

## x10 Anti-vandal Speed Dome Camera

User's Manual



## Safety Information



#### CAUTION:

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) 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.

#### Precaution

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.

x10 Anti-vandal Speed Dome Camera User's Manual

Ver. 3 . 1 / 2009.09

2

### 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 Special 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.

### Contents

#### 4 Precation

 1. Introduction
 6 Product & Accessories

 7 Parts Name & Functions

- 2. Installation 8 DIP Switch Setup
  - 10 Installation Using Surface Mount Bracket
  - 11 Installation Using Flush Mount Ring Bracket(Option)
  - 12 Installation Using Ceiling Mount Bracket(Option)
  - 13 Installation Using Wall Mount Bracket(Option)
  - 14 Installation Using Wall Mount Bracket with Junction Box(Option)
  - 16 Cabling the 5P Terminal Block
  - 17 Cabling the 7P Terminal Block

#### 3. OSD Menu 18 Check Points before Operation

- 19 Main Functions
- 20 OSD Information
- 21 General Rules of Menu Operation
- 22 OSD Menu Contents
- 24 OSD ROOT MENU & SYSTEM INFORMATION
- 25 OSD DISPLAY SETUP
- 26 OSD MOTION SETUP
- 28 OSD FUNCTION SETUP>PRESET SETUP
- 30 OSD FUNCTION SETUP>SCAN SETUP
- 31 OSD FUNCTION SETUP>PATTERN SETUP
- 32 OSD FUNCTION SETUP>GROUP SETUP
- 34 OSD FUNCTION SETUP>SCHEDULE SETUP
- 36 OSD CAMRA SETUP>WB SETUP
- 37 OSD CAMRA SETUP>AE SETUP
- 38 OSD SYSTEM SETUP
- 40 OSD SYSTEM INITIALIZE

#### 4. Specification | 41 Dimensions

- 42 Dimensions of Option Brackets
- 44 Specifications

## Product & Accessories

Please check if all the camera and accessories are included in the package.

#### Main Body

Camera module, screws, terminal block slot and DIP switches are included.

#### 2 Surface Mount Bracket

- It is used when installing the camera right on to the ceiling.
- To install the camera with the surface mount bracket, the bracket needs to be separated from the main body, then needs to be re-assembled the bracket and the main body according to the order.

#### Screw & Plastic Anchor

- Screws are used to fix the surface mount bracket to the ceiling.
- Plastic anchors are used to tighten the screws to the hole by inserting them into the holes in advance.

#### 4 Terminal Block

Power, video, communication and alarm input cables are connected through the terminal blocks.

#### **5** Torx Screw Driver

It is used to screw/unscrew the fixed screws on the main body.

#### 6 Rubber Gasket

It is installed between the surface mount bracket and wall/wall mount bracket to prevent the water leakage.

#### Manual

Please read the manual carefully before installing.







6 Rubber Gasket

7 Manual





#### 1 Dome Cover

- Protects the camera module from outside environment.
- Do not detach protection vinyl from the dome cover before finishing all installation processes to protect dome cover from scratches or dust.

#### **2** Lockup Screw

Fixes main body to the surface mount bracket.

#### 3 7P Terminal Block Slot

Power, keyboard controller/DVR video device are connected to this terminal block.
Refer page 17 for details.

#### **4** DIP Switch

Adjusts camera ID and protocols.Refer page 8, 9 for details.

#### **5** 5P Terminal Block Slot

Alarm input and relay out cables are connected to this terminal block.
Refer page 16 for details.

#### 6 Mounting Hole

This is used to attach the surface mount bracket to the ceiling.

#### **7** ¾" Pipe Mounting Hole

- This is used to pass the cables to the cameras.

- When water protection is needed, connect the  $3\!\!4''$  pipe through this hole, then pass the cables through the pipe.

## **DIP Switch Setup**

Before installing the camera, you should set the DIP switch to configure the camera ID, communication protocol.

Pin On/Off If the pin is located 'ON' side of the printed



#### 1. DIP Switch for Communication

- It is consist of communication protocol, baud rate and RS-485 termination setup pins.
- If you change the camera protocol by changing the DIP switch, the change will be effective after rebooting the camera.





Choose the appropriate communication protocol by setting the DIP switch.

2. Communication Protocol Setup

- If you want to control using DVR or keyboard controller, their protocol must be identical to the camera's protocol. Otherwise, you cannot control the camera.
- The factory default is auto protocol.

#### Auto Protocol

- If you set the protocol as auto protocol, camera will automatically recognize the kind of protocol.





6 GE(Kalatel)

 $\begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix}$ 

ON

2 PELCO-D

1 2 3 4

5678

5 6 7

ON





#### **5** Panasonic



If there is other combination of pins from above, it will be recognize as auto protocol.

## **DIP Switch Setup**



**B** 9600 BPS





6

8

5

## ON $\begin{bmatrix} 1 \\ 2 \end{bmatrix}$



Choose the termination resistor on/off to notify the last camera.



#### Camera ID Setup

#### - ID number of camera is set using binary number. The example is shown below.

Pin	1	2	3	4	5	6	7	8
ID Value	1	2	4	8	16	32	64	128

#### 4. RS-485 Termination Setup

- Pin 8 is use for on/off of RS-485 termination. Normally, it must be off state. - Especially, when you have trouble with long daisy chain style connection, turn on this termination
- switch of the last camera.

#### 5. DIP Switch for Camera ID Setup

- If you want to control a certain camera, you must match the camera ID with 'CAM ID, setting of DVR or keyboard controller.
- ID number of the camera is set using binary number. - The range of ID is 0~255. Factory default of
- camera ID is 1.
- Camera ID will be effective without rebooting the camera.

8

## Installation Using Surface Mount Bracket

#### 1 Drilling the Hole on the Ceiling

To pass cables through the ceiling, drill a hole (30mm diameter) on the ceiling panel.

**2** Fix the Surface Mount Bracket Pass the cables to the <sup>3</sup>/<sub>4</sub>" pipe hole, and screw the surface mount bracket to the ceiling.

#### 🔀 Rubber Gasket

Before installing the gasket, the hole in the center is to be cut by knife when only necessary.
When installing gasket, the protrusion of the gasket should be matched with the groove joint of the bottom of the surface mount bracket.



Connect the Cables
Connect wire cables to the terminal blocks.
Refer page 16, 17 for details.

# © Connect the Terminal Blocks Connect the terminal blocks to the main body.

**(5)** Fix the Main Body Screw the main body to the surface mount bracket by screwing 4 lock-up screws.

### **6** Detach the Protection Vinyl Detach the protection vinyl from the dome cover.



## Installation Using Flush Mount Ring Bracket (Option)



## Installation Using Ceiling Mount Bracket (Option)

#### 1. Installing on the Concrete Ceiling

**1** Drill the Ceiling and Fix the Anchor Bolts On the ceiling, drill a hole (6mm diameter/ 50mm depth), and fix the anchor bolts.

#### • Fix the Ceiling Mount Bracket

- 1. Drill a hole (20mm diameter) on the pipe of the bracket to pass the cables.
- 2. On the fixed anchor bolts, attach the rubber gasket and screw the ceiling mount bracket.

#### 2. Installing on the Wooden Ceiling

#### 1 Drill the Ceiling

To pass cables to upside of ceiling, drill a hole (30mm diameter) on the ceiling.

#### **2** Fix the Ceiling Mount Bracket

Pass the cables into the ceiling mount bracket, and screw the ceiling mount bracket to the ceiling.

#### B Fix the Surface Mount Bracket

Pass the cables through the hole of the surface mount bracket, screw the surface mount bracket to the ceiling mount bracket.

#### **4** Wire Cables

Wire the cables to the terminal block. Refer page 16, 17.

#### **5** Connect the Terminal Blocks

Connect terminal block to the main body. Refer page 10.

#### **6** Fix the Main Body

Screw the main body to the surface mount bracket. (Screws are included in the main body.)

#### **7** Detach the Protection Vinyl

Detach the protection vinyl from the dome cover.



### Installation Using Wall Mount Bracket (Option)



#### 1. Installing on the Concrete Wall

#### 1 Drill the Wall and Fix the Anchor Bolts

On the wall, drill a hole (6mm diameter/50mm depth), and fix the anchor bolts.

#### 2 Fix the Wall Mount Bracket

- 1. Drill a hole (20mm diameter) on the pipe of the bracket to pass the cables.
- 2. On the fixed anchor bolts, attach the rubber gasket and fix the wall mount bracket with nuts and screws.

#### 2. Installing on the Wooden Wall

#### 1 Drill the Wall

To pass cables to the wall, make a hole about 30 mm on the wall.

#### 2 Fix the Wall Mount Bracket

Pass the cables into the wall mount bracket, and screw the wall mount bracket to the wall.

#### 3 Fix the Surface Mount Bracket

Pass the cables through the hole of the surface mount bracket, screw the surface mount bracket to the wall mount bracket.

#### • Wire Cables Wire the cables to the terminal block. Refer page 16, 17.

Connect the Terminal Blocks
 Connect terminal block to the main body.
 Refer page 10.

#### **6** Fix the Main Body

Screw the main body to the surface mount bracket. (Screw are included in the main body.)

#### **Detach the Protection Vinyl** Detach the protection vinyl from the dome cover.

## Installation Using Wall Mount Bracket with Junction Box (Option)



## **2** Cabling the 5P Terminal Block



#### **5P Terminal Block**

5p terminal block connects the sensor/alarm input and the relay out device to the camer's main body. (Refer 'Installation Using Surface Mount Bracket' of page 10 for the connection of the terminal block.)



#### Relay Out

- It connects to the alarm lights, siren or lamps, and it is activated according to the OSD menu setting.
- If you want to use relay out, the types of sensor must be selected in OSD menu (ROOT MENU>SYSTEM SETUP> RELAY TYPE). The sensor types are normal open and normal close.

Normal Open (N.O)	Output voltage is high state when sensor is activated.
Normal Close (N.C)	Output voltage is high state when sensor is no activated.
a (	

<Inside of terminal block: Activation type of relay out N.O.>

#### 2 Sensor/Alarm Input

- It connects to IR sensor, IrDA sensor or door switch. If the sensor is activated, it can activate to move camera to the specific angle and to connect the alarm device.

- A cable of the sensor should connect to input 1 or 2, and the other should be connected to 'COM' slot.

 If you want to use alarm input, the types of sensor must be selected in OSD menu (ROOT MENU>MOTION SETUP> ALARM INPUT SETUP). The sensor types are normal open and normal close.

Normal Open (N.O) Output voltage is high state when sensor activated.	nal Open N.O)	put voltage is high state when sensor is vated.
---	------------------	---

Normal Close Output voltage is high state when sensor is not activated.



<Inside of terminal block: Activation type of alarm input N.O. / N.C.>

### Cabling the 7P Terminal Block



#### 7P Terminal Block

7p terminal block connects the power, keyboard controller/ DVR or video device and etc to the camera's main body. (Refer 'Installation Using Surface Mount Bracket' of page 10 for the connection of the terminal block.)



#### Monitor

Connects to video output device such as monitor using the BNC coaxial cable.

#### 2 Keyboard Controller/DVR

Controls PTZ by connecting with keyboard controller or DVR using RS-485 communication standards.



#### B Power

Please check the correct rated power.
 The rated power is marked on the bottom of the camera.

Power	Range	Power Consumption
DC 12V	DC 11V ~ 15V	8W

Fan/Heater model consumes 12W.

## **Check Points before Operation**

#### 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 target camera. The camera ID can be checked by reading DIP switch of the camera.
- 3. If your controller supports multi-protocols, the protocol must be changed to match to 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 cannot be controlled properly.

#### Preset and Pattern Function Pre-check

use shortcut keys with preset numbers. For more

Some preset numbers are reserved to special functions.

information, refer to 'Reserved Preset' below.

2 Reserved Preset

#### Auto Calibration

- Check how to operate preset and pattern function with keyboard controller/DVR in advance to operate camera function fully when using keyboard controller/DVR.
- for a long time, the camera can lose focus. As a result, you will get a blurry image. In this case, enter 'Preset key + 165' to enable auto calibration. - If keyboard controller/DVR has no pattern key or function,
  - If auto calibration is enabled, the camera will be re-focused once every 6 hours. If you want to disable this function, enter 'Preset key + 165'.

- If the camera is exposed the high temperature(over 50°)

### **Main Functions**

#### Preset

- Max. 127 positions can be stored as preset positions. The preset number can be assigned from 1 to 128, but 95 is reserved for starting OSD menu.
- Refer page 28 'ROOT MENU>FUNCTION SETUP>PRESET SETUP' for more detailed information.

#### 1. Set Preset

Method 1) Use keyboard controller: Refer to keyboard controller 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 pattern, use OSD menu.

#### 2 Scan

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

- Refer page 30 - 'ROOT MENU>FUNCTION SETUP>SCAN SETUP' for more detailed information.

1. Set Scan To set scan, use OSD menu.

2. Run Scan

Method 1) If there is scan key on the keyboard controller: Scan key + Scan number(1~8) + Enter key Ex) Run scan 2 = Scan key + [2] + Enter key

Method 2) If there is no scan key on the keyboard controller: Preset key + [Scan number(1~8) + 140] Ex) Run scan 2 = Preset key + [142]

3. Delete Scan

To delete scan, use OSD menu.

#### B Pattern

- 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.

- Refer page 31 - 'ROOT MENU>FUNCTION SETUP>PATTERN SETUP' for more detailed information.

#### 1. Set Pattern

To set pattern, use OSD menu.

#### 2. Run Pattern

Method 1) If there is pattern key on the keyboard controller: Pattern key + Pattern number(1~4) + Enter key Ex) Run pattern 2 = Pattern key + [2] + Enter key

Method 2) If there is no pattern key on the keyboard controller: Preset key + [Pattern number(1~4) + 130] Ex) Run pattern 2 = Preset key + [132]

3. Delete Pattern To delete pattern, use OSD menu.

Preset key + 95: Enters into 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: Sets relay output to OFF Preset key + 161: Sets relay 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 Preset 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 AUTO1 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 + 195: Sets fan/heater to ON (Turning off after 5 min, turn to auto mode) Preset key + 196: Sets fan/heater to OFF (After turning off, turn to manual mode)

Preset key + 197: Fan ON(Turning off after 5 min, turn to auto mode) Preset key + 198: Fan OFF(After turning off, turn to manual mode) Preset key + 200: Sets digital zoom to ON Preset key + 201: Sets digital zoom to OFF

#### - Refer page 32 - 'ROOT MENU>FUNCTION SETUP>GROUP SETUP' for more detailed information.

pattern and/or scans.

1. Set Group To set group, use OSD menu.

#### 2. Run Group

4 Group

Method 1) If there is group key on the keyboard controller: Group key + Group number(1~8) + Enter key Ex) Run group 2 = Group button + [2] + Enter key

- The group function allows running sequence of presets,

Method 2) If there is no group key on the keyboard controller: Preset key + [Group number(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 running an appropriate function like preset, scan, group, pattern, home move at the designated day and time.

- Refer Page 34 - 'ROOT MENU>FUNCTION SETUP>SCHEDULE SETUP' for more detailed information.

## 3 OSD Information



#### Preset Label

- The label stored for specific preset.
- Refer page 29 for setting preset label.
   (ROOT MENU>FUNCTION SETUP>PRESET SETUP>LABEL)

#### 2 Date / Time

- Shows the current date/time.
- Refer page 38 for setting date/time. (ROOT MENU>SYSTEM SETUP>DATE/TIME SETUP)

#### 3 Image Flip

- Shows that images are currently reversed by auto flip function.
- Refer page 36 for setting image flip. (ROOM MENU>CAMERA SETUP>IMAGE FLIP)

#### 4 Camera ID

- The current camera ID.
- The camera ID is identical with the address of 'ROOT MENU>SYSTEM INFORMATION'.

#### **6** Action Title

Shows the current action titles of the camera.

Action Title	
SET PRESET 123	Means to store preset 123.
PRESET 123	Means it reached preset 123.
PATTERN 9	Means tthe camera is running pattern 9.
SCN 1/PRESET 123	Means the camera is running scan 1.
UNDEFINED	Means the action received is not defined.

#### 6 Temperature

- Current temperature: Boxed 'C' and 'F' means celsius and fahrenheit respectively.
- Refer page 25 for setting temperature unit. (ROOM MENU>DISPLAY SETUP>TEMPERATURE)

#### Alarm Input Information

This information shows current state of alarm Input. If an input is on state it will show the number of input. If an input is off state, ' - ' will be displayed.



#### 8 Relay Out Information

This information shows the current state of relay out. If the output is on state it will show the number of output. If an output is off state, ' - ' will be displayed.

Relay Out On	Relay Out Off
0:1	0:-

#### **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).

- Refer page 39 for setting compass direction.
 (ROOT MENU>SYSTEM SETUP>SET NORTH DIRECTION)

#### D Zoom Magnification

Shows the current zoom magnification.

**1** Tilt Angle in Degree Shows the current tilt(0-180) angle.

#### Pan Angle in Degree

Shows the current fan(0-359) angle.





- This page explains how to operate the OSD menu using keyboard controller.
- Read the manual of the keyboard controller.
- ☑ If there are no keys or functions described below, refer the manual of the keyboard controller.
- Move the Cursor Up/Down to Choose Menu To move from items to item in the menu, move the joystick Up/Down.

Shift to the Sub Menu of the Chosen Menu For all menu level, to go into sub menu, press near/enter key.

#### Choose the Value

To change the value, press near/enter key to move the cursor to the value.

#### **4** Change the Value

Move the joystick Up/Down to change the value.

#### **5** Move to the Previous Screen

Press near key to save values and press far key to cancel values, then go to the previous screen.

- The menu items surrounded with <> always have its sub menu.
   To move to the sub menu, press near/enter key.
- (DISPLAY SETUP).
- G: This screen is the sub menu of 'DISPLAY SETUP' on the screen ().
- **d** is the value of the each content.

# 3 OSD Menu Contents

IRMWARE VER OLOR SYSTEM ROTOCOL AUD RATE DDRESS AMERA ID TZ INFORMATION CTION TITLE RESET LABEL LARM I/O ATE-TIME PRIVACY ZONE> EMPERATURE RESET LOCK WR UP ACTION UTO FLIP DG MAX SPEED	MASK NO. DISPLAY CLEAR MASK <edit mask=""></edit>	Select the Camera location	Select the Mask Size & Color	1.0         NTSC         PELCO-D         2400         1         ON / OFF         ON / OFF / AUTO         ON / OFF         1(UNDEFINED) ~ 4(UNDEFINED)         ON / OFF         CANCEL / OK         CELSIUS / FAHRENHEIT / OFF
OLOR SYSTEM ROTOCOL AUD RATE DDRESS AMERA ID TZ INFORMATION CTION TITLE RESET LABEL LARM I/O ATE/TIME PRIVACY ZONE> EMPERATURE RESET LOCK WR UP ACTION UTO FLIP DG MAX SPEED	MASK NO. DISPLAY CLEAR MASK <edit mask=""></edit>	Select the Camera location	Select the Mask Size & Color	NTSC         PELCO-D         2400         1         ON / OFF         ON / OFF / AUTO         ON / OFF         1(UNDEFINED) ~ 4(UNDEFINED)         ON / OFF         CANCEL / OK         CELSIUS / FAHRENHEIT / OFF
ROTOCOL AUD RATE AUD RATE DDRESS AMERA ID TZ INFORMATION CTION TITLE RESET LABEL LARM I/O ATE/TIME PRIVACY ZONE> EMPERATURE RESET LOCK WR UP ACTION UTO FLIP DG MAX SPEED	MASK NO. DISPLAY CLEAR MASK <edit mask=""></edit>	Select the Camera location	Select the Mask Size & Color	PELCO-D 2400 1 0N / OFF ON / OFF / AUTO ON / OFF / AUTO ON / OFF / AUTO ON / OFF / AUTO ON / OFF / 1(UNDEFINED) ~ 4(UNDEFINED) ON / OFF 1(UNDEFINED) ~ 4(UNDEFINED) ON / OFF CANCEL / OK CELSIUS / FAHRENHEIT / OFF
AUD RATE DDRESS AMERA ID TZ INFORMATION CTION TITLE RESET LABEL LARM I/O ATE/TIME PRIVACY ZONE> EMPERATURE RESET LOCK WR UP ACTION UTO FLIP DG MAX SPEED	MASK NO. DISPLAY CLEAR MASK <edit mask=""></edit>	Select the Camera location	Select the Mask Size & Color	2400 1 1 ON / OFF ON / OFF / AUTO ON / OFF 1(UNDEFINED) ~ 4(UNDEFINED) ON / OFF CANCEL / OK CELSIUS / FAHRENHEIT / OFF
DDRESS AMERA ID TZ INFORMATION TITLE RESET LABEL LARM I/O ATE/TIME PRIVACY ZONE> EMPERATURE RESET LOCK WR UP ACTION UTO FLIP DG MAX SPEED	MASK NO. DISPLAY CLEAR MASK <edit mask=""></edit>	Select the Camera location	Select the Mask Size & Color	1 ON / OFF ON / OFF / AUTO ON / OFF / AUTO ON / OFF / AUTO ON / OFF / AUTO ON / OFF 1(UNDEFINED) ~ 4(UNDEFINED) ON / OFF CANCEL / OK CELSIUS / FAHRENHEIT / OFF
AMERA ID TZ INFORMATION TZ INFORMATION CTION TITLE RESET LABEL LARM I/O ATE/TIME PRIVACY ZONE> EMPERATURE RESET LOCK WR UP ACTION UTO FLIP DG MAX SPEED	MASK NO. DISPLAY CLEAR MASK <edit mask=""></edit>	Select the Camera location	Select the Mask Size & Color	ON / OFF ON / OFF / AUTO ON / OFF / AUTO ON / OFF / AUTO ON / OFF / AUTO ON / OFF 1(UNDEFINED) ~ 4(UNDEFINED) ON / OFF CANCEL / OK CELSIUS / FAHRENHEIT / OFF
TZ INFORMATION CTION TITLE RESET LABEL LARM I/O ATE/TIME PRIVACY ZONE> EMPERATURE RESET LOCK WR UP ACTION UTO FLIP DG MAX SPEED	MASK NO. DISPLAY CLEAR MASK <edit mask=""></edit>	Select the Camera location	Select the Mask Size & Color	ON / OFF / AUTO ON / OFF / AUTO ON / OFF / AUTO ON / OFF / AUTO ON / OFF 1(UNDEFINED) ~ 4(UNDEFINED) ON / OFF CANCEL / OK CELSIUS / FAHRENHEIT / OFF
CTION TITLE RESET LABEL LARM I/O ATE/TIME PRIVACY ZONE> EMPERATURE RESET LOCK WR UP ACTION UTO FLIP DG MAX SPEED	MASK NO. DISPLAY CLEAR MASK <edit mask=""></edit>	Select the Camera location	Select the Mask Size & Color	ON / OFF / <b>AUTO</b> ON / OFF / <b>AUTO</b> ON / OFF / <b>AUTO</b> <b>ON</b> / OFF <b>1(UNDEFINED) ~ 4(UNDEFINED)</b> ON / <b>OFF</b> CANCEL / OK <b>CELSIUS</b> / FAHRENHEIT / OFF
RESET LABEL LARM I/O ATE/TIME PRIVACY ZONE> EMPERATURE RESET LOCK WR UP ACTION UTO FLIP DG MAX SPEED	MASK NO. DISPLAY CLEAR MASK <edit mask=""></edit>	Select the Camera location	Select the Mask Size & Color	ON / OFF / AUTO ON / OFF / AUTO ON / OFF 1(UNDEFINED) ~ 4(UNDEFINED) ON / OFF CANCEL / OK CELSIUS / FAHRENHEIT / OFF
LARM I/O ATE/TIME PRIVACY ZONE> EMPERATURE RESET LOCK WR UP ACTION UTO FLIP DG MAX SPEED	MASK NO. DISPLAY CLEAR MASK <edit mask=""></edit>	Select the Carnera location	Select the Mask Size & Color	ON / OFF / AUTO ON / OFF 1(UNDEFINED) ~ 4(UNDEFINED) ON / OFF CANCEL / OK CELSIUS / FAHRENHEIT / OFF
ATE/TIME PRIVACY ZONE> EMPERATURE RESET LOCK WR UP ACTION UTO FLIP DG MAX SPEED	MASK NO. DISPLAY CLEAR MASK <edit mask=""></edit>	Select the Carnera location	Select the Mask Size & Color	ON / OFF 1(UNDEFINED) ~ 4(UNDEFINED) ON / OFF CANCEL / OK CELSIUS / FAHRENHEIT / OFF
PRIVACY ZONE> EMPERATURE RESET LOCK WR UP ACTION UTO FLIP DG MAX SPEED	MASK NO. DISPLAY CLEAR MASK <edit mask=""></edit>	Select the Camera location	Select the Mask Size & Color	1(UNDEFINED) ~ 4(UNDEFINED) ON / OFF CANCEL / OK CELSIUS / FAHRENHEIT / OFF
EMPERATURE RESET LOCK WR UP ACTION UTO FLIP DG MAX SPEED	DISPLAY CLEAR MASK <edit mask=""></edit>	Select the Camera location	Select the Mask Size & Color	ON / OFF CANCEL / OK CELSIUS / FAHRENHEIT / OFF
EMPERATURE RESET LOCK WR UP ACTION UTO FLIP DG MAX SPEED	CLEAR MASK <edit mask=""></edit>	Select the Camera location	Select the Mask Size & Color	CANCEL / OK CELSIUS / FAHRENHEIT / OFF
EMPERATURE RESET LOCK WR UP ACTION UTO FLIP DG MAX SPEED	<edit mask=""></edit>	Select the Camera location	Select the Mask Size & Color	CELSIUS / FAHRENHEIT / OFF
EMPERATURE RESET LOCK WR UP ACTION UTO FLIP DG MAX SPEED				CELSIUS / FAHRENHEIT / OFF
RESET LOCK WR UP ACTION UTO FLIP DG MAX SPEED				
WR UP ACTION UTO FLIP DG MAX SPEED				ON / OFF
UTO FLIP DG MAX SPEED				ON / OFF
DG MAX SPEED				ON / OFF
				2/SEC ~ 360/SEC (Default: 140/SEC)
OG DIRECTION				INVERSE / NORMAL
RZ IN PRESET				ON / OFF
PARKING ACTION SETUP>	PARK ENABLE			ON / OFF
	WAIT TIME			<b>00:00:05</b> ~ 04:00:00
	PARK ACTION			HOME / PRESET / SCAN / PATTERN / GROUP
ALARM INPUT SETUP>	ALARM TYPE			N.O(Normal Open) / N.C(Normal Close)
	ALARM ACTION			NOT USED / HOME / PRESET 1~128 / SCAN 1~8 / PATTERN 1~4 / GROUP 1~4
PRESET SETUP>	PRESET NO.			1(UNDEFINED) ~ 128(UNDEFINED)
	<edit scene=""></edit>	Select the Camera location		
	<label></label>	Input Label		
	CLR PRESET			CANCEL / OK
	CAM ADJUST			GENERAL / SPECIAL
	ALARM OUT			-/1
SCAN SETUP>	SCAN NO.			1(UNDEFINED) ~ 8(UNDEFINED)
	1ST POSITION			PRESET 1 ~ 128
	2ND POSITION			PRESET 1 ~ 128
	SCAN SPEED			2/SEC ~ 360/SEC (Default: 30/SEC)
	CLEAR SCAN			CANCEL / OK
PATTERN SETUP>	PATTERN NO.			1(UNDEFINED) ~ 4(UNDEFINED)
	CLR PATTERN			CANCEL / OK
	<pdit patterns<="" td=""><td>Select the Camera location</td><td></td><td></td></pdit>	Select the Camera location		
GROUP SETUP>	GROUP NO			1/UNDEFINED) ~ 8/UNDEFINED)
		Select the camera activ	n operation time and option	
		Sciell the carried delle	on, operation time and option	
SCHEDULE SETUPS	INIASTER ENABLE			
	ARM INPUT SETUP> ESET SETUP> CAN SETUP> TTTERN SETUP> ROUP SETUP> CHEDULE SETUP>	ARM INPUT SETUP> ALARM TYPE ALARM ACTION ALARM ACTION ALARM ACTION ESET SETUP> PRESET NO. CEDIT SCENE> CLABEL> CLR PRESET CAM ADJUST ALARM OUT CAN SETUP> SCAN NO. SCAN SPEED CLEAR SCAN ATTERN NO. CLR PATTERN ATTERN NO. CLR PATTERN CLR PATTERN ROUP SETUP> CLEAR GROUP CLEAR GROUP CLEAR GROUP CLEADULE SETUP> CHEDULE SETUP> ALARM TYPE ALARM ACTION ATTERN SETUP> CHEDULE SETUP> ALARM ALARM TYPE ALARM ACTION ALA	ARM INPUT SETUP>     ALARM TYPE       ALARM ACTION     ALARM ACTION       RESET SETUP>     PRESET NO.       4LARM ACTION     Select the Camera location       4LABEL>     Input Label       CLR PRESET     Input Label       CLR PRESET     Input Label       CAM ADJUST     ALARM OUT       ALARM OUT     Input Label       CAM ADJUST     ALARM OUT       ALARM OUT     Input Label       CAN SETUP>     SCAN NO.       ALARM OUT     Input Label       CLR PRESET     Input Label       CLR PRESET     Input Label       CLR PRESET     Input Label       CLEAR SCAN NO.     Input Label       SCAN SPEED     Input Label       CLEAR SCAN     Input Label       CLEAR SCAN     Input Label       CLEAR SCAN     Input Label       CLEAR GROUP     Select the Camera location       ROUP SETUP>     GROUP NO.       CLEAR GROUP     Select the camera action       CHEDULE SETUP>     MASTER RNABLE	ARM INPUT SETUP>         ALARM TYPE         Image: Constant of the second

### **OSD Menu Contents**

ROOT MENU	The 1st screen	The 2nd screen	Value
<camera setup=""></camera>	FOCUS MODE		AUTO / MANUAL / SEMIAUTO
	DIGITAL ZOOM		ON / OFF
	IMAGE FLIP		ON / OFF
	<white balance="" setup=""></white>	WB MODE	AUTO / MANUAL
		RED ADJUST	10~60
		BLUE ADJUST	10~60
	<exposure setup=""></exposure>	BACK LIGHT	OFF / LOW / MIDDLE / HIGH
		DAY/NIGHT	AUTO1 / AUTO2 / DAY / NIGHT
		BRIGHTNESS	0~100 (Default: 25)
		IRIS	AUTO / MANUAL (0~100)
		SHUTTER	ESC / A.FLICKER / MANUAL(×128~1/120000 sec)
		AGC	OFF / NORMAL / HIGH
		SSNR	OFF / LOW / MIDDLE / HIGH
		SENS-UP	AUTO(2~128) / <b>OFF</b>
<system setup=""></system>	<date setup="" time=""></date>	DATE	dd / mm / yyyy
		TIME	hh : mm : ss
	<relay type=""></relay>	RELAY 1	N.O(Normal Open) / N.C(Normal Close)
	<password></password>	Input Password	
	<set home="" position=""></set>	Select the Camera location	
	<set direction="" north=""></set>	Select the Camera location	
	LANGUAGE		ENGLISH / ESPAÑOL / FRANÇAIS / DEUTSCH / ITALIANO / РУССКИЙ / PORTUGUÊS
	<fan heater="" setup=""></fan>	FAN RUN TIME	30°C ~ 80°C (86°F ~ 176°F) (Default: 40°C)
		HEATER RUN TIME	$-10^\circ C \sim 20^\circ C ~(14^\circ F \sim 68^\circ F)$ (Default: 5°C)
<system initialize=""></system>	CLEAR ALL DATA		NO / YES
	CLR DISPLAY SET		NO / YES
	CLR CAMERA SET		NO / YES
	CLR MOTION SET		NO / YES
	CLR FUNCTION SET		NO / YES
	REBOOT CAMERA		NO / YES
	REBOOT SYSTEM		NO / YES

The bold characters of the value are the default value of the system. (Refer page 40 – 'SYSTEM INITIALIZE')
 The menu of 'ROOT MENU>SYSTEM SETUP>FAN/HEATER SETUP' is applicable only for fan/heater model.

## **5** OSD - ROOT MENU & SYSTEM INFORMATION

ROOT MENU • SYSTEM INFORMATION> OISPLAY SETUP> • MOTION SETUP> • CUNCTION SETUP> • CAMERA SETUP> • SYSTEM SETUP> • SYSTEM INITIALIZE> EXIT

#### ROOT MENU

To enter this screen, enter 'Preset key + 95'.

<SYSTEM INFORAMTION> Shows information and current configuration.

<DISPLAY SETUP> Enable/Disable of OSD display on main screen.

<MOTION SETUP> Setup for motion related settings.

<FUNCTION SETUP> Setup for various functions such as preset, scan, pattern, group and schedule.

<CAMERA SETUP> Configure camera related functions and data.

<SYSTEM SETUP> Configure for basic system setup.

<SYSTEM INITIALIZE>

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

#### EXIT

To escape from the OSD setting, go to exit.



#### **1** DISPLAY SETUP

This menu defines to enable/disable of OSD display on main screen.

CAMERA ID	ON / OFF
PTZ INFORMATION	ON / OFF / AUTO
If an item is set to be 'A it is changed.	UTO', the item is displayed only when the value of
ACTION TITLE	ON / OFF / AUTO
PRESET LABEL	ON / OFF / AUTO
ALARM I/O	ON / OFF / AUTO
DATE/TIME	ON / OFF
<privacy zone=""> Moves to the privacy z</privacy>	zone setup.
TEMPERATURE	CELSIUS / FAHRENHEIT / OFF

#### **2** PRIVACY ZONE

- Selects area in image to mask.

- It selects the area to mask, and setup various function of the mask

MASK NO. 1 ~ 4 Select mask number. If the selected mask has data already, camera moves as it was set. Otherwise, 'UNDEFINED' will be displayed under 'MASK NO.'.

DISPLAY ON / OFF Sets if the camera makes mask shows or not on images.

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

<EDIT MASK>

Moves to setup the mask no.

#### EDIT MASK - Select Mask Location

1. Move camera to area to mask.

2. Adjust the mask size. Use the zoom key to adjust the image size.

3. Press near key to complete the location.

#### EDIT MASK - Select Mask Color and Size

1. Choose the mask color using zoom key.

- (The current color is 50% transparent. When the mask setting is completed, the mask area is masked by 100% opaque color.)
- 2. Move joystick Left/Right to adjust the width.
- 3. Move joystick Up/Down to adjust the height.
- 4. Press near key to complete the setting.
- 5. If press far key, it returns to the previous setting without storing the setting.

#### MASK SETTING - Completion Screen

- Run the mask no. marked on the screen.
- The value of 'DISPLAY' is set to 'ON' automatically.
- Can set mask 2 ~ 4 continuously.
- The objects behind the mask can be shown when the camera is moving in a short period.
- It is recommended that the size of the mask must be 20% bigger than the original target size so as to mask the objects during high speed pan/tilt.



#### **1** SYSTEM INFORMATION

Shows basic information and current configuration of the system.

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 - MOTION SETUP**



#### MOTION SETUP

Setup the general functions of pan/tilt motions.

#### PRESET LOCK

ON / OFF If motion lock is set to on, it is impossible to set up and delete preset, scan, pattern and group. It is possible only to run those functions. To set up and delete those functions, enter into OSD menu.

#### PWR UP ACTION ON / OFF

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

#### AUTO FLIP ON / OFF

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 'F' appears in screen. If this function is set to 'OFF', tilt movement range is 0° ~ 90°

#### JOG MAX SPEED 2/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.

#### FRZ 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>

Moves to 'PARKING ACTION SETUP' screen

<ALARM INPUT SETUP>

Moves to '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 Enables/Disables 'PARKING ACTION'.

#### WAIT TIME 00:00:05 ~ 04:00:00

The time is displayed with "hh:mm:ss" format and you can change this by 1 sec unit.

1. To place the cursor on the time marked as 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 current setting.

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

Select the action of parking. Move joystick Up/Down to choose the appropriate action.





#### 2 ALARM INPUT SETUP

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

Alarm Type: N.O(Normal Open) / N.C(Normal Close) - Sets sensor input type. Refer page 14 for more detailed information.

Alarm Action NOT USED / HOME / PRESET 1~128 / SCAN 1~8 / PATTERN 1~4 / GROUP 1~8 Assign counter-action to each alarm input. Among 149 actions, choose the action as explained below.

#### ALARM INPUT SETUP - Type Setup

1. Move joystick Up/Down to set alarm type. 2. Move joystick Left/Right to set alarm action.

#### **4 5** ALARM INPUT SETUP - Alarm Action Setup

- 1. Move joystick Up/Down to set the action(HOME, PRESET, SCAN, PATTERN, GROUP) and no.
- 2. On screen 5, move joystick Left/Right to move the focus to set alarm type, function name and function no.
- 3. By pressing near key, save the current setting.

## **3** OSD - FUNCTION SETUP > PRESET SETUP



#### **1** FUNCTION SETUP

Configure 5 special functions with this menu.

<PRESET SETUP> Moves to 'PRESET SETUP' screen.

<SCAN SETUP> Moves to 'SCAN SETUP' screen. Refer page 30.

<PATTERN SETUP> Moves to 'PATTERN SETUP' screen. Refer page 31.

<GROUP SETUP> Moves to 'GROUP SETUP' screen. Refer page 32.

<SCHEDULE SETUP> Moves to 'SCHEDULE SETUP' screen. Refer page 34.

#### **2** PRESET SETUP - Undefined Screen

127 presets from the number 1 to 128 can be assigned excluding preset 95 reserved for 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 show on monitor. (Refer screen 4) If a selected preset is not defined, "UNDEFINED" shows on monitor.

<EDIT SCENE> Moves to 'EDIT SCENE' setup screen.

#### EDIT SCENE

Using joystick, move camera to desired position.
 Using zoom key, move camera to desired screen size.
 By pressing near key, the save current PTZ data

#### 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 monitor when preset runs. If the preset is not defined, this is not shown. Refer following page to setup label.

CLR PRESET CANCEL / OK

Deletes current preset data. If the preset is not defined, this is not shown.

CAM ADJUST GENERAL / SPECIAL

- CAM ADJUST\_GENERAL: The general mode means that WB or AE defined 'ROOT MENU>CAMERA SETUP' will be applied to this preset. - CAM ADJUST\_SPECIAL: The Special mode means that WB or AE can be

set up independently or separately for each preset in each preset setup menu.

 Special WB/AE value should activate only when the camera arrives at each preset location. During jog operation, general WB/AE value should be applied.

- Refer following page to set special WB/AE.

- / 1

#### ALARM OUT

Relay output can be linked with preset run. ' - 'means off, '1' means on.

### OSD - FUNCTION SETUP > PRESET SETUP





#### 2 LABEL

- Edits label to show on monitor when preset runs. - Max. 10 alphabets are allowed(Including space).



Preset NO. for Label

- **(b)** Input Cursor: The character which cursor is located will be input or edited.
- © Cursor Selecting Alphabet: Using Left/Right/Up/Down of joystick, move to an appropriate character from the character set.
- **d** Space: If you want to use blank, choose space character (" ").

● Back-Space: If you want to delete a character before, use back space character ('<').</p>

#### **B** LABEL – Alphabet Input

- 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.

#### 2 CAM ADJUST

Sets WB/AE for the preset when 'CAM ADJUST' value is 'SPECIAL'.

<WHITE BALANCE SETUP> Moves to 'WHITE BALANCE SETUP' screen. Refer page 36.

<AUTO EXPOSURE SETUP> Moves to 'AUTO EXPOSURE SETUP' screen. Refer page 37.



#### **2** SCAN SETUP

- Up to 8 scans are available, which makes the camera to move slowly between two preset positions.

When scan function runs, the camera moves from the preset assigned as the 1st pos. to the preset assigned as the 2nd pos. in CW(Clockwise) direction. Then camera moves from the preset assigned as the 2nd pos. to the preset assigned as the 1st pos. in CCW(Counterclockwise) direction. Then, it continues to move from the 1st pos. to the 2nd pos. back and forth.

#### If the 1st POS. = the2nd POS.

In case that the preset assigned as the 1st pos. is same as the preset assigned as the 2nd pos., camera turns on its axis by  $360^{\circ}$  in CW direction and then it turns on its axis by  $360^{\circ}$  in CCW direction.

If one preset is not defined between the 1st POS. and the 2nd POS. If case that a position assigned is 'NOT USED', camera turns on its axis by 360° in CW direction from the preset which is 'NOT USED' and then it turns on its axis by 360° in CCW direction.



SCAN NO.

Select scan number to edit. If a selected scan is defined, 2 presets will be displayed in the 1st position and the 2nd position.

1~8

**1ST POS.** PRESET 1 ~ 128, NOT USED Set up the 1st position for scan function. If a selected preset is not defined, 'UNDEFINED' will be displayed as shown below.

SCAN SETUP	
SCAN NO. *1ST POS. 2ST POS.	1 PRESET 1 NOT USED
	UNDEFINED

Undefined preset cannot be assigned as position. If you press near key when the selected preset is 'UNDEFINED', the preset will returned to previous position(Available preset or 'NOT USED').

**2ST POS.** PRESET 1 ~ 128, NOT USED Same as the 1st pos. setup.

SCAN SPEED 1/SEC ~ 180/SEC Sets the scan speed.

CLEAR SCAN CANCEL / OK Deletes the data in current scan.

### OSD - FUNCTION SETUP>PATTERN SETUP



2 PATTERN SETUP

It records the free path of camera by joystic control.

PATTERN NO. 1 ~ 4 Select pattern number to edit. If a selected pattern number is not defined, 'UNDEFINED' will be displayed under selected pattern number.

CLR PATTERN CANCEL / OK Deletes data in the current pattern.

<EDIT PATTERN> Moves to edit the pattern assigned.

#### **B**EDIT PATTERN - Select the Position

- 1. By using joystick, move to start position.
- 2. By using joystick, move to the appropriate zoom.
- 3. To start pattern recording, press near key.

#### **4** EDIT PATTERN - Records the Path

- Move camera with joystick of controller or run preset function to memorize the path (mostly curve path) in a selected pattern.
- 2. The total memory size and the rest memory size is displayed in the form of bar. (Refer screen 5)
- If bar is full as below, the camera does not record any more paths.



The pattern path includes the zoom magnification.To save data and exit, press near key.

- 4. To cancel recording and delete the recorded data, press far key.
- When pattern is edited or ok, pan/tilt will turn to 'AUTO FLIP> OFF' temporarily.

## **3** OSD - FUNCTION SETUP>GROUP SETUP



#### **2** GROUP SETUP SCREEN

The group function allows running sequence of presets, pattern and/or scans. Max. 8 group can be stored. Each group can have max. 20 action entities which can be preset, pattern or scan.



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 data in the current group.

<EDIT GROUP> Moves to edit the group assigned.

#### B EDIT GROUP - Initial Screen

To edit group, press near key to move screen 4.

At the current screen, if moves joystick Down, the cursor will move to 'SAVE' menu.

NO.	1~20	
Means the seq The functions	ience of the function in a group. vill be run from lower no. to higher no. by sequen	ice.

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

Select the function. Select the function no. separately.

DWELL TIME 00:03 ~ 04:00 (min:sec) Sets dwell time between function by moving joystick Up/Down. If the 'OPT' of pattern/group is set to repeat more than twice, it means the repeat interval.

OPT PRESET: 2~360 / PATTERN & SCAN: 1~255 It should be preset speed when preset is set in 'ACTION'. It should be the number of repeat when pattern or scan is selected in 'ACTION'.

#### EDIT GROUP – Select Function Sequence

Note that max. 20 functions are allowed in a group. Move cursor Up/Down to rotate among 20 functions.

#### **5** EDIT GROUP - Assign Function

Move cursor to the 'NO.' to assign the function, press near key to set up. Select the function by moving joystick Up/Down.

### OSD - FUNCTION SETUP>GROUP SETUP



#### 6 EDIT GROUP - Assign Function

Move cursor Left/Right to select items and move cursor Up/Down to change each value.

#### **2** EDIT GROUP - Select Function Sequence

☑ The function undefined cannot be set as action.

e.g.) If 'PATTERN 1' is not defined at 'ROOT MENU>FUNCTION SETUP>PATTERN SETUP', then the 'ACTION 1' will be automatically changed to 'NONE'.



#### **B** EDIT GROUP- Saves the Setting

After finishing setting up all actions, place cursor on 'SAVE'. Then, press near key to save data.

## **3** OSD - FUNCTION SETUP>SCHEDULE SETUP



#### **2** SCHEDULE SETUP SCREEN

- The schedule function allows running the appropriate function like preset, scan, group, pattern, home move at designated day and time.
- e.g.) if you setup a rule 'Tuesday at 9:00AM' and 'Preset 1 (say main gate)', the camera will move to main gate every Tuesday at 9:00AM.
- It is noted that due to the real time clock (ROOT MENU>SYSTEM SETUP>DATE/TIME SETUP), the time data will be kept regardless of blackout. The initial time and day setup is essential to proper schedule function.

- Max. 7 schedules are allowed.

MASTER ENABLE	ON / OFF
Decide whether s	chedule function is active or not.
DAY Set the day for sc - Undefined: Inac - All: Applies to e - WKD: Applies to - SUN-MON: App	UNDEFINED / ALL / WKD / SUN ~ MON heduling. tivate very day every day every day except Sunday lies to designated day only
TIME Set the time.	00:00 ~ 23:59 (hour:min)
ACT NO	HOM(HOME) / PRS(Preset) 1~128(Excluding 95 / SCN(Scan) 1~8 / PTN(Pattern) 1~8 / GRO(Group) 1~8
Set the function a	and no.
Unlike the grou However, no ac	p, the undefined function can be assigned in schedule tion is taken at the schedule.
ON	ON /OFF

Decide to make this rule effective or not.

#### **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



#### **G** SCHEDULE SETUP - Save Edited Setting

To save data and exit, press near key.

- If there are rules conflicts to each other, the higher number is, the higher priority has.
- e.g.) The camera will move to 'Preset 127' at 12:00 on every Wednesday although 'Preset 128 and 127' were set at 12:00 on every Wednesday.

SCI	HEDULE SETUP	
<b>≯</b> Μ	ASTER ENABLE OFF	
1	ALL 12:00 PRS 128 0N	
23	UNDEFINED	
4	UNREFINER	

## **3** OSD - CAMERA SETUP>WB SETUP



#### **1** CAMERA SETUP

Setup the general functions of zoom camera module.

FOCUS MODE AUTO / MANUAL / SEMIAUTO Sets camera focus mode.

 SEMIAUTO: 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.

- MANUAL: 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' or 'OFF'. If this is set to 'OFF', optical zoom function runs but zoom function stops at the end of optical zoom magnification.

IMAGE FLIP ON / OFF Sets if the image should be reversed or not.

<WHITE BALANCE SETUP> Move to 'WHITE BALACE SETUP' screen.

<AUTO EXPOSURE SETUP> Move to 'AUTO EXPOSURE SETUP' screen.

#### WB SETUP

WB MODE AUTO / MANUAL Red and blue level can be set up manually only in manual mode.

**RED ADJUST** 10 ~ 60 Adjust the red color value. It can be set only in manual mode.

#### **B** WB SETUP - Set WB Mode to Manual

If WB mode changes to 'MANUAL', the value of 'RED ADJUST' and 'BLUE ADJUST' shows on the screen.

#### **4 5** WB SETUP - Change WB Color Value

 - If WB mode changes to 'MANUAL', the color value of 'RED ADJUST' and 'BLUE ADJUST' can be set up manually.
 - To save data and exit, press near key.



OSD - CAMERA SETUP>AE SETUP







#### **2** AE SETUP

Setup the video related function of zoom camera module.

BACKLIGHT OFF / LOW / MIDDLE / HIGH Sets the backlight compensation.

DAY/NIGHT AUTO1 / AUTO2 / DAY / NIGHT 'AUTO1' exchanges day/night mode faster than 'AUTO2'.

**BRIHGTNESS** 0 ~ 100 Adjusts the brightness of images.

IRIS AUTO / MANUAL
- 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 ESC / A.FLICKER / MANUAL

- If iris is set to 'MANUAL' and shutter speed is set to 'ESC', shutter speed should have highest priority.

- 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 the image brightness automatically in case that luminance level of image signal is too low.

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

#### SENS-UP AUTO / OFF

 Activates the slow shutter function when luminance of image (signal) is too dark.

- It is possible to set up the maximum number of frames piled up one on another by Slow Shutter function.

#### **3** MANUAL IRIS SCREEN

IRIS LEVEL 0 ~ 100

**4** MANUAL SHUTTER SCREEN

SHUTTER SPD x128 ~ 1/120000

#### **5** AUTO SENS-UP SCREEN

SENS-UP LIMIT x2 ~ x128

## 3 OSD - SYSTEM SETUP







#### SYSTEM SETUP

<DATE/TIME SETUP> Moves to 'DATE/TIME SETUP' screen. Refer screen 2 below.

<RELAY TYPE> Moves to 'RELAY TYPE' setup screen. Refer screen 3 below.

<PASSWORD> Moves to 'PASSWORD' setup screen. Refer screen 4 below.

<SET HOME POSITION> Moves to 'SET HOME POSITION' screen. Refer screen 5 on page 39.

#### <SET NORTH DIRECTION>

Moves to 'SET NORTH DIRECTION' screen. Refer screen 6 on page 39.

LANGUAGE ENGLISH / ESPAÑOL / FRANÇAIS / DEUTSCH / ITALIANO / PYCCKI/Й / PORTUGUÉS Select a preferred language among English, Spanish, French, German, Italian, Russian and Portuguese.

<FAN/HEATER SETUP> Moves to 'FAN/HEATER SETUP' screen. Refer screen 7 on page 39

This setup is only applicable for fan/heater model.

#### 2 DATE/TIME SETUP

DATE 01 / JAN / 2000 ~ 31 / DEC / 2037 Date is displayed in dd/mm/yy format.

If you press the near key, the focus will be placed on 'dd'.
 Sets date moving joystick Up/Down.
 Moves joystick Left/Right to move to date-month-year.
 The values in the field are changed using Up/Down keys.

 $\blacksquare$  The day is automatically calculated when you set the day.

TIME Time is displayed in HH:MM:SS format. Sets time same as setting date.

#### **3** RELAY TYPE SETUP

RELAY1 NORMAL OPEN(N.O) / NORMAL CLOSE(N.C) - Contacts type of relay out are defined. - Refer page 14 for the detailed information.

#### 4 EDIT PASSWORD

 Sets the 4 characters long password. If this function is set to 'ENABLE', the password is required whenever you enter OSD menu. The master password is '4321'.

To input password, refer 'LABEL' on page 29.

### **OSD - SYSTEM SETUP**



#### **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 is not effective to tilt angle.

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

Set Home Position?

When you replace the camera block or the orientation of camera is changed due to maintenance operations, it is very difficult to maintain the same pan orientation. Therefore, all function data depending on pan orientation such as preset, scan, pattern, group and privacy zone mask are not useful any more accordingly. However, even in this case, you can reuse the data if you redefine set home position on the previous home position.

For setup, refer 'EDIT SCENE' on page 28.

#### **6** SET NORTH DIRECTION

The direction will be displayed on the right-bottom of the screen, pan is '0' and direction is 'N'.



#### **7** FAN/HEATER SETUP

Sets the fan/heater enabled/disabled according to the temperature.

M This menu will be displayed only for fan/heater model.

**FAN RUN TEMP**  $30^{\circ}$ C ~  $80^{\circ}$ C ( $86^{\circ}$ F ~  $176^{\circ}$ F) Above this temperature, the blower fan will start automatically.

 $\begin{array}{ll} \mbox{HEATER RUN TEMP} & -10^\circ C \sim 20^\circ C ~ (14^\circ F \sim 68^\circ F) \\ \mbox{Below this temperature, the heater will be tuned on automatically.} \end{array}$ 





0

#### **1** SYSTEM INITIALIZE

Initializes to the camera setting.

CLEAR ALL DATA ON / OFF Deletes all configuration data such as display, camera, motion setup and so on.

CLR DISPLAY SET ON / OFF Initializes display configuration.

CLR CAMERA SET ON / OFF Initializes camera configuration.

CLR MOTION SET ON / OFF Initializes motion configuration.

CLR FUNCTION SET ON / OFF Deletes preset data, scan data, pattern data, group data and schedule data.

**REBOOT CAMERA** ON / OFF Reboots zoom camera module.

**REBOOT SYSTEM** ON / OFF Reboots speed dome camera.

OSD menu contents on page 22, 23, default values of each content are marked in bold.



Unit: mm





## **4** Dimensions of Option Brackets

Unit: mm

1. Flush Mount Ring Bracket













### Dimensions of Option Brackets

Unit: mm











2. Ceiling Mount Bracket

Unit: mm







Sigr	nal Format	NTSC	PAL		
	Image Device	1/4" Interline Transfer CCD			
	Total Pixel	410K pixels [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: 500 TV Lines B/W: 570 TV Lines			
	S/N Ratio	50dB (AGC Off)			
	Zoom	x10 Optical Zoom & x10 Digital Zoom			
	Focal Length	F 1.8, f=3.8 ~ 38mm			
	Min. Illuminance	Color: 0.7 Lux (50 IRE) B/W: 0.02 Lux			
Camera	Day & Night	Auto / Day / Night (IR Cut Filter)			
	Focus	Auto / Manual / Semi-Auto			
	Iris	Auto / Manual			
	Shutter Speed	x128~ 1/120000 sec, Anti Flickerless			
	AGC	Normal / High / Off			
	White Balance	Auto / Manual (Red & Blue Gain Adjustable)			
	BLC	Low / Middle / High / Off			
	Flickerless	Selectable			
	SSNR	Low / Middle / High / Off			
	Other Functions	Frame Freeze Function, System Image Flip by Installation Type			
	_	Pan: 360° (Endless)			
	Range	Tilt: 0° ~ 180° (Auto-Flip On), 0° ~ 90° (Auto-Flip Off)			
	Pan/Tilt Speed	Preset: 360°/sec			
		Manual: 0.05° ~ 360°/sec (Zoom Proportional)			
		Scan: 1° ~ 180°/sec			
Pan/Tilt	Preset	127 Presets with Labels / Independent Camera Setup			
	Pattern	4 Patterns (Approx. 5 Minutes for Each Pattern)			
	Scan	8 Scans			
	Group	8 Groups (Max. 20 Enters for Each Group)			
	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	RS-485		
	Protocol	Auto, Pelco-D, Pelco-P, Samsung, Panasonic, GE(Kalatel), AD(American Dynamics) Selectable			
	Privacy Zone	4 Zones			
	Sensor In/Out	Built-in 2 Input / 1 Relay Output			
	OSD	Temperature, Day and Date & Time Display, Support 7 Languages:			
		(ENGLISH / ESPAÑOL / FRANÇAIS / DEUTSCH / ITALIANO / РУССКИЙ / PORTUGUÊS)			
General	Power	DC 12V(7.8W) (Fan & Heater Model Consumes 12W)			
		🖾 Dual Voltage Model: AC 24V / DC 12V (7.8W)			
	D	Dome: Ø115 mm			
	Demension	Housing : Ø165 x 101.5(H) mm			
	Weight	Approx. 2.4 Kg (5.3Lbs)			
	Operating Temp.	-10°C ~ 50°C (14°F ~ 122°F)			