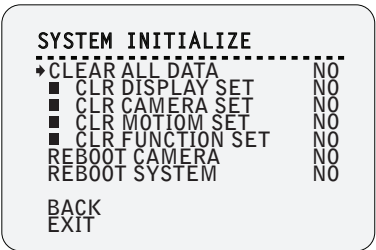
[NEAR:SELECT/FAR:CANCEL]
0/0/x1/N

Direction will be displayed as one of the following:

N(North) / S(South) / E(East) / W(West) / NE(Northeast) / NW(Northwest) / SE(Southeast) / SW(Southwest).

OSD - SYSTEM INITIALIZE

1



1 SYSTEM INITIALIZE

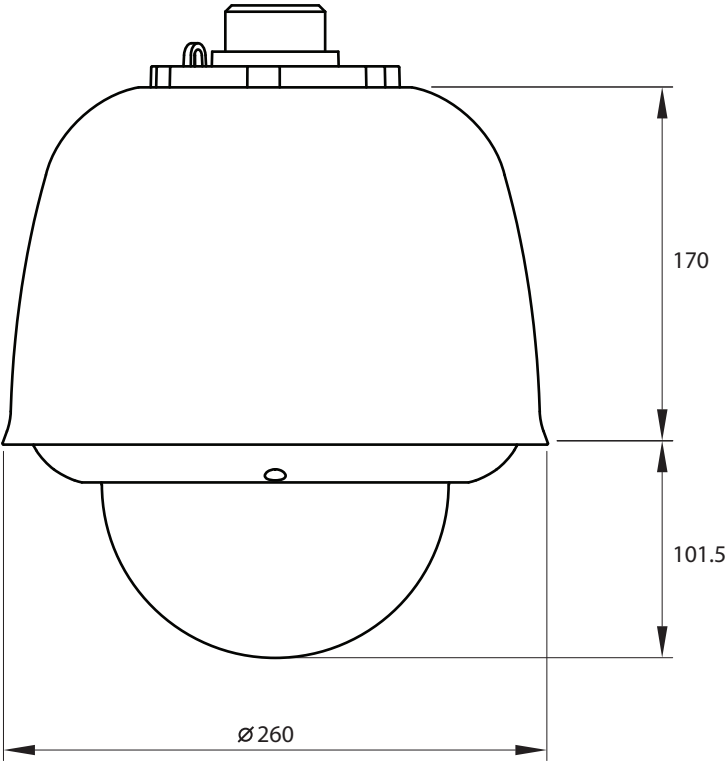
CLEAR ALL DATA	NO / YES
Deletes all configuration data such as display, camera, motion setup, and so on.	
CLR DISPLAY SET	NO / YES
Initializes display configuration.	
CLR CAMERA SET	NO / YES
Initializes camera configuration.	
CLR MOTION SET	NO / YES
Initializes motion configuration.	
CLR FUNCTION SET	NO / YES
Deletes preset data, scan data, pattern data, group data, and schedule data.	
REBOOT CAMERA	NO / YES
Reboots zoom camera module.	
REBOOT SYSTEM	NO / YES
Reboots speed dome camera.	

Initial Configuration Table

Address	ON	Display
Camera ID	OFF	
PTZ Information	AUTO	
Action Title	AUTO	
Preset Label	AUTO	
Alarm I/O	AUTO	
Date/Time	ON	
Privacy Zone	Undefined	Motion
Preset Lock	OFF	
Power Up Action	ON	
Auto Flip	ON	
Jog Max Speed	140°/sec	
Jog Direction	NORMAL	
Freeze In Preset	OFF	
Park Action	OFF	Function
Alarm I/O Action	OFF	
Preset 1~128	Undefined	
Auto Pan 1~8	Undefined	
Pattern 1~4	Undefined	
Scan 1~8	Undefined	
Schedule 1~7	Undefined	
Focus Mode	AUTO	Camera
Digital Zoom	ON	
Image Flip	OFF	
Flickerless	OFF	
DIS Mode	Off	
Day/Night	DAY	
WB Mode	ATW2	
Red Adjust	0	Intelligence
Blue Adjust	0	
Day/Night	NIGHT	
WB Mode	OFF	
Iris	ALC	
Iris Level	0	
Backlight	OFF	
Day/Night	AUTO	Communication
Burst	OFF	
Brightness	MIDDLE	
Dwell Time	5 SEC	
Mask Area	Undefined	
Motion	F.FAST	
Sens-up	AUTOx4	
DNR	MIDDLE	Intelligence
Zoom Speed	4	
Detail	2	
AGC Color Sup	MIDDLE	
PIP	OFF	
Posi/Nega	+	
Motion	OFF	Intelligence
Advanced	OFF	
Mask Area	Undefined	
Display	ON	
Sensitivity	4	
Resolution	3	
Alarm Out>Motion	ON	
Alarm Out>Fix/Move	ON	Communication
Protocol	AUTO	
Baud Rate	9600	

Specifications - Dimension

unit: mm



Specifications - Specification PTZ39X

Signal Format		NTSC	PAL
Camera	Image Device	1/4" EX View-HAD PS CCD	
	Total Pixel	410K Pixtels, 811 (H) x 508 (V)	470K Pixels, 795 (H) x 596 (V)
	Effective Pixel	380K Pixels, 768 (H) x 494 (V)	440K Pixels, 752 (H) x 582 (V)
	H. Resolution	Color: 550 TV Lines B/W: 600 TV Lines	
	S/N Ratio	52 dB (AGC OFF)	
	Zoom	X39 Optical Zoom, X12 Digital Zoom	
	Focal Length	F 1.6 (W) 3.7 (T) f=3.4 ~ 132.6mm	
	Angle of View	H: 57.54° (W) ~ 1.56° (T) V: 44.44° (W) ~ 1.16° (T)	
	Min. Illumination	Color: 1.2 Lux / F1.6 (50 IRE) B/W: 0.12 Lux / F1.6 (50 IRE)	
	Day & Night	COLOR / BW / AUTO (Day&Night Filter)	
	Focus	AUTO / MANUAL / SEMI-AUTO	
	Iris	AUTO / MANUAL	
	Shutter Speed	1/60 (1/50) ~ 1/10K-sec	
	White Balance	ATW1(2,500 ~ 9,500°K) / ATW2(2,000 ~ 10,000°K) / AWC / MANUAL	
	Sens-Up	X2 ~ X256	
	Flickerless	ON / OFF	
	AGC	ON / OFF	
	WDR	ON / OFF	
	BLC	ON / OFF	
	DNR	ON / OFF	
	DIS	ON / OFF	
	Intelligent Video	MOTION / FIX/MOVE	
	Video Out	VBS: 1.0 Vp-p (75Ohm Terminated)	
	Other Functions	Frame Freeze Function, Detail, Reverse, Posi/Nega, PIP	
Pan/Tilt	Range	Pan: 360° (Endless)	
		Tilt: 0° ~ 180° (Auto-Flip On), 0° ~ 90° (Auto-Flip Off)	
	Pan/Tilt Speed	Preset: 360°/sec	
		Manual: 0.05° ~ 200°/sec (Zoom Proportional)	
		Scan: 1° ~ 180°/sec	
	Preset	127 Presets with Labels / Independent Camera Setup	
	Pattern	4 Patterns, 1000 Commands/Pattern (Approximately 5 Minutes for Each Pattern)	
	Scan	8 Scans	
	Group	8 Groups (Maximum 20 Entries per Group)	
General	Schedule	7 Rules (Condition: Day, Time → Action: Preset, Scan, Group, Pattern)	
	Other Functions	Image Auto Flip, Auto Parking, Power-Up Action, etc.	
	Communication	RS-485	
	Protocol	Auto, Pelco-D, Pelco-P, Samsung, Panasonic, Kalatel, AD (American Dynamics)	
	Privacy Zone	12 Zones	
	Sensor In/Out	8 Input / 4 Relay Output	
	OSD	Available, Supports 7 Languages: ENGLISH / ESPAÑOL / FRANÇAIS / DEUTSCH / ITALIANO / РУССКИЙ / PORTUGUÊS	
	Power	AC 24V: 24W, 1A / 57W, 2.38A HEATER ON	
	Dimension	Net: 260 x 552 x 405 mm, 10.2 x 21.7 x 15.9 in	
		Package: 390 x 580 x 500 mm, 15.4 x 22.8 x 19.7 in	
	Weight	6.4kg, 14.1lbs	
	Operating Temperature	-45°C ~ 50°C / -49°F ~ 122°F	
	Outdoor Housing	IP 66/ Vandal Proof Structure (Housing & Accessories: AL Die-cast), (Dome Cover: PC)	

WARRANTY INFORMATION

Digital Watchdog (referred to as “the Warrantor”) warrants the Digital Watchdog Camera against defects in materials or workmanship as follows:

LABOR : For the initial two (2) years from the original purchase date, if the camera is determined to be defective, the Warrantor will repair or replace the unit with a new or refurbished product at its option at no charge.

PARTS : In addition, the Warrantor will supply replacement parts for the initial two (2) years.

To obtain warranty or out of warranty service, please contact a Technical Support Representative at 1-866-446-3595 Monday through Friday from 8:30AM to 8:00PM Eastern Standard Time.

A purchase receipt or other proof of the original purchase date is required before warranty service is rendered. This warranty only covers failures due to defects in materials and workmanship which arise during normal use. This warranty does not cover damage which occurs in shipment or failures which are caused by products not supplied by the Warrantor or failures which result from accident, misuse, abuse, neglect, mishandling, misapplication, alteration, modification, faulty installation, set-up adjustments, improper antenna, inadequate signal pickup, maladjustment of consumer controls, improper operation, power line surge, improper voltage supply, lightning damage, rental use of the product or service by anyone other than an authorized repair facility or damage that is attributable to acts of God.

LIMITS AND EXCLUSIONS

There are no express warranties except as listed above. The Warrantor will not be liable for incidental or consequential damages (including, without limitation or damage to recording media) resulting from the use of these products, or arising out of any breach of the warranty. All express and implied warranties, including the warranties of merchantability and fitness for particular purpose, are limited to the applicable warranty period set forth above.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the exclusions or limitations listed above may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state-to-state.

If the problem is not handled to your satisfaction, then write to the Address listed on the next page.

Service calls which do not involve defective materials or workmanship as determined by the Warrantor, in its sole discretion, are not covered. Costs of such service calls are the responsibility of the purchaser.



5436 W Crenshaw St. Tampa, FL 33634

Toll Free : 866-446-3595

Tel : 813-888-9555 Fax : 813-888-9262

www.Digital-Watchdog.com

technicalsupport@dwcc.tv

Technical Support Hours : Monday-Friday

8:30AM to 8:00PM Eastern Standard Time

Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)



This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract.

This product and its electronic accessories should not be mixed with other commercial wastes for disposal.