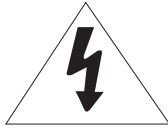


## **x12** Analog WDR PTZ In/Outdoor Camera

*User's Manual* Ver. 1.0 / 2012.06

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 COVER (OR BACK) NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



#### Warning

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 excessive 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 items, 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. 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.

## Precaution

### Operating

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

### Handling

- Do not disassemble or tamper with parts inside the camera.
- Do not drop the camera or subject it to shock or vibration as this can damage the camera.
- Clean the clear dome cover with extra care. Scratches and dust can ruin the quality of the camera image.

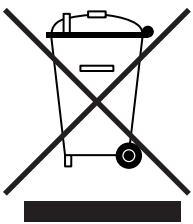
### Installation and Storage

- Do not install the camera in areas of extreme temperature, exceeding the allowed range.
- Avoid installing in humid or dusty environments.
- 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 or water.

# Important Safety Instructions

1. **Read these instructions.** - All these safety and operating instructions should be read before the product is installed or operated.
2. **Keep these instructions.** - The safety, operating and use instructions should be retained for future reference.
3. **Heed all warnings.** - All warnings on the product and in the operating instructions should be adhered to.
4. **Follow all instructions.** - All operating and use instructions should be followed.
5. **Do not use this device near water.** - For example: near a bath tub, wash bowl, kitchen sink, laundry tub, in a wet basement; near a swimming pool; etc.
6. **Clean only with dry cloth.** - Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners.
7. **Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.** - Slots and openings in the cabinet are provided for ventilation, to ensure reliable operation of the product, and to protect it from over-heating. The openings should never be blocked by placing the product on bed, sofa, rug or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided and the manufacturer's instructions have been adhered to.
8. **Do not install near any heat sources such as radiators, heat registers, or other apparatus (including amplifiers) 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 are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. **Protect the power cord from being walked on or pinched particularly at 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 apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.**
13. **Unplug this apparatus during lightning storms or when unused for long periods of time.**
14. **Refer all servicing to qualified service personnel.** Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.





#### Disposal of Old Appliances

---

1. When this crossed-out wheel bin symbol is attached to a product it means the product is covered by the European Directive 2002/96/EC.
2. All electrical and electronic products should be disposed of separately from the municipal waste stream in accordance to laws designated by the government or the local authorities.
3. The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.
4. For more detailed information about disposal of your old appliance, please contact your city office, waste disposal service or the shop where you purchased the product.



This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

# Table of Content

---

	2 Safety Information
	3 Important Safety Instructions
	5 Table of Contents
<b>INTRODUCTION</b>	6 Features
	7 Product & Accessories
	8 Parts& Description
<b>INSTALLATION</b>	9 Camera ID Setup
	10 Teminal Block Connections
	11 Surface Mount Installation
	12 Accessories Installation
	17 First Time Booting Up
	18 Check Points Before Operation
<b>OSD MENU</b>	19 Special Functions
	20 OSD Information
	21 General Rules of Menu Operation
	22 OSD - ROOT MENU & SYSTEM INFORMATION
	23 OSD - DISPLAY SETUP
	24 OSD - MOTION SETUP & PARKING ACTION
	25 OSD - MOTION SETUP & ALARM INPUT
	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 > WHITE BALANCE SETUP
	35 OSD - CAMERA SETUP > AUTO EXPOSURE SETUP
	36 OSD - CAMERA SETUP > SPECIAL
	37 OSD - SYSTEM SETUP
	40 OSD - SYSTEM INITIALIZE
<b>SPECIFICATIONS</b>	41 Dimension
	44 Specification
	45 Troubleshooting
	46 Warranty Information & Limits and Exclusions
<b>APPENDIX</b>	47 Camera IDs
	53 Reserved PResets
	54 Using a USB mouse to control the Camera's OSD Menu
	59 Using Joystick Contrller to control the camera's OSD menu

# Features

---

## **CAMERA SPECIFICATIONS**

- 1/4" Sony Super HAD II (Double Scan) CCD
- Zoom Magnification: ×12 Optical, ×32 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**

- 2 Alarm sensor inputs and 1 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.

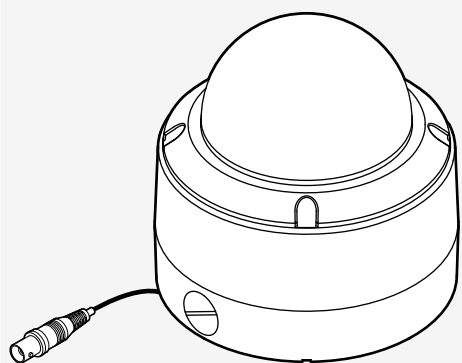
## **RESERVED PRESETS FOR SPECIAL PURPOSE**

- 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.

# Introduction - Product & Accessories



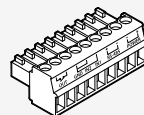
Verify the following items are included in the package.



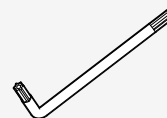
Main Body + Surface Mount Bracket



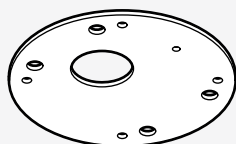
Screw & Plastic Anchor-4pcs



9P Terminal Block



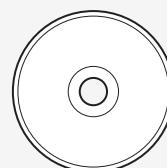
Torx Wrench



Rubber Gasket



Template Sheet



Manual CD



Quick Manual

## Accessories (Required)



DWC-P12WM  
Indoor Wall Mount



DWC-P12CM  
Indoor Ceiling Mount



DWC-P12WMS  
Sunshield Wall Mount



DWC-P12CMS  
Sunshield Ceiling Mount

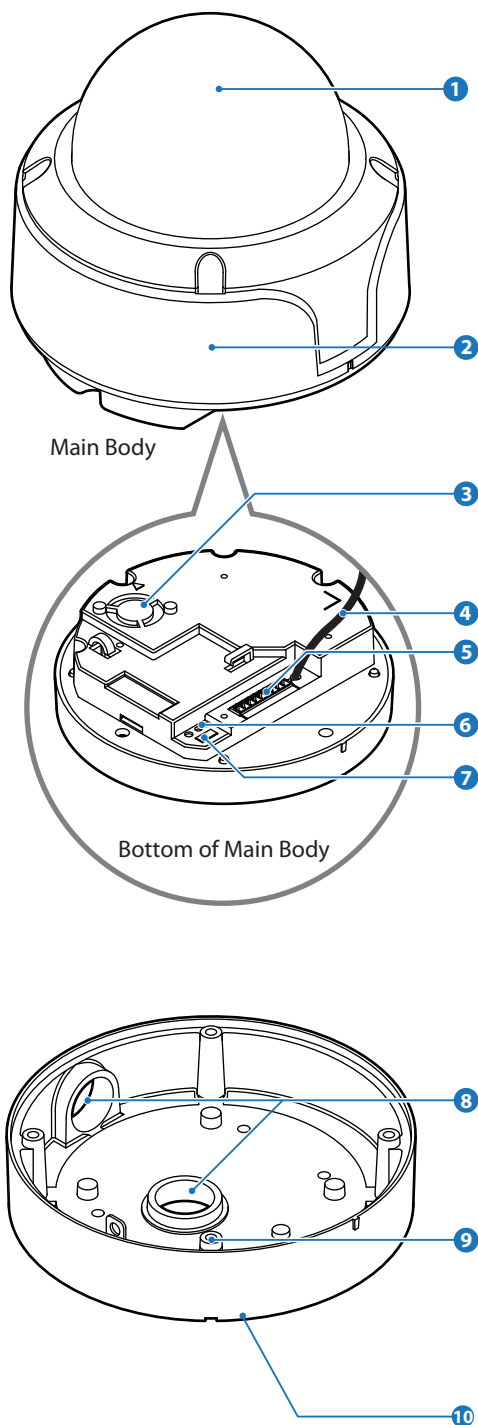


DWC-P39CNM  
Corner Mount



DWC-P39POLM  
Pole Mount

# Introduction - Parts & Description



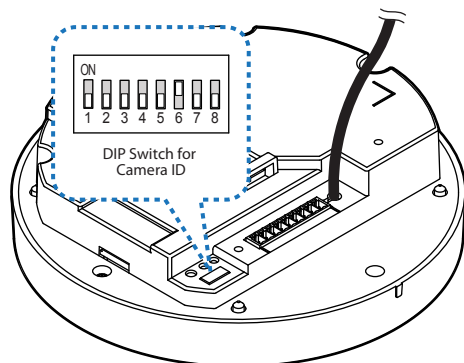
- 1 Dome Cover**
  - Protects the camera module from outside environment.
  - Do not detach protection film from the dome cover before finishing all installation to protect dome cover from scratches or dust.
- 2 Lockup Screw**
  - Fixes main body to the surface mount bracket.
- 3 Fan**
  - Fan for temperature control.
- 4 BNC Video Cable**
  - Main video output cable.
- 5 9P Terminal Block Slot**
  - 9P terminal block that is connected with cables is inserted in this slot.
- 6 LED & Reset Button**
  - LED for active(yellow light), power(red light) status and Reset button for reset camera.
- 7 ID Setup Switch**
  - Specify the camera ID.
- 8 3/4" 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.
- 9 Mounting Hole**
  - This is used to attach the surface mount bracket to the ceiling.
- 10 Main Body**
  - The camera's main body protects the camera's wires.
  - This part is required when installing the camera with an Indoor Accessory.



# Installation - Camera ID Setup

---

- ⌘ Before installing the camera, set up the DIP switch to configure the Camera ID.



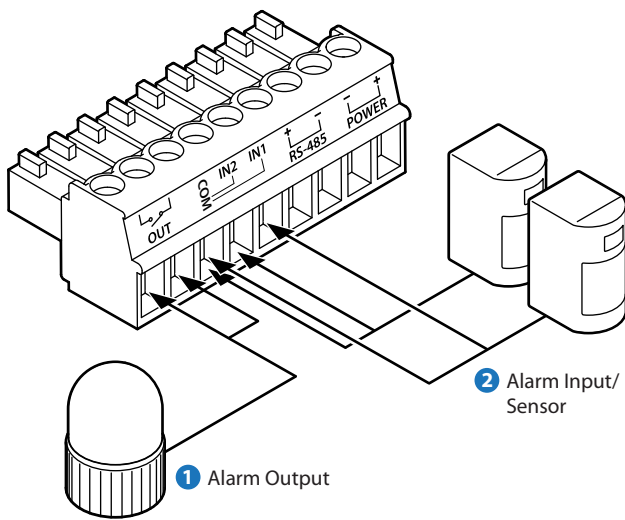
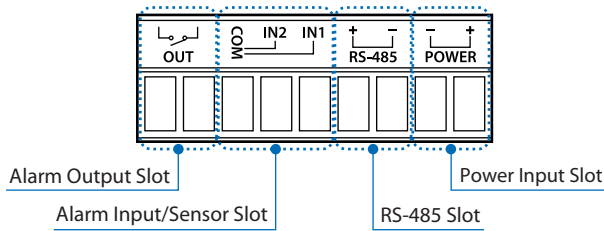
Bottom of Main Body

The ID number of the camera is set using binary numbers. See the example 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 'CAM ID' setting of DVR or keyboard controller.
- The range of Camera ID is 0~255.
- All cameras have a factory default Camera ID of 1.
- Camera ID will be effective without having to reboot the camera.

# Installation - Terminal Blocks Connections

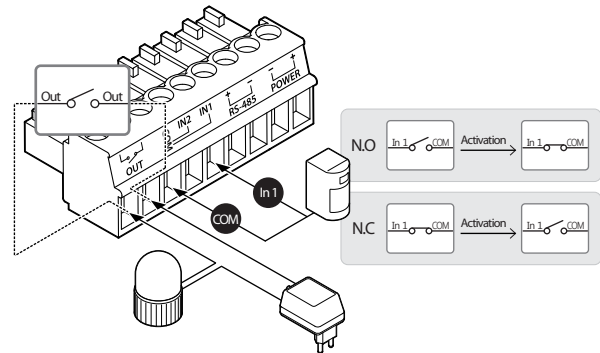


## 1 Alarm Output

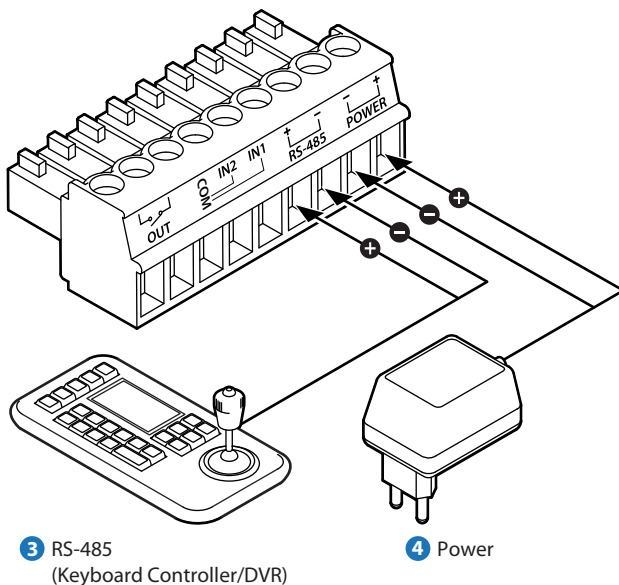
- It connects to the alarm lights, siren or lamps, and it is activated according to the OSD menu setting.
- There are 1 Alarm Output and it is relay contact type. Therefore, you do not have to care about polarity, AC/DC, and isolations between channels. Care must be taken for the power capacity of relay contact type.
- The sensor types are normal open and normal close.

## 2 Alarm Input/Sensor

- 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.
- The sensor types are normal open and normal close.



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

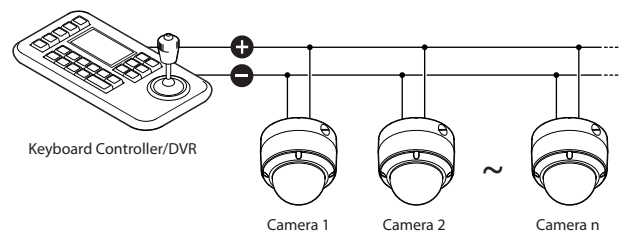


## 3 Power

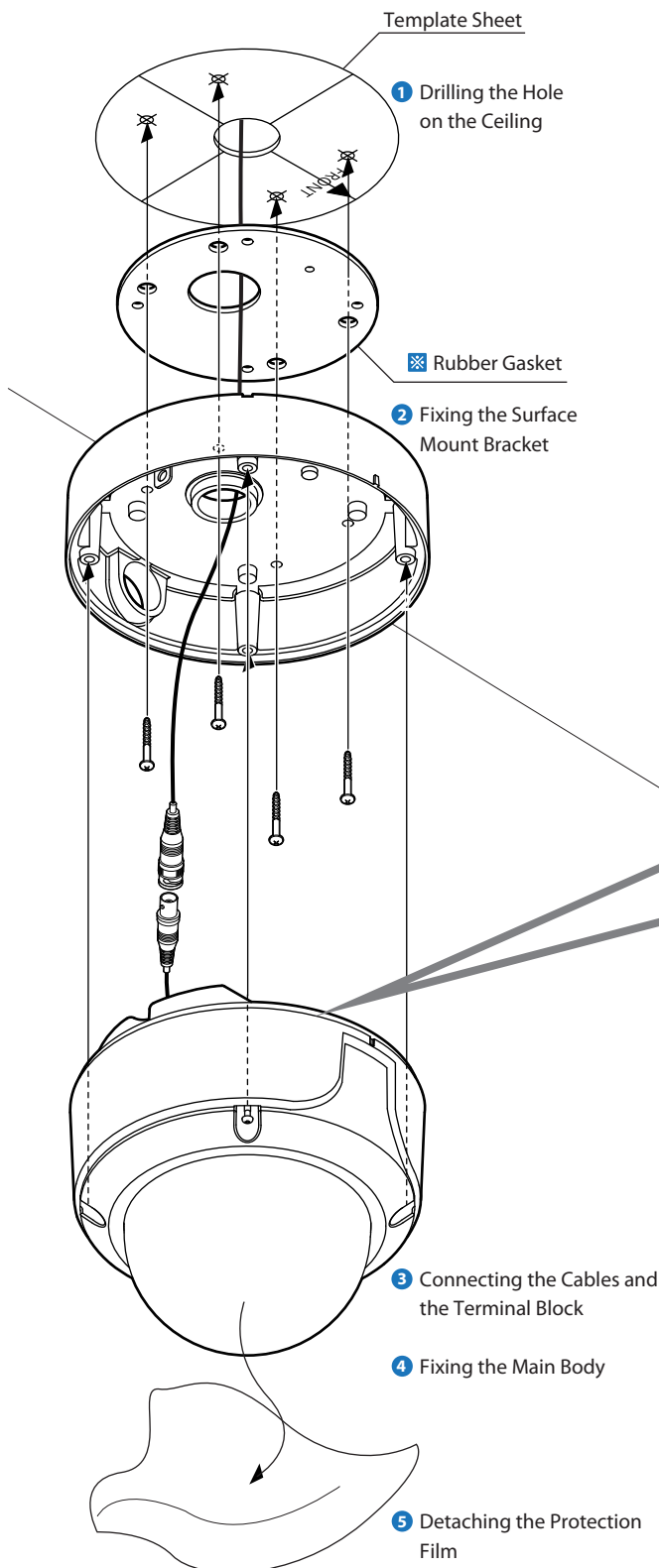
- Please check the correct rated power.
- The rated power is marked on the bottom of the camera.

## 4 RS-485 Communication (Keyboard Controller/DVR)

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



# Installation - Installation Using Surface Mount Bracket



✘ **Disassemble the main body with the surface mount before installation the camera.**

1 **Drilling a Hole on the Ceiling**

Using provided template sheet, drill a hole (30mm diameter) on the ceiling panel to pass cables.

2 **Fixing the Surface Mount Bracket**

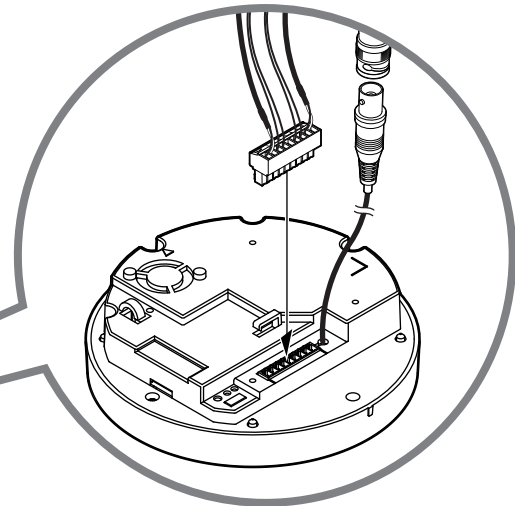
Pass the cables through the  $\frac{3}{4}$ " pipe hole, and screw the surface mount bracket to the ceiling.

✘ **Rubber Gasket**

- Before installing the gasket, the hole in the center is to be cut by knife when only necessary.

3 **Connecting the Cables and the Terminal Block**

Connect the cables to the terminal block and then put the terminal block in the slot of the main body. (See the section 'Terminal Block' for details.)



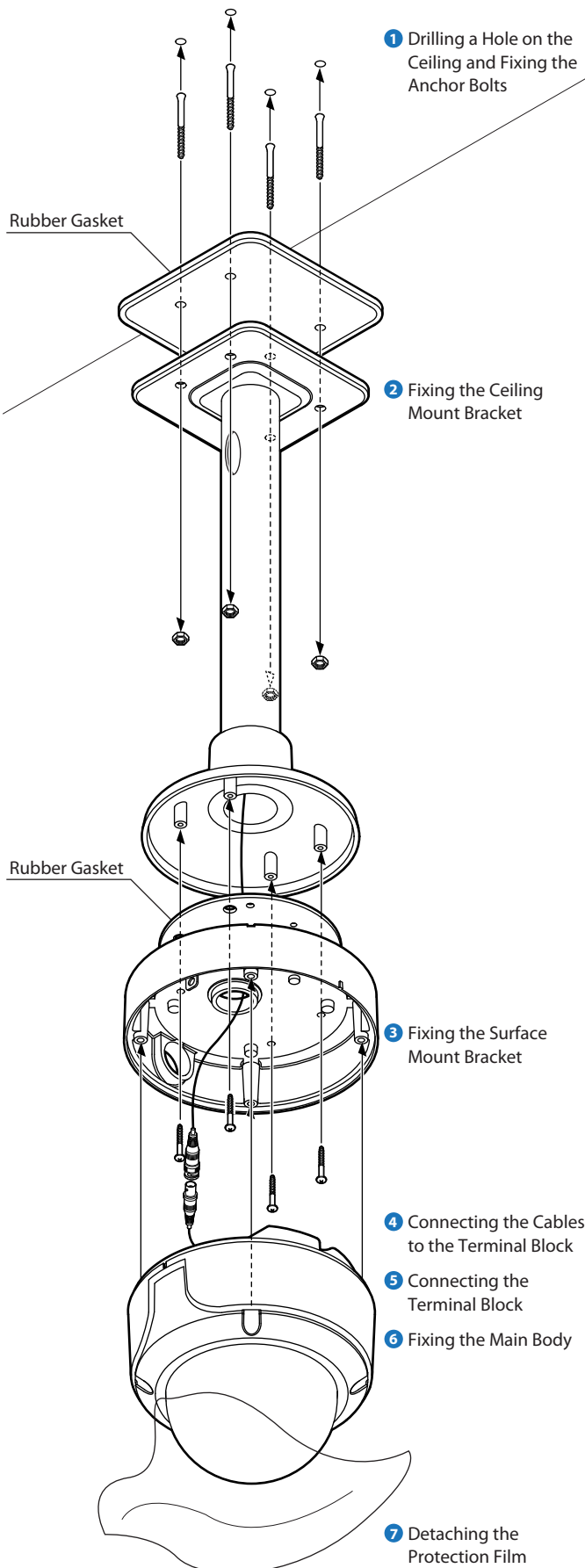
4 **Fixing the Main Body**

Screw the main body to the surface mount bracket by screwing 4 lock-up screws.

5 **Detaching the Protection Film**

Detach the protection film from the dome cover after finishing all installation.

# Installation - Installation Using Ceiling Mount Bracket (Option)



✘ Disassemble the main body with the surface mount before installation the camera.

## 1. Installing on the Concrete Ceiling

### 1 Drilling a Hole on the Ceiling and Fixing the Anchor Bolts

To install the ceiling mount bracket, drill four holes (6mm diameter/50mm depth) on the ceiling and insert the anchor bolts into the hole.

### 2 Fixing 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 Drilling a Hole on the Ceiling

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

### 2 Fixing the Ceiling Mount Bracket

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

### 3 Fixing 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 Connecting the Cables to the Terminal Block

See the section 'Cabling the Terminal Block' for details.

### 5 Connecting the Terminal Block

Put the terminal block connected to the cables in the slot of the main body.

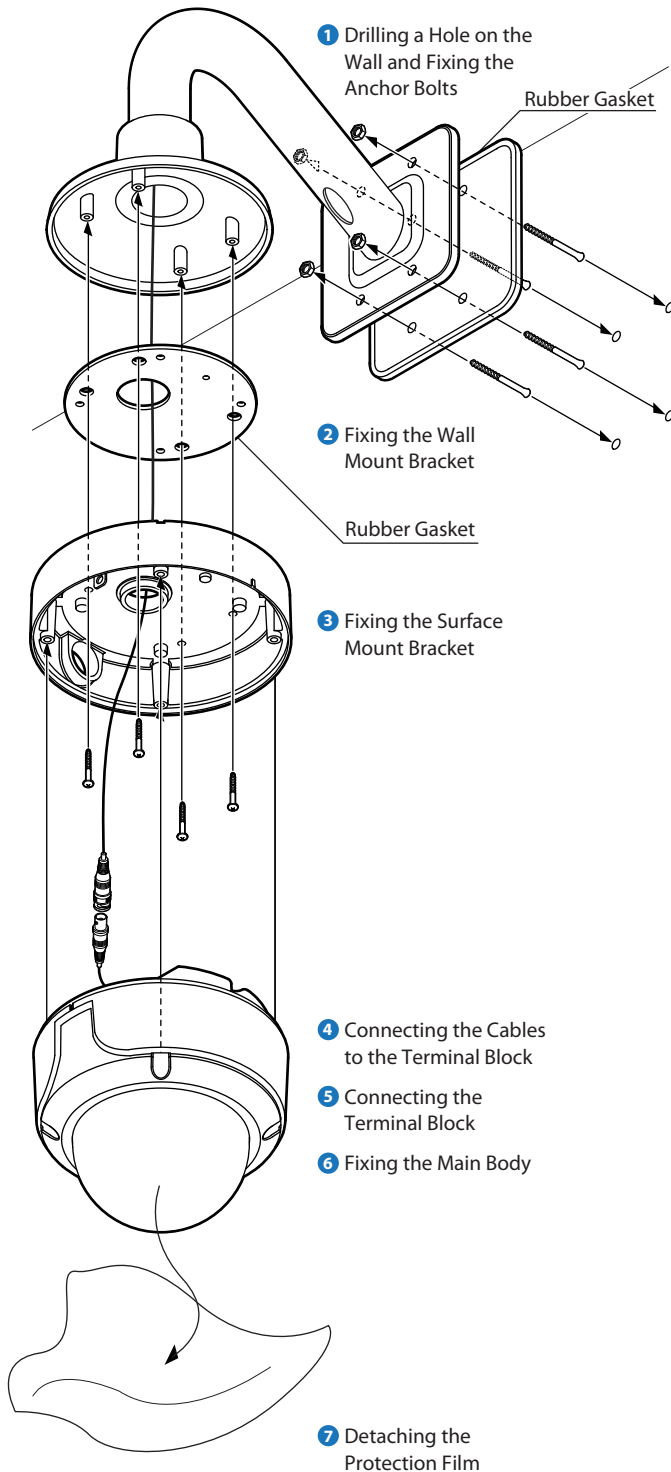
### 6 Fixing the Main Body

Screw the main body to the surface mount bracket by screwing 4 lock-up screws.

### 7 Detaching the Protection Film

Detach the protection film from the dome cover after finishing all installation.

# Installation - Installation Using Wall Mount Bracket (Option)



✘ Disassemble the main body with the surface mount before installation the camera.

## 1. Installing on the Concrete Wall

### 1 Drilling a Hole on the Wall and Fixing the Anchor Bolts

To install the wall mount bracket, drill four holes (6mm diameter/50mm depth) on the wall and insert the anchor bolts into the hole.

### 2 Fixing 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 screw the wall mount bracket.

## 2. Installing on the Wooden Wall

### 1 Drilling a Hole on the Wall

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

### 2 Fixing the Wall Mount Bracket

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

### 3 Fixing 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.

### 4 Connecting the Cables to the Terminal Block

See the section 'Cabling the Terminal Block' for details.

### 5 Connecting the Terminal Block

Put the terminal block connected to the cables in the slot of the main body.

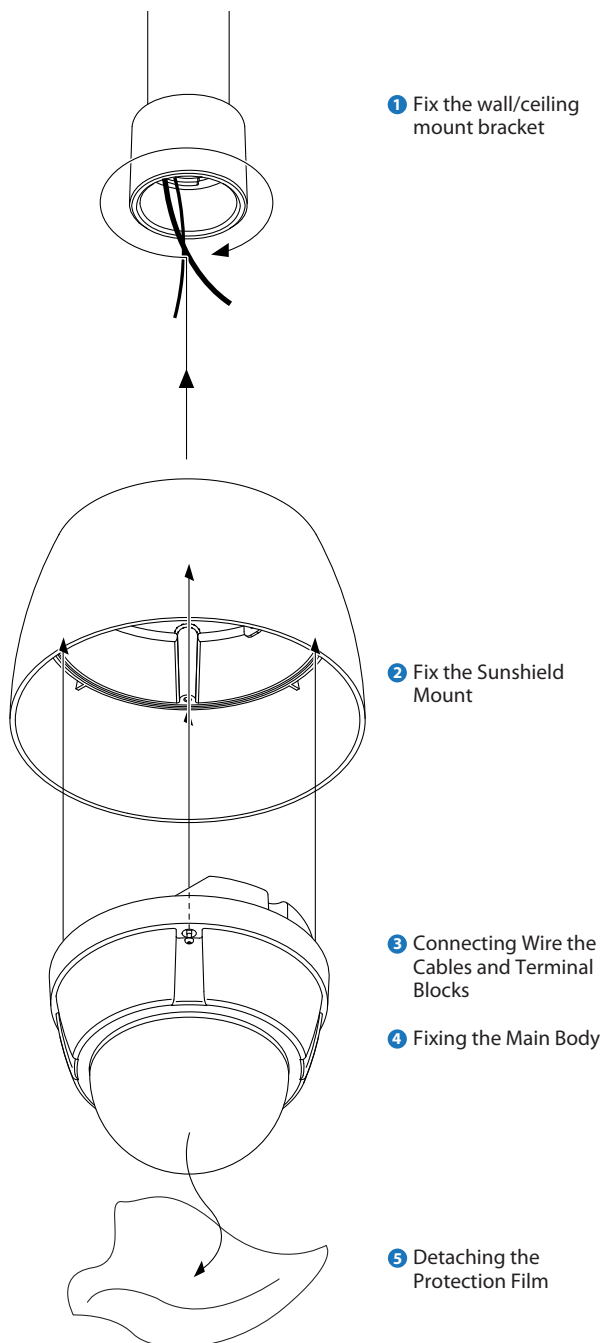
### 6 Fixing the Main Body

Screw the main body to the surface mount bracket by screwing 4 lock-up screws.

### 7 Detaching the Protection Film

Detach the protection film from the dome cover after finishing all installation.

# Installation - Installation Using Sunshield Mount



✘ Disassemble the main body with the surface mount and open the junction box cover before installation the camera.

**1 Drilling a Hole on the Wall and Fixing the Anchor Bolts**

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

**2 Fixing the Junction Box**

On the fixed anchor bolts, attach and screw the junction box.

**3 Passing the Cables through the Wall Mount Bracket**

**4 Closing the Junction Box Cover**

Close the cover to the junction box using the torx driver provided before fix the sunshield mount.

**5 Fixing the Sunshield Mount**

Pass the cables through the pipe hole of the sunshield mount, and fix the sunshield mount to the wall mount bracket.

**6 Connecting the Cables to the Terminal Blocks**

- See the section 'Installation - Cabling the 5P/7P Terminal Block and the Audio Cable' for details.  
- Connect the cables to the terminal blocks and then put the terminal blocks in the slots of the main body.

**7 Connecting the other Cables**

Connect the audio cable and crossover cable in the connectors of the main body.

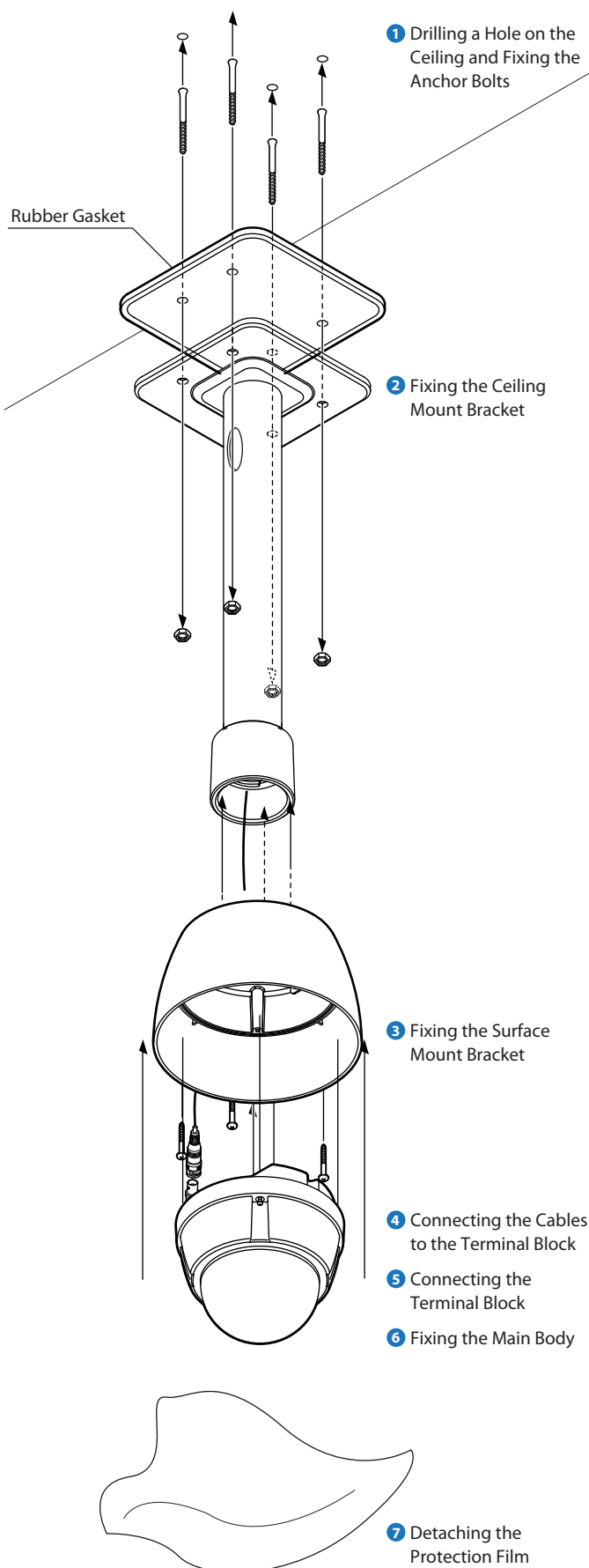
**8 Fixing the Main Body**

Screw the main body to the sunshield mount by screwing 4 lock-up screws.

**9 Detaching the Protection Film**

Detach the protection film from the dome cover after finishing all installation.

# Installation - Installation Using Ceiling Mount Bracket and Sunshield Dome (optional)



✘ Disassemble the main body with the surface mount before installation the camera.

## 1. Installing on the Concrete Ceiling

### 1. Drilling a Hole on the Ceiling and Fixing the Anchor Bolts

To install the ceiling mount bracket, drill four holes (6mm diameter/50mm depth) on the ceiling and insert the anchor bolts into the hole.

### 2. Fixing 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. Drilling a Hole on the Ceiling

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

### 2. Fixing the Ceiling Mount Bracket

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

### 3. Fixing the Sunshiled Dome

Pass the cables through the hole of the Sunshiled Dome. Screw the Sunshiled Dome to the ceiling mount bracket.

### Connecting the Cables to the Terminal Block

### 4. See the section 'Cabling the Terminal Block' for details.

### Connecting the Terminal Block

### 5. Put the terminal block connected to the cables in the slot of the main body.

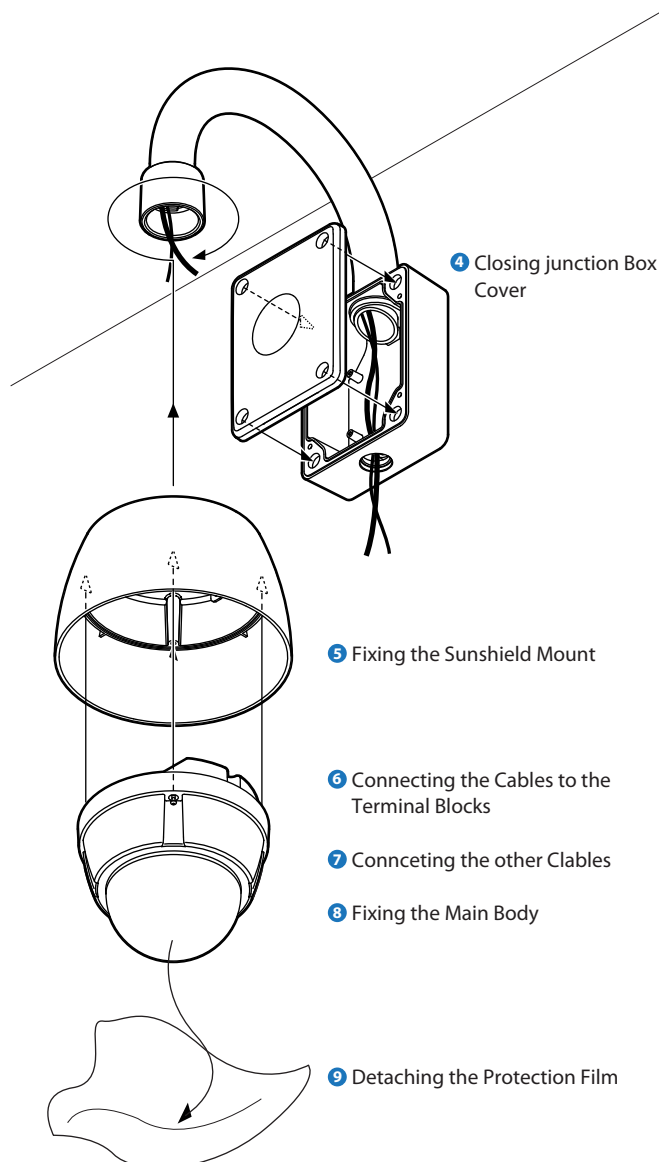
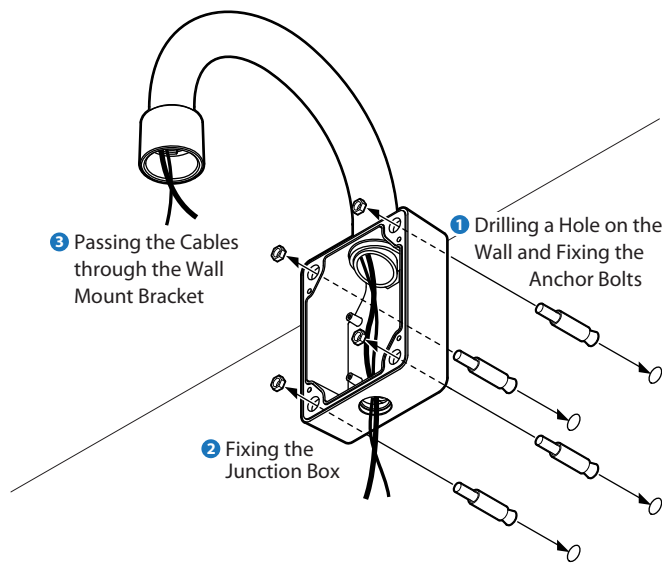
### Fixing the Main Body

### 6. Screw the main body to the surface mount bracket by screwing 4 lock-up screws.

### Detaching the Protection Film

### 7. Detach the protection film from the dome cover after finishing all installation.

# Installation - Installation Using Wall Mount Bracket and Sunshield Dome (optional)



✘ Disassemble the main body with the surface mount before installation the camera.

## 1. Installing on the Concrete Wall

### 1 Drilling a Hole on the Wall and Fixing the Anchor Bolts

To install the wall mount bracket, drill four holes (6mm diameter/50mm depth) on the wall and insert the anchor bolts into the hole.

### 2 Fixing 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 screw the wall mount bracket.

## 2. Installing on the Wooden Wall

### 1 Drilling a Hole on the Wall

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

### 2 Fixing the Wall Mount Bracket

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

### 3 Passing the Cables

Pass the cables through the wall mount bracket.

### 4 Closing the Junction Box

Once the wall mount bracket is secured to the wall, attach the cover to the junction box and secure tightly.

### 5 Fix the Sunshield Mount

Pass the cables through the hole of the sunshield mount, fix the sunshield mount to the wall/ceiling bracket.

### 6 Connecting the Cables to the Terminal Block

See the section 'Cabling the Terminal Block' for details.

### 7 Connecting the Terminal Block

Put the terminal block connected to the cables in the slot of the main body.

### 8 Fixing the Main Body

Screw the main body to the surface mount bracket by screwing 4 lock-up screws.

### 9 Detaching the Protection Film

Detach the protection film from the dome cover after finishing all installation.



# Installation - First-time Booting Up

## 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 to be controlled. The camera ID can be check in the system information of OSD menu.
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

Check how to operate preset, pattern, scan and group function with keyboard controller/DVR in advance to operate camera function using them.  
(Refer to system keyboard manual)

## Start OSD Menu

Using the OSD menu, preset, pattern, scan, group and alarm input function can be configured for each application.  
Enter 'Preset key + 95'.

Connect camera to power and make sure it is operating properly.

15. Camera will show Initializing Setup screen.

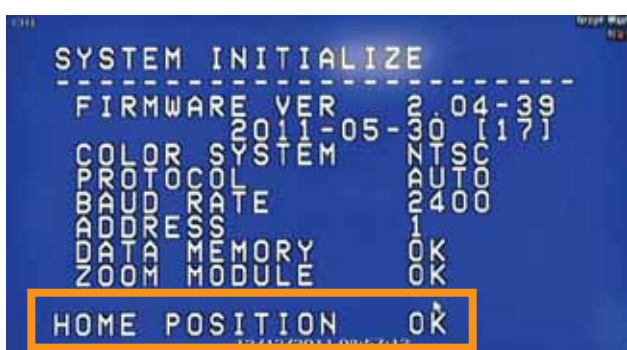
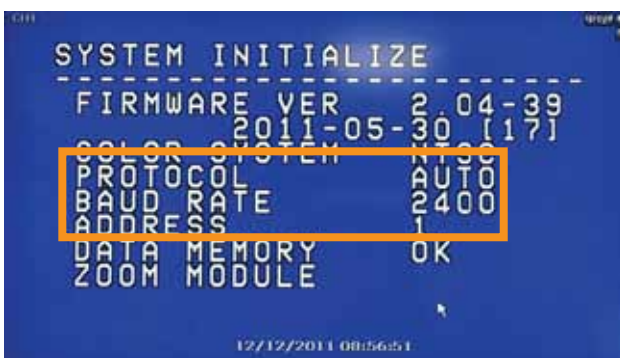
Note: Please record the information on this screen, especially the Protocol (If set to Auto, it is probably Pelco-D), Baud Rate, and Camera's Address.

16. When initializing System is complete, screen will display camera's video.

## Auto Calibration

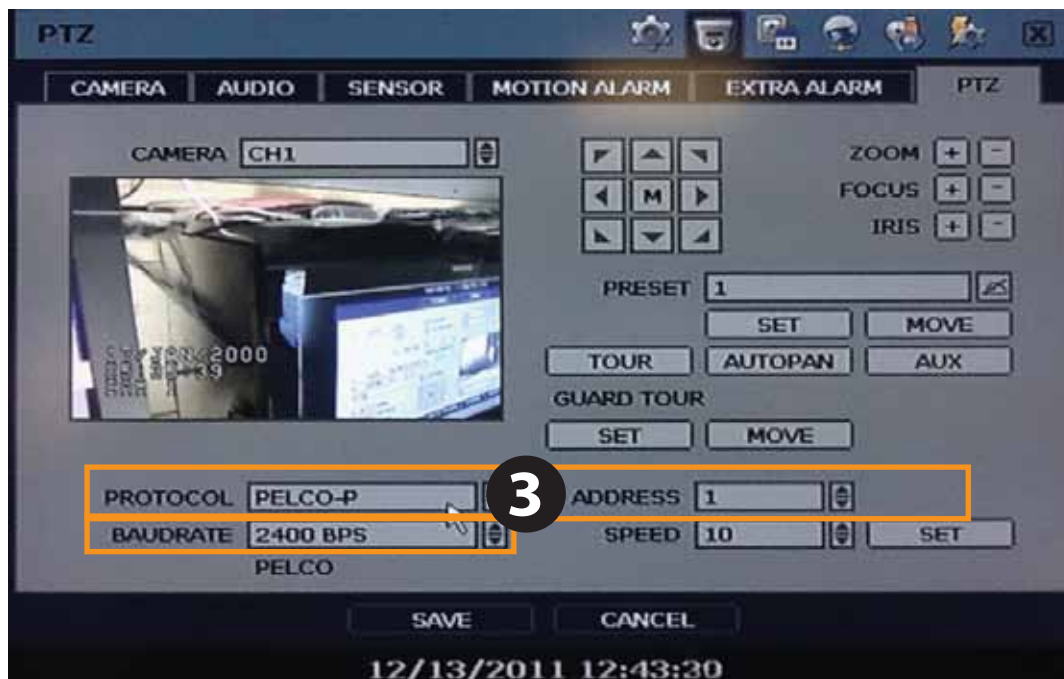
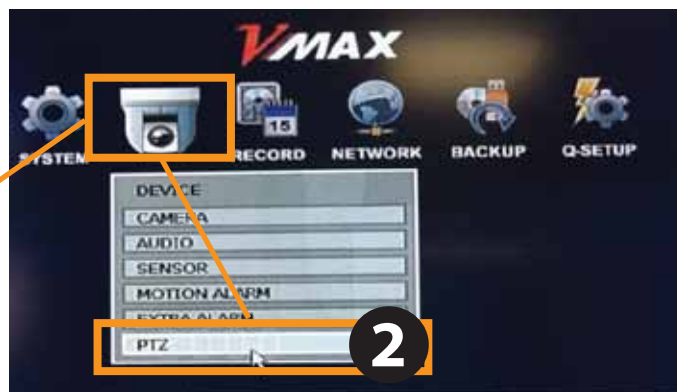
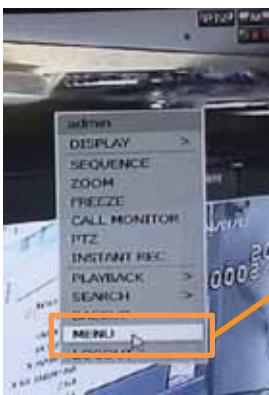
If the camera is continuously subjected to very high temperatures (over 50°C or 122°F) for a long period, the camera can lose focus and produce blurry images. In this case, it is recommended to turn on AUTO CALIBRATION by running preset 165.

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.



# Installation- Check Points before Operation

1. Before you can start controlling your PTZ12X camera, you need to make sure the Camera's ID, Baud Rate and Protocol are setup in the DVR or Joystick Controller.
2. In the DVR, go to Menu --> Device --> PTZ
3. Setup the Protocol, Baud Rate and Address to match the information collected from the Initializing System page.  
Note: If you do not have the information from the Initializing System screen, go to the PTZ39X's OSD menu, System Information. Please see page \_\_\_\_ for further information on how to navigate in the OSD menu using a DVR's mouse.
4. 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



# OSD - Special Functions

---

## 1 Preset

- You can setup and save the camera position.
- See the section '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

---

### 3. Delete Preset

To delete preset, use OSD menu.

---

## 2 Scan

- By using scan function, you can make camera to move between 2 preset positions repeatedly.
- See the section 'ROOT MENU>FUNCTION SETUP>SCAN SETUP' for more detailed information.

---

### 1. Set Scan

To set scan, use OSD menu.

---

### 2. Run Scan

Method) Pattern key + Scan number + 10  
Ex) Run scan 2 = Pattern key + [12] + Enter key

---

### 3. Delete Scan

To delete scan, use OSD menu.

---

## 3 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.
- See the section 'ROOT MENU>FUNCTION SETUP>PATTERN SETUP' for more detailed information.

---

### 1. Set Pattern

To set pattern, use OSD menu.

---

### 2. Run Pattern

Method 1) Pattern key + Pattern number + Enter key  
Ex) Run pattern 2 = Pattern key + [2] + Enter key

---

### 3. Delete Pattern

To delete pattern, use OSD menu.

---

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

## 4 Group

- The group function allows running sequence of presets, pattern and/or scans.
- See the section 'ROOT MENU>FUNCTION SETUP>GROUP SETUP' for more detailed information.

---

### 1. Set Group

To set group, use OSD menu.

---

### 2. Run Group

Method) Pattern key + [Group number + 20]  
Ex) Run group 2 = Pattern key + [22] + Enter key

---

### 3. Delete Group

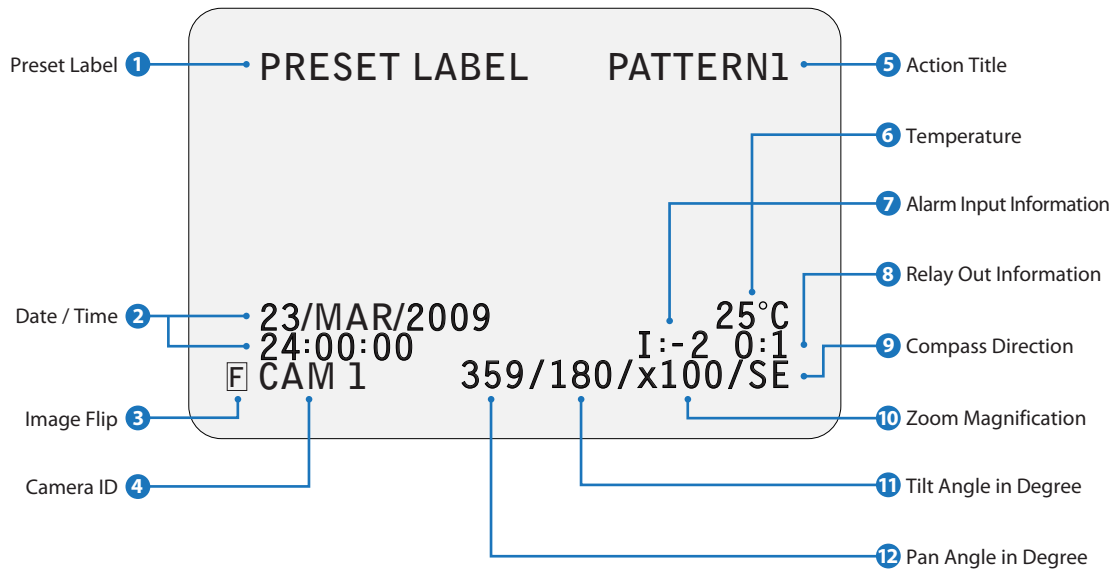
To delete group, use OSD menu.

---

## 5 Schedule

- The schedule function allows running an appropriate function like preset, scan, group, pattern, home move at the designated day and time.
- See the section 'ROOT MENU>FUNCTION SETUP>SCHEDULE SETUP' for more detailed information.

# OSD - OSD Information



### 1 Preset Label

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

### 2 Date / Time

- Shows the current date/time.
- See the section 'SYSTEM SETUP>DATE/TIME SETUP'.

### 3 Image Flip

- Shows that images are currently reversed by auto flip function.
- See the section 'ROOM MENU>CAMERA SETUP>IMAGE FLIP'.

### 4 Camera ID

- The current camera ID(Address).
- See the section 'ROOT MENU>SYSTEM INFORMATION'.

### 5 Action Title

Followings are possible action titles and their meanin

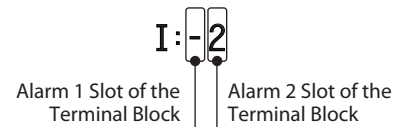
Action Title	Means
SET PRESET 123	Means to store preset 123.
PRESET 123	Means it reached preset 123.
PATTERN 1	Means the camera is running pattern 1.
SCN 1/PRESET 123	Means the camera is running scan 1.
RANGE OVER	Means the action received is not within the range supported.
UNDEFINED	Means the action received is not defined.

### 6 Temperature

- Current temperature: Boxed 'C' and 'F' means celsius and fahrenheit respectively.
- See the section 'ROOM MENU>DISPLAY SETUP>TEMPERATURE'.

### 7 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).
- See the section 'ROOT MENU>SYSTEM SETUP>SET NORTH DIRECTION'.

### 10 Zoom Magnification

Shows the current zoom magnification.

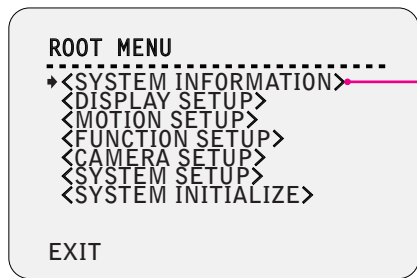
### 11 Tilt Angle in Degree

Shows the current tilt(0 ~ 180) angle.

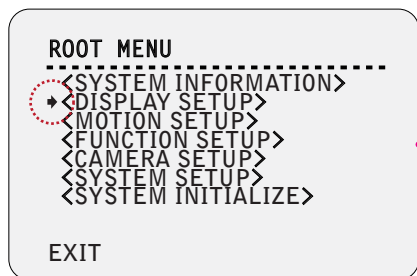
### 12 Pan Angle in Degree

Shows the current fan(0 ~ 359) angle.

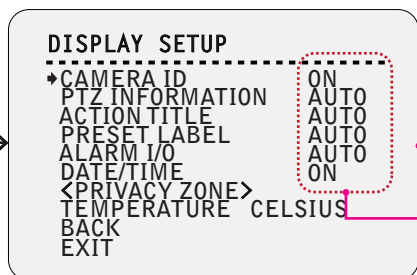
# OSD - General Rules of Menu Operation



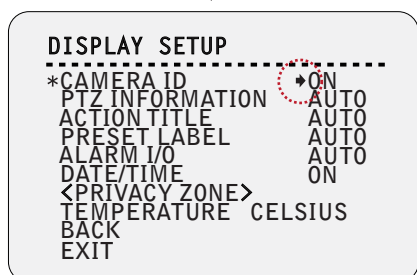
Move the Joystick Up or click on the top of the screen with a USB mouse ↑  
 Move the Joystick Down or click on the bottom of the screen with a USB mouse ↓



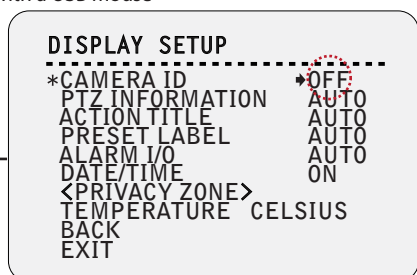
Press the Far Key or scroll a USB mouse's wheel forward ↑  
 Press the Near/Enter Key or scroll a USB mouse's wheel backwards ↓



Press the Far Key or scroll a USB mouse's wheel forward ↑  
 Press the Near/Enter Key or scroll a USB mouse's wheel backwards ↓



Move the Joystick Up or click on the top of the screen with a USB mouse ↑  
 Move the Joystick Down or click on the bottom of the screen with a USB mouse ↓



Press the Near/Enter key (scroll forward with a USB mouse) to save, or Far Key (scroll backwards with a USB mouse) to cancel

⊠ This page explains how to operate the OSD menu using keyboard controller or USB mouse. If there are no keys or functions described below, refer the manual of the keyboard controller.

**1 Move the Cursor Up/Down to Choose Menu**  
 To move from one item to another in the menu, move the joystick up/down. If you are using a USB mouse, click on the bottom of the screen to go down, or the top of the screen to go up.

**2 Shift to the Sub Menu of the Chosen Menu**  
 For all menu level, to enter a sub-menu, press the "near/enter" key. If you are using the USB mouse, scroll the mouse's wheel forward to enter a sub-menu.

**3 Choose the Value**  
 To change a value, press "near/enter" key to move into value edit mode. If you are using a USB mouse, scroll the mouse's wheel forward to enter edit mode to change a value. Once in edit mode, the arrow on the left side of the OSD menu will change to an asterisk symbol and an arrow will appear next to the value.

**4 Change the Value**  
 Move the joystick up/down to change the value. If you are using the USB mouse, click on the bottom and/or top of the screen to change the value. To save a value change, use the mouse's wheel and scroll forward. To cancel any value changes, use the mouse's wheel and scroll backwards.

**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. If you are using a USB mouse, scroll the mouse's wheel backwards to move to previous screens, and exit from a sub-menu to the main menu.

**a** : Menu items surrounded with < > always have a sub menu option. To move to the sub menu, press near/enter key, or scroll forward using a USB mouse's wheel.

**b** : This screen is the main menu of the **c** (DISPLAY SETUP).

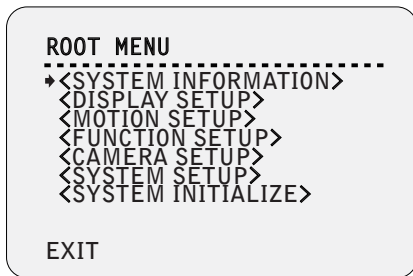
**c** : This screen is the sub menu of 'DISPLAY SETUP' on the screen **b**.

**d** : **d** is the value of the each content.

**Note:** For more information on controlling the PTZ camera, see Appendix III for USB mouse control, or Appendix IV for controlling the camera using the DW-KB100.

# OSD - ROOT MENU & SYSTEM INFORMATION

1



1 ROOT MENU

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

---

#### <SYSTEM INFORMATION>

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.

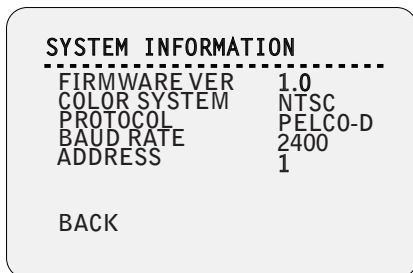
---

#### EXIT

To escape from the OSD setting, go to exit.

---

1



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.

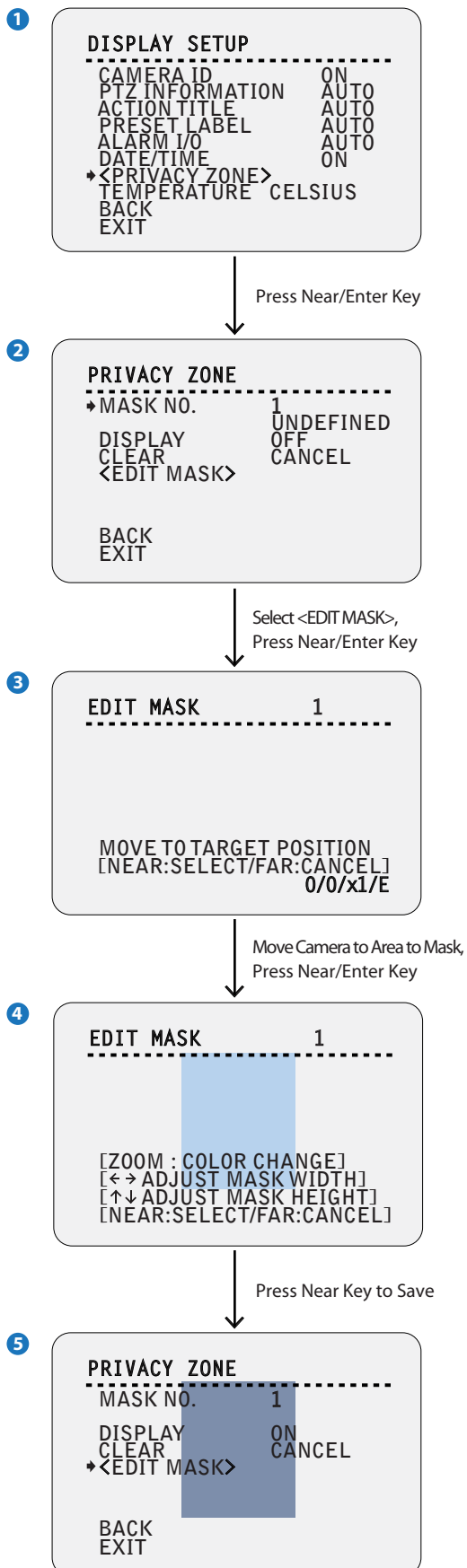
---

#### ADDRESS

Shows the current camera ID of the PTZ control.

---

# OSD - DISPLAY SETUP (Privacy Zone)



## 1 DISPLAY SETUP

This menu defines enable/disable of OSD display on main screen. If an item is set to be 'AUTO', the item is displayed only when the value of it is changed.

## 2 PRIVACY ZONE

Selects area in image to mask.

### MASK NO.

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

Sets if the camera makes mask shows or not on images.

### CLEAR

Deletes data in the selected mask no.

### <EDIT MASK>

Moves to setup the mask no.

## 3 EDIT MASK - Move to Target Position

Move camera to area to mask. Then the menu to adjust 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 tilt angle over 90° (image flipped region) is designated, camera will automatically move to identical position by changing tilt angle less than 90° and moving pan angle 180° relatively.

## 4 EDIT MASK - Color Change & Adjust Mask Size

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

- Zoom In/Out: Change Color of Mask.

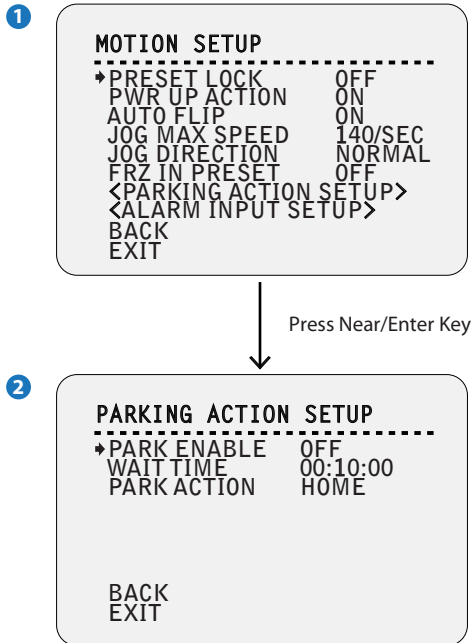
- Move Joystick Left/Right(◀▶): Adjust Mask Width.

- 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.

# OSD - MOTION SETUP & PARKING ACTION SETUP



## 1 MOTION SETUP

Setup the general functions of pan/tilt motions.

### PRESET LOCK

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

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

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

Sets maximum jog speed. Jog speed is inversely proportional to zoom magnification. As zoom magnification goes up, pan/tilt speed goes down.

### JOG DIRECTION

If you set this to 'NORMAL', the view in the screen is moving same direction with jog tilting. If 'INVERSE' is selected, the view in the screen is moving reversely.

### FRZ IN PRESET

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 SETUP' screen.

※ '<ALARM INPUT SETUP>' is displayed only analog camera.

## 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

### WAIT TIME

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.

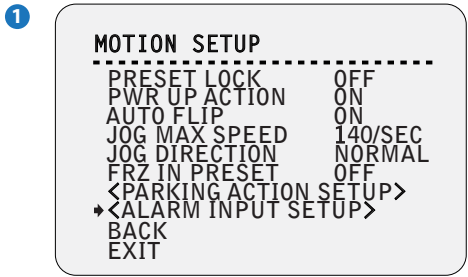
4. By pressing near key, save current setting.

### PARKING ACTION

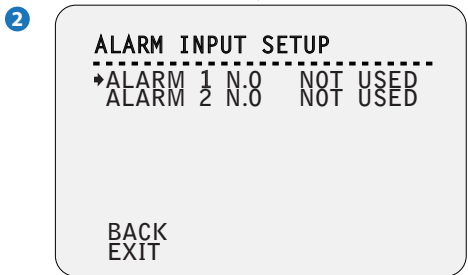
Ex) If 'HOME' is selected for park action, camera will move to home position when there is no PTZ command during the assigned 'WAIT TIME.'



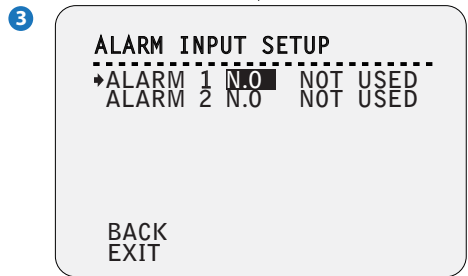
# OSD - MOTION SETUP & ALARM INPUT SETUP



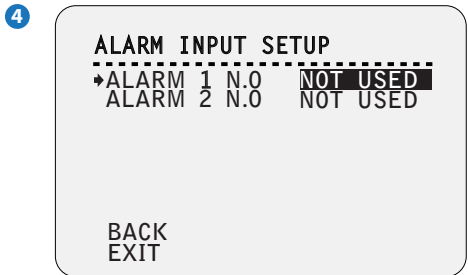
Press Near/Enter Key



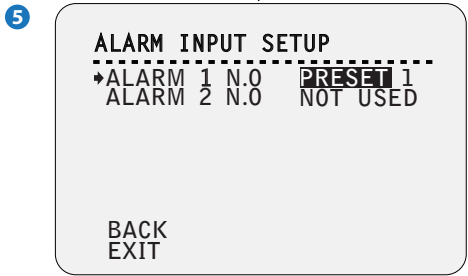
Press Near/Enter Key



Joystick Right



Joystick Down



✳ This setup is not supported on some models.

## 2 ALARM INPUT SETUP

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

### Alarm Type

Sets the sensor input type.

### Alarm Action

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

## 3 ALARM TYPE

N.O- Normally Open

N.C- Normally Closed

### Note:

Consult your alarm devices manual for N.O and N.C settings.

Note: to properly setup a group for the camera, be sure to have at least 2 Presets, 1 Scan, 1 Patter, and 1 Group setup.

# OSD - FUNCTION SETUP > PRESET SETUP

## What is a Preset?

A Preset is a unique command users can assign the camera.

The PTZ39X supports up to 255 different Presets.

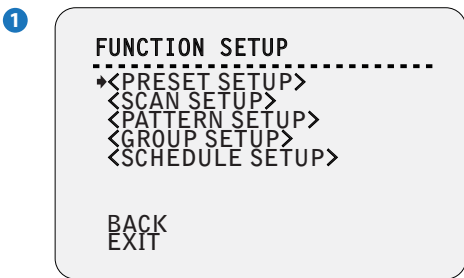
Users can use 127 Presets to setup different positions for the camera

Users can setup 1~128 Presets for different camera positions, except for preset 95.

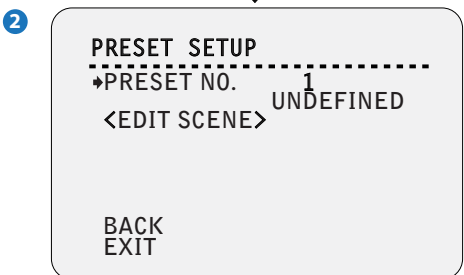
Preset 95 is reserved for starting the camera's OSD menu.

For a complete list of all the reserved presets, see below.

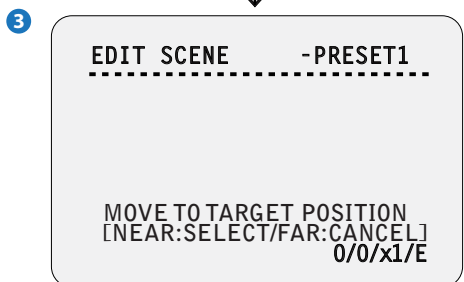
See Appendix II for more information on reserved presets.



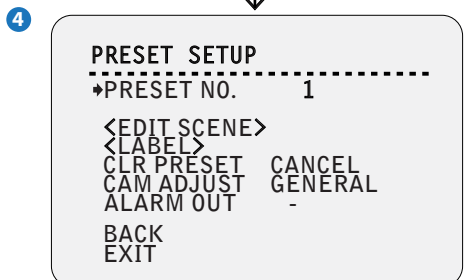
Press Near/Enter Key



Select <EDIT SCENE>, Press Near/Enter Key



Press Near/Enter Key



## 1 FUNCTION SETUP

Configure 5 special functions with this menu.

## 2 PRESET SETUP - Undefined

### PRESET NO.

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>

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

## 3 EDIT SCENE

1. Using 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.

### <EDIT SCENE>

### <LABEL>

Edits Label to show on monitor when preset runs. Max. 10 alphabets are allowed.

### CAM ADJUST

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

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

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

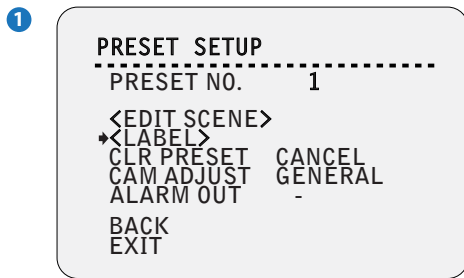
- Each special WB/AE value should be activated correspondingly when camera arrives at each preset location. During jog operation, general WB/AE value should be applied.

- All special WB/AE value should not be changed although general WB/AE value is changed. If 'SPECIAL' is selected, the menu to set WB/AE is shown on monitor.

### ALARM OUT

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

# OSD - FUNCTION SETUP > PRESET SETUP



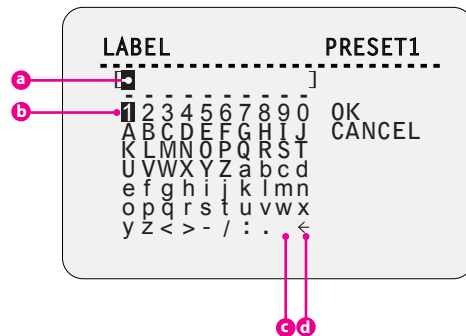
Press Near/Enter Key



Press Near/Enter Key

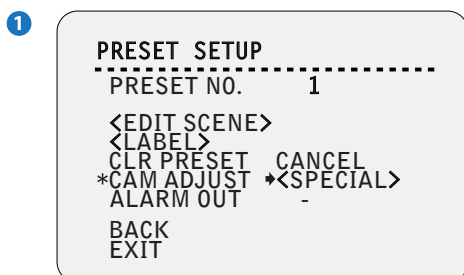


- 2 LABEL  
Edits label to show on monitor when camera arrives at preset.

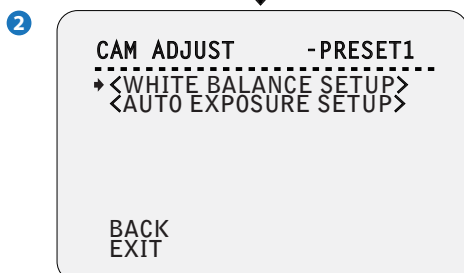


- a **Current Cursor Position:** In edit label menu, a reverse rectangular is cursor. As soon as finishing selecting alphabet, cursor moves to the next digit.
- b **Selecting Alphabet:** Using left/right/up/down of joystick, move to an appropriate character from the character set. To choose the character, press the near or enter key.
- c **Space:** If you want to use blank, choose space character (' ').
- d **Back-Space:** If you want to delete a character in front, use back space character ('<').

- 3 LABEL – Complete Editing  
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.



Press Near/Enter Key



- 2 CAM ADJUST  
Edits label to show on monitor when the camera arrives at presets.

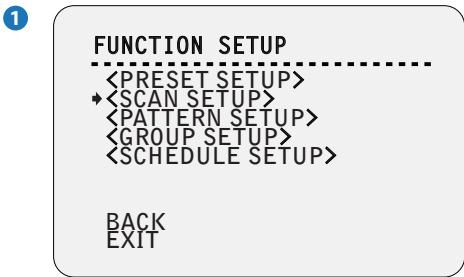
<WHITE BALANCE SETUP>

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

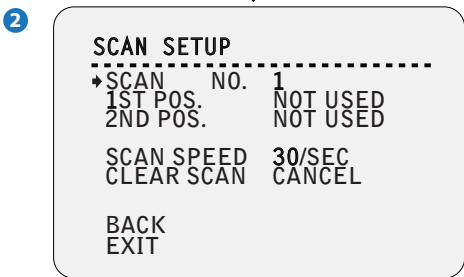
<AUTO EXPOSURE SETUP>

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

# OSD - FUNCTION SETUP > SCAN SETUP



Press Near/Enter Key

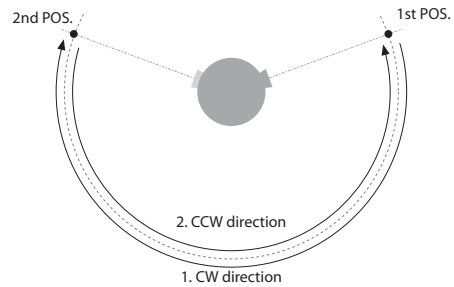


## 2 SCAN SETUP

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 camera preset assigned as the 1st point in CCW(Counterclockwise) direction.

In case that the preset assigned as the 1st point is same 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.

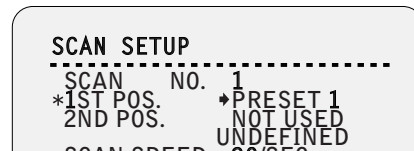


### SCAN NO.

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.

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



### SCAN SPEED

Sets the scan speed.

### CLEAR SCAN

Deletes the current scan data.

Note: to properly setup a scan for the camera, be sure to have at least 2 Presets setup.



# 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  UNDEFINED
CLEAR GROUP
<EDIT GROUP>      CANCEL

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**

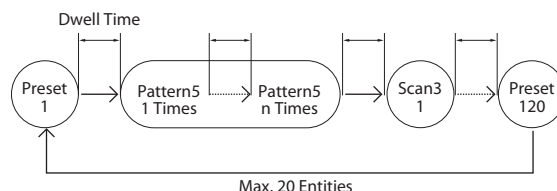
```

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 SCREEN

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

Preset speed can be set up and the repeat number of pattern & scan can be set up in group setup. Dwell time between actions can be set up also.



### GROUP NO.

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

### CLEAR GROUP

Deletes data in the current group.

### <EDIT GROUP>

Starts editing group.

## 3 EDIT GROUP - Initial Screen

Press near or enter key in 'NO' list to start group setup.

### ACTION NO.

Sets the function and function number.

### DWELL TIME

Sets dwell time between function by moving joystick up/down.

### OPT

It represents preset speed when preset is selected. It should be the number of repetition when pattern or scan is selected for 'ACTION'.

## 4 EDIT GROUP – Select Function Sequence

Note that max. 20 functions are allowed in a group.

Move cursor up/down and press near or enter key to set up.

## 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**

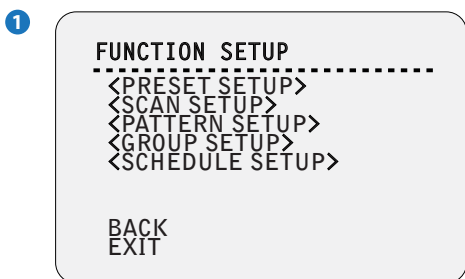
After finishing setting up an 'ACTION', press near or enter key to one-upper-level menu. Move cursor up/down to select 'ACTION NO.' and repeat to step 4~ step 6 to edit the selected group.

**8 EDIT GROUP - Saves the Setting**

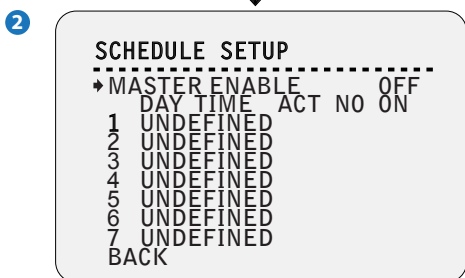
After finishing setting up all actions, press far key to exit. Then cursor should be moved to 'SAVE'. Press near or enter key to save the data.

Note: to properly setup a group for the camera, be sure to have at least 2 Presets, 1 Scan, and 1 Patter setup.

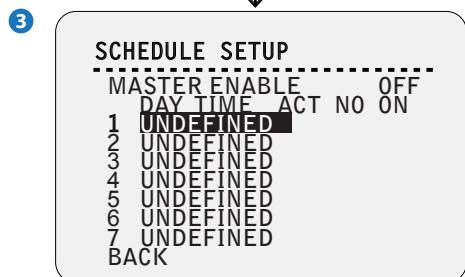
# OSD - FUNCTION SETUP > SCHEDULE SETUP



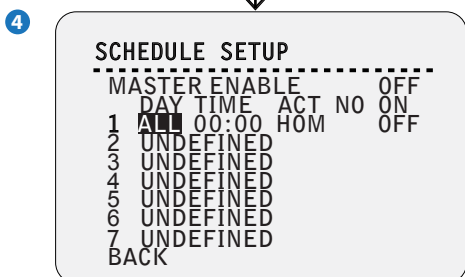
Press Near/Enter Key



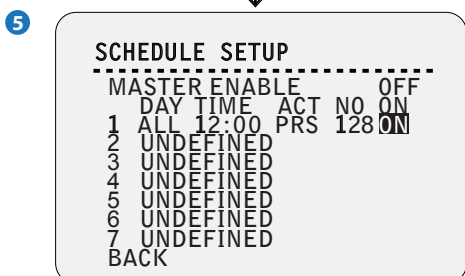
Joystick Down,  
Press Near Key



Joystick Down



Assign Value



## 2 SCHEDULE SETUP SCREEN

The schedule function allows running an appropriate function like preset, scan, pattern, group, home move at 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 main gate every Tuesday at 9:00 AM. If you choose weekday, camera will move to main gate everyday except weekend.

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 blackout. The initial time and day setup is essential to proper schedule function.

### MASTER ENABLE

Decide whether schedule function is active or not.

### DAY

Set the day for scheduling.

- **Undefined:** Inactivate
- **All:** Applies to every day
- **WKD:** Applies to every day except Saturday and Sunday
- **SUN-MON:** Applies to designated day only

### TIME

Set the time.

### ACT NO

Set the function and function number.

### ON

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

6

SCHEDULE SETUP				
-----				
	MASTER	ENABLE		
	DAY	TIME	ACT	NO
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				

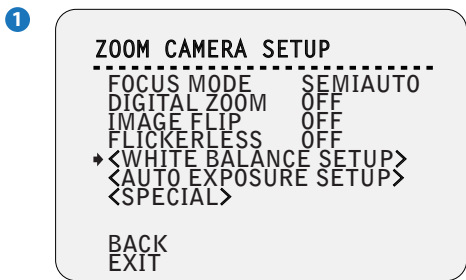
EX)

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

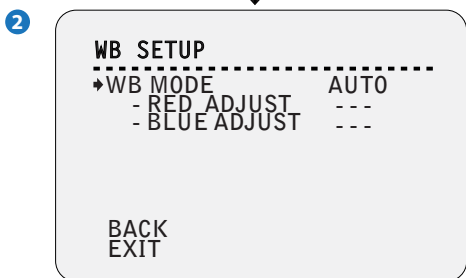
- ☒ If there are rules conflicts to each other, the higher number is the higher priority has.
- ☒ If you assign undefined function, there will be no action.
- ☒ Using reserved preset, you can make various schedules.  
For example, PRS125 and PRS124 are 'DAY' and 'NIGHT' mode respectively.  
(Refer to Reserved Preset list in this manual.)

Note: to properly setup a schedule for the camera, be sure to have at least 2 Presets, 1 Scan, 1 Patter, and 1 Group setup.

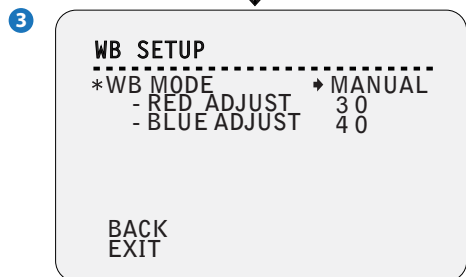
# OSD - CAMERA SETUP > WHITE BALANCE SETUP



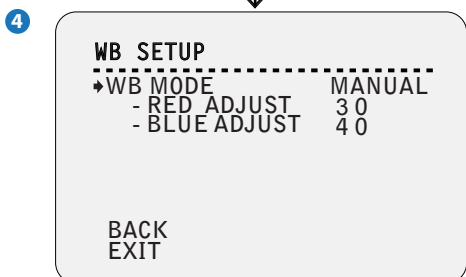
Press Near/Enter Key



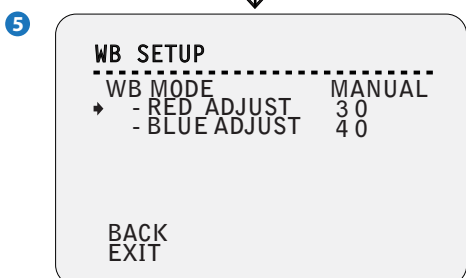
Press Near Key,  
Joystick Down



Press Near/Enter Key



Joystick Down



## 1 ZOOM CAMERA SETUP

Setup the general functions of zoom camera module.

### FOCUS MODE

Sets the camera focus mode.

- **AUTO:** Focus is exchanged automatically in this mode.
- **SEMIAUTO:** This mode exchanges the 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

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

Sets if the image should be reversed or not.

### FLICKERLESS

Turns on or off the flickerless function. In this function, AE mode becomes shutter priority mode and shutter speed value will be fixed to 1/100 sec.

### <WHITE BALANCE SETUP>

Starts 'WHITE BALANCE SETUP' setup screen.

### <AUTO EXPOSURE SETUP>

Starts 'AUTO EXPOSURE SETUP' setup screen.

### <SPECIAL>

Starts 'SPECIAL' setup screen.

☒ This setup is not supported on some models.

## 2 WB SETUP

### WB MODE

- **AUTO:** Camera perform white balance automatically.
- **Manual:** R/B gain level can be set up manually.
- **ATW:** Auto White Balance is performed in the wider range of color temperature than that of the 'AUTO' mode.
- **AWC:** When right direction key is clicked, one time white balance is performed for current illumination condition and the value is kept.
- **INDOOR:** WB will be done under assumption of Indoor illumination.
- **OUTDOOR:** WB will be done under assumption of Sun light.

### RED ADJUST

### BLUE ADJUST

# OSD - CAMERA SETUP > AUTO EXPOSURE SETUP

1

```

ZOOM CAMERA SETUP
-----
FOCUS MODE      SEMIAUTO
DIGITAL ZOOM    ON
IMAGE FLIP      OFF
FLICKERLESS     OFF
<WHITE BALANCE SETUP>
+ <AUTO EXPOSURE SETUP>
<SPECIAL>

BACK
EXIT
    
```

Press Near/Enter Key

2

```

AE SETUP
-----
+ WDR/BLC      ALL OFF
DAY/NIGHT     AUTO
AE MODE       AUTO
■ IRIS LEVEL   ---
■ GAIN LEVEL   ---
■ SHUTTER SPD  ---
■ BRIGHTNESS   8
■ SENS-UP     X8
BACK
EXIT
    
```

## 2 AE SETUP

### WDR/BLC

Sets the backlight compensation.

### DAY/NIGHT

'AUTO' exchanges day/night.

### AE MODE

- **AUTO:** Full auto mode for AE function
- **MANUAL:** In manual mode. 'IRIS', 'GAIN', 'SHUTTER SPEED' can be changed in this mode.
- **IRIS:** Iris priority mode. You can change iris while others are adjusted automatically.
- **SHUTTER:** Shutter priority mode. Shutter speed can be changed while others are adjusted automatically.
- **BRIGHT:** In this mode, you can assign AE value in terms of brightness.

### IRIS LEVEL

Works when 'AE MODE' is 'MANUAL' or 'IRIS' mode.

### GAIN LEVEL

Works when 'AE MODE' is 'MANUAL'. Enhances image brightness automatically in case that luminance level of image signal is too low.

### SHUTTER SPD

Works when 'AE MODE' is 'MANUAL' or 'SHUTTER' mode.

### BRIGHTNESS

Works when 'AE MODE' is 'BRIGHT'. Adjusts brightness of images. Iris, shutter speed and gain are adjusted automatically in correspondence with this value.

### SENS-UP

# OSD - CAMERA SETUP > SPECIAL (HLC/ DNR)

1

```

ZOOM CAMERA SETUP
-----
FOCUS MODE      SEMIAUTO
DIGITAL ZOOM    ON
IMAGE FLIP      OFF
FLICKERLESS     OFF
<WHITE BALANCE SETUP>
<AUTO EXPOSURE SETUP>
* <SPECIAL>

BACK
EXIT
    
```

↓ Press Near/Enter Key

2

```

SPECIAL
-----
* DNR              OFF
  DETAIL           5
  HR               OFF
  HLC              OFF

BACK
EXIT
    
```

⊗ This setup is not supported on some models.

## 2 SPECIAL

Sets the special function related to the image.

### DNR

If reduces the noise caused by 'AGC' action. If set to AUTO or MANUAL, the noise will be reduced but the ghost effect on moving objects will be increased. If enabled, select the appropriate level from 1~10.

### DETAIL

Selects if the sub screen will be displayed. Sub screen will be displayed on the bottom of the right side. Even though the main image enables the digital zoom, the sub screen will only display with maximum optical zoom.

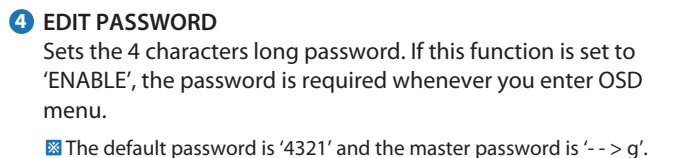
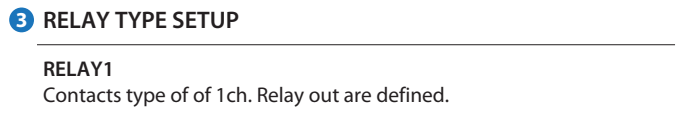
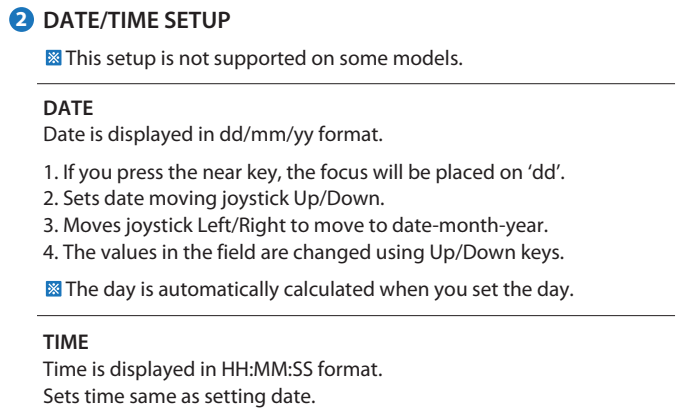
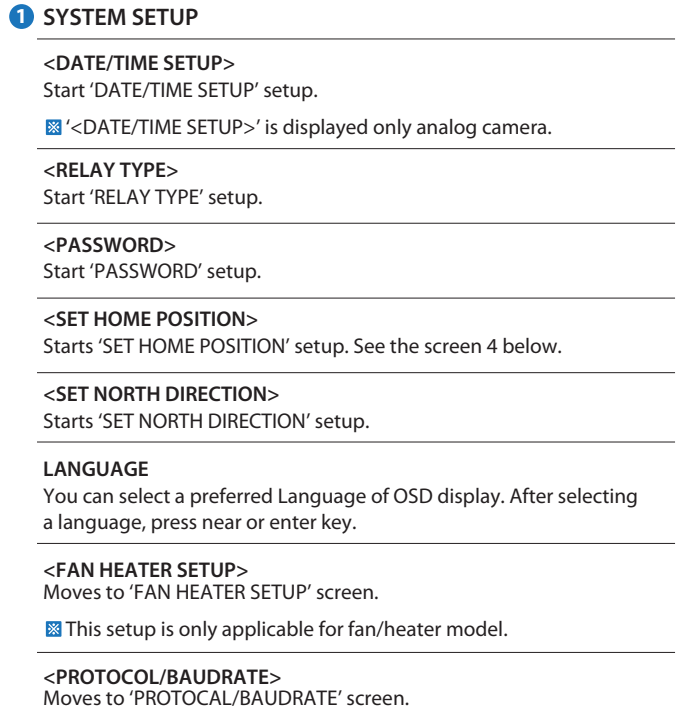
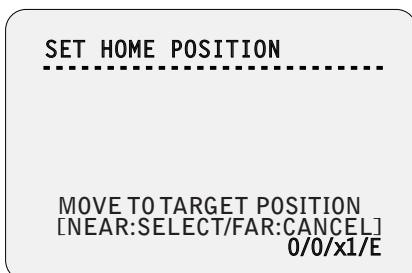
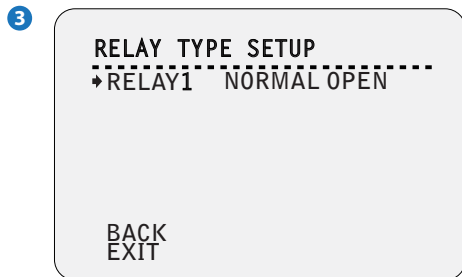
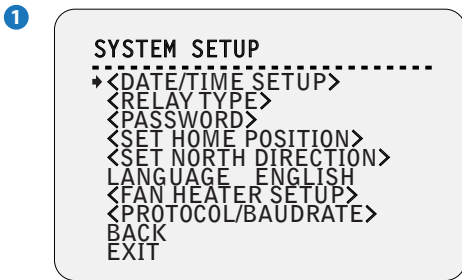
### HR(High Resolution)

This mode enhances edges and produces higher definition images.

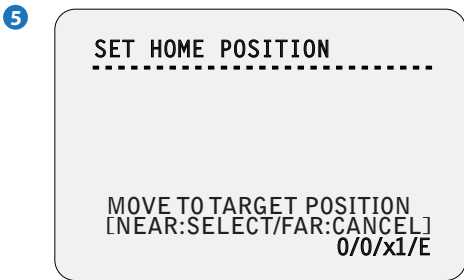
### HLC

Part where becomes brightness more than the standard value is automatically hid by mask on the video.

# OSD - SYSTEM SETUP



# 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. Home is not effective to tilt angle.

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

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.

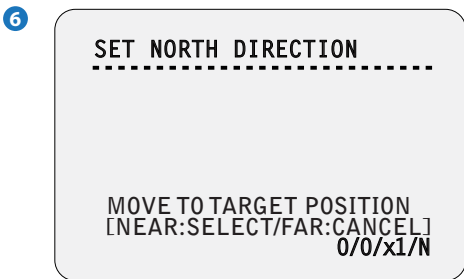
If there are no setup for those functions like preset, pattern, scan, group camera will automatically move to home position after rebooting.

If power up action is set to be on, camera will continue the function which is executed lastly after rebooting.

**⊗ 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 maintain 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.

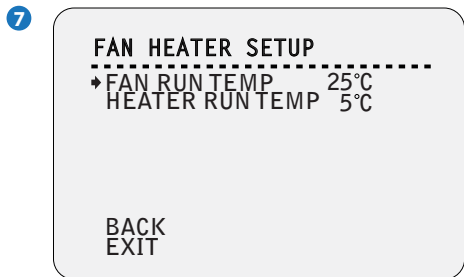


**6 SET NORTH DIRECTION**  
By using joystick, move the camera to the desired north position and press enter (near/save). The direction will be displayed in the screen



Direction will be displayed from:

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



**7 FAN HEATER SETUP**  
Sets the fan/heater enabled/disabled according to the temperature.

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

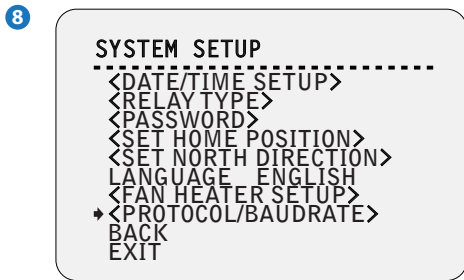
**FAN RUN TEMP**

Above this temperature, the blower fan will start automatically.

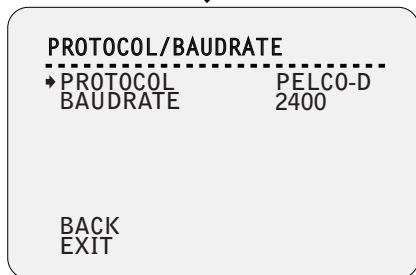
**HEATER RUN TEMP**

Below this temperature, the heater will be tuned on automatically.

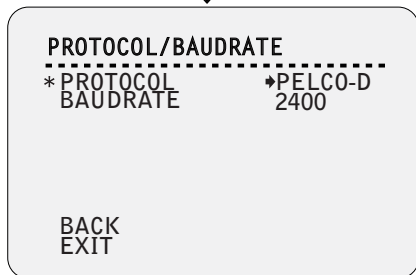
# OSD - SYSTEM SETUP (BAUDRATE & PROTOCOL)



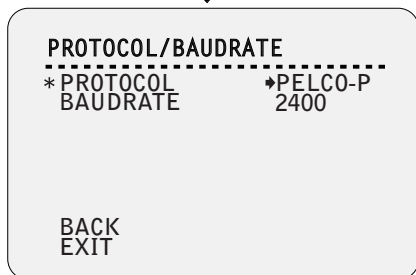
Press the  
Near/Enter Key



Press the  
Near/Enter Key



Move the  
Joystick Down



## 8 PROTOCOL/BAUDRATE

After installing the camera, you should set the communication protocol and baudrate.

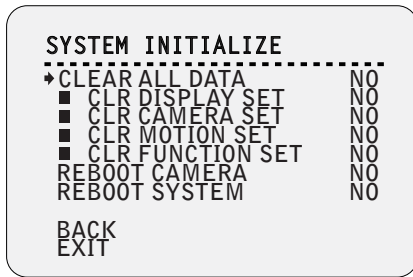
### PROTOCOL

- Select the appropriate protocol.
- If you set the protocol as 'Auto' protocol, camera will automatically recognize PELCO-D, PELCO-P or SAMSUNG protocol.
- If you want to control using DVR or system keyboard, their protocol must be identical to camera. Otherwise, you can not control the camera.
- If you change camera protocol by changing DIP switch, the change will be effective after you reboot the camera.

### BAUDRATE

Select the appropriate baud rate.

# OSD - SYSTEM INITIALIZE



## SYSTEM INITIALIZE

**CLEAR ALL DATA**      YES / NO  
Deletes all configuration data such as display, camera, motion setup and so on.

**CLR DISPLAY SET**      YES / NO  
Initializes display configuration.

**CLR CAMERA SET**      YES / NO  
Initializes camera configuration.

**CLR MOTION SET**      YES / NO  
Initializes motion configuration.

**CLR FUNCTION SET**    YES / NO  
Deletes preset, scan, pattern, group and schedule data.

**REBOOT CAMERA**      YES / NO  
Reboots zoom camera module.

**REBOOT SYSTEM**      YES / NO  
Reboots speed dome camera.

## ⊗ Initial Configuration Table

Camera ID	ON	
PTZ Information	AUTO	
Action Title	AUTO	
Preset Label	AUTO	Display
Alarm I/O	AUTO	
Date/Time	ON	
Privacy Zone	Undefined	
Temperature	OFF	

Preset Lock	OFF	
Power Up Action	ON	
Auto Flip	ON	
Jog Max Speed	140°/sec	Motion
Jog Direction	NORMAL	
Freeze In Preset	OFF	
Park Action	OFF	

Preset	Undefined	
Scan	Undefined	
Pattern	Undefined	Function
Group	Undefined	
Schedule	Undefined	

Focus Mode	AUTO	
Digital Zoom	OFF	
Image Flip	OFF	
Flickerless	OFF	
White Balance	ATW	
WDR/BLC	ALL OFF	
Day/Night	AUTO	
AE Mode	AUTO	
Iris Level	-	Camera
Gain Level	-	
Shutter Speed	-	
Brightness	8	
Sens-up	X8	
DNR	AUTO	
Detail	5	
HR	ON	
HLC	OFF	

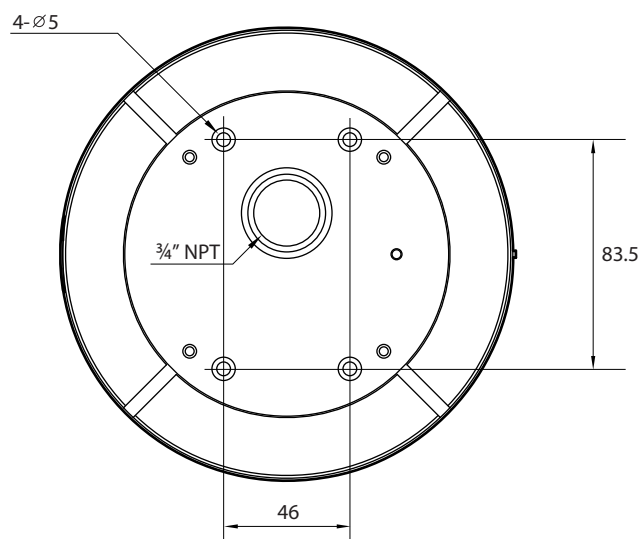
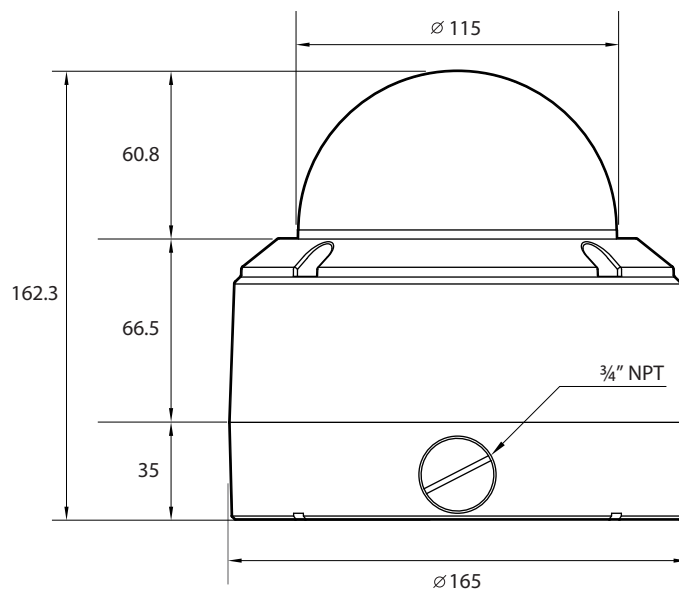
Relay Type	Normal Open	
Language	English	
Fan Run Temp	25	System
Heater Run Temp	5	
Protocol	AUTO	
Baud Rate	2400	



# Specification - Dimension

---

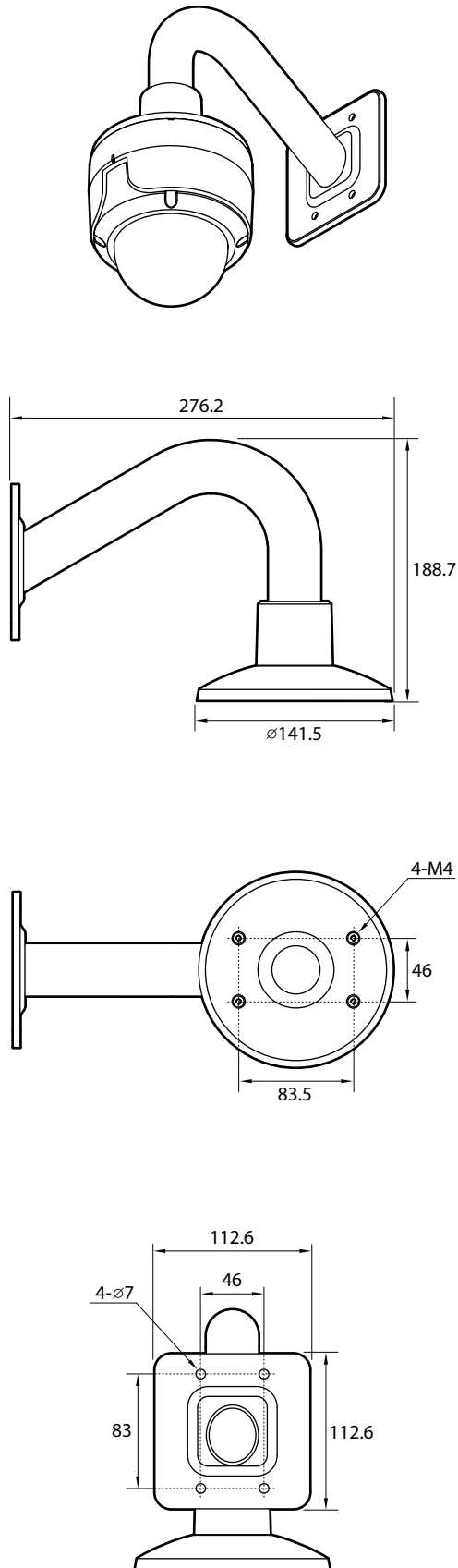
Unit: mm



# Specification - Dimensions of Option Brackets

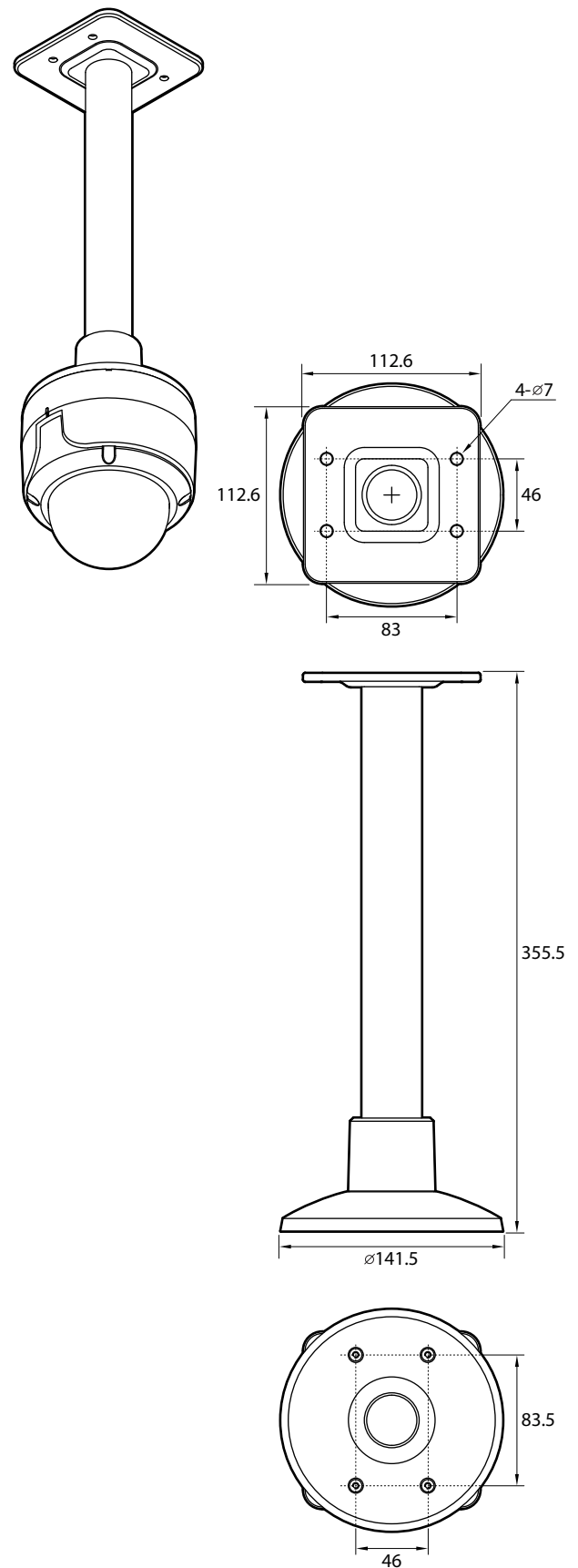
Wall Mount Bracket

Unit: mm



Ceiling Mount Bracket

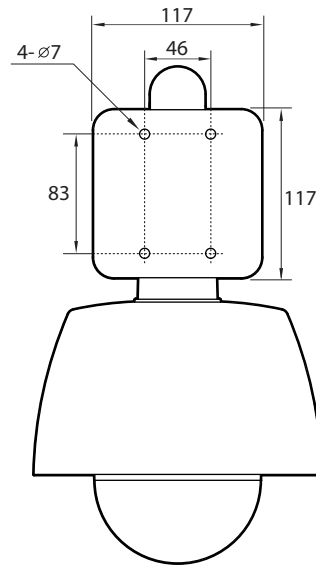
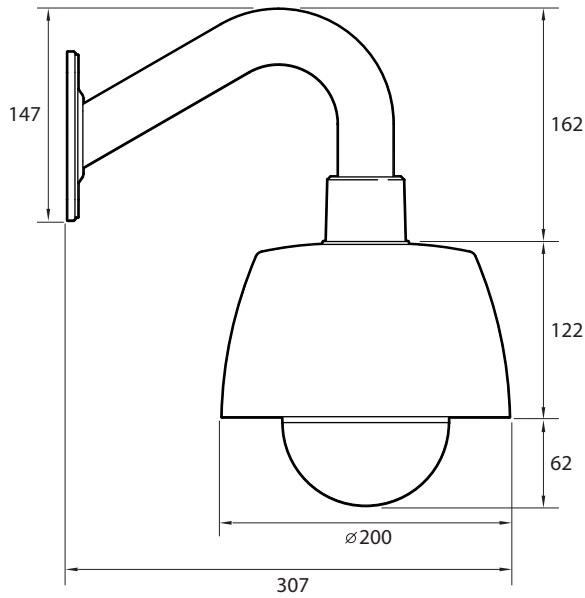
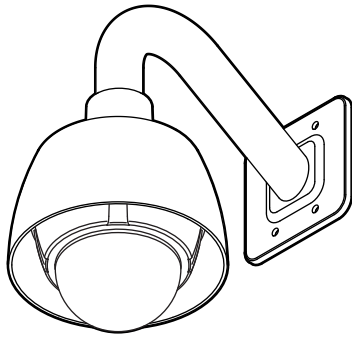
Unit: mm



# Specification - Dimensions of Option Sunshield

Sun Shield Mount Bracket

Unit: mm



# Specification - Specification\_x12

VIDEO	
Image Sensor	1/4" Sony Super HAD (Double Scan) CCD II
Effective Pixels	1028 (H) x 508 (V), 520K
Horizontal Resolution	750 TV Lines [B&W], 700 TV Lines [Color]
Minimum Illumination	Color: 0.5 Lux, 0.001 Lux [DSS ON] B&W: 0.2 Lux, 0.0004 Lux [DSS OFF]
S/N Ratio	50dB (AGC off)
Video Output	CVBS: 1.0Vp-p / 75Ω
LENS	
Focal Length	F1.6 (W) ~ F2.7(T) f = 3.8mm (W) ~ 45.6mm (T)
Focus	Auto / Semi-Auto / Manual
Zoom	12X Optical, 32X Digital
OPERATIONAL	
Digital Slow Shutter	x2 ~ x512 / 1/60 ~ 1/100000
3D Digital Noise Reduction	OFF / ON
Wide Dynamic Range	OFF / ON
Day and Night	AUTO / DAY / NIGHT
Auto Gain Control	AUTO / MANUAL / MAX GAIN LIMIT
White Balance	ATW / AWC / MANUAL / INDOOR / OUTDOOR / OUT. AUTO
Motion Detection	Available
Privacy Zones	OFF / ON (8 Programmable Zones)
Highlight Compensation	OFF / ON
PAN / TILT	
Range	Pan: 360° Endless
	Tilt: 180° (Auto-Flip On), 90° (Auto-Flip Off)
Speed	360°/sec for Presets; 1~180°/sec for Scans;
	0.05~360°/sec for Manual Adjustments
Presets	128 with Alphanumeric Labels
Scans	8
Patterns	4 (1000 Commands/Pattern)
Groups	8 (20 Actions/Group)
Schedules	7
GENERAL	
Sensor In / Out	2 In / 1 Out
Operating Temperature	-10°C ~ 50°C (14°F ~ 122°F)
Approvals	FCC, CE, RoHS,
	IP66 (Protects against dust and high pressure water.)
Power Requirement	Dual (12VDC & 24VAC)
Power Consumption	12VDC: 12W, 1A
	24VAC: 12W, 500mA
Housing Material	Aluminum Die-casting
Bubble Dome Material	Polycarbonate
Dimensions	165 x 157.5 mm (6.5 x 6.2 in)
Weight	6.61 lbs , 3kg

\*Specification is subject to change without prior notice.

# Troubleshooting

Before sending your camera for repair, check the following or contact our technical support specialists.

PROBLEM	SOLUTION
Not image appears on the screen.	Check that the power cable is connected properly to the camera and that it meets the camera's power requirements. Check that the line connection between the camera and monitor is fixed properly. Check that you have properly connected BNC cable to the camera.
The image on the screen is dim.	Is the lens stained with dirty? Clean your lens with a soft, clean cloth. Check the monitor and DVR settings. If the camera is exposed to very strong light, change the camera position.
The image on the screen is dark.	Adjust the contrast feature of the monitor . If you have an intermediate device, set the $\Omega 75$ / Hi-z properly.
The camera is properly, and the surface of the camera is hot.	Check that you have properly connected the camera to an appropriate power source.
The DAY/NIGHT menu does not work.	Check that AGC under the CAMERA SETUP> AE SETUP menu is 'OFF'.
Color is not correct.	Check the setting of CAMERA SETUP> WB SETUP menu .
The screen flickers continually.	Check that the camera is not pointing at the sun.
When RS485 communication is not available	Make sure that the camera and monitor are installed within the recommended distance. Make sure the cables are properly connected to the +/- on both the DVR and the Camera. Make sure you set the appropriate Baudrate pending on the distance between the camera and the DVR. When setting up the camera communications on the DVR side, make sure you enter the same protocol and baudrate as set in the camera. If your DVR supports more than one RS485 connection, make sure the cables are connected to the corresponding Channel.
The camera is out of focus.	Check that you have properly adjusted the zoom/focus adjustment lever of lens. Try setting the FOCUS to AUTO and see if the camera adjusts itself correctly. If necessary, change the FOCUS option to SEMI-AUTO or MANUAL and adjust the focus of the camera manually.
The OSD menu is frozen	Reboot the camera (unplug from the power supply) to set camera to INITIALIZE mode.

# 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 and one (1) year on PTZ Zoom Module 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 and one (1) year on PTZ Zoom Module.

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.

# Appendix I

## Setting the Camera's ID using the DIP Switch

Use the following table as a quick reference to the Pin values and positions required for each individual ID number. The unique Pin combination equals a different ID you can use to define you camera in a situatoin where you want to control multiple cameras.

Pin	1	2	3	4	5	6	7	8
Pin Value	1	2	4	8	16	32	64	128
ID								
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
17	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
18	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
19	ON	ON	OFF	OFF	ON	OFF	OFF	OFF
20	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF
21	ON	OFF	ON	OFF	ON	OFF	OFF	OFF
22	OFF	ON	ON	OFF	ON	OFF	OFF	OFF
23	ON	ON	ON	OFF	ON	OFF	OFF	OFF
24	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
25	ON	OFF	OFF	ON	ON	OFF	OFF	OFF
26	OFF	ON	OFF	ON	ON	OFF	OFF	OFF
27	ON	ON	OFF	ON	ON	OFF	OFF	OFF
28	OFF	OFF	ON	ON	ON	OFF	OFF	OFF
29	ON	OFF	ON	ON	ON	OFF	OFF	OFF
30	OFF	ON	ON	ON	ON	OFF	OFF	OFF
31	ON	ON	ON	ON	ON	OFF	OFF	OFF
32	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF
33	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF
34	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
35	ON	ON	OFF	OFF	OFF	ON	OFF	OFF
36	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF
37	ON	OFF	ON	OFF	OFF	ON	OFF	OFF
38	OFF	ON	ON	OFF	OFF	ON	OFF	OFF

# Appendix I

## Setting the Camera's ID using the DIP Switch

---

Pin	1	2	3	4	5	6	7	8
Pin Value	1	2	4	8	16	32	64	128
ID								
39	ON	ON	ON	OFF	OFF	ON	OFF	OFF
40	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF
41	ON	OFF	OFF	ON	OFF	ON	OFF	OFF
42	OFF	ON	OFF	ON	OFF	ON	OFF	OFF
43	ON	ON	OFF	ON	OFF	ON	OFF	OFF
44	OFF	OFF	ON	ON	OFF	ON	OFF	OFF
45	ON	OFF	ON	ON	OFF	ON	OFF	OFF
46	OFF	ON	ON	ON	OFF	ON	OFF	OFF
47	ON	ON	ON	ON	OFF	ON	OFF	OFF
48	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF
49	ON	OFF	OFF	OFF	ON	ON	OFF	OFF
50	OFF	ON	OFF	OFF	ON	ON	OFF	OFF
51	ON	ON	OFF	OFF	ON	ON	OFF	OFF
52	OFF	OFF	ON	OFF	ON	ON	OFF	OFF
53	ON	OFF	ON	OFF	ON	ON	OFF	OFF
54	OFF	ON	ON	OFF	ON	ON	OFF	OFF
55	ON	ON	ON	OFF	ON	ON	OFF	OFF
56	OFF	OFF	OFF	ON	ON	ON	OFF	OFF
57	ON	OFF	OFF	ON	ON	ON	OFF	OFF
58	OFF	ON	OFF	ON	ON	ON	OFF	OFF
59	ON	ON	OFF	ON	ON	ON	OFF	OFF
60	OFF	OFF	ON	ON	ON	ON	OFF	OFF
61	ON	OFF	ON	ON	ON	ON	OFF	OFF
62	OFF	ON	ON	ON	ON	ON	OFF	OFF
63	ON	ON	ON	ON	ON	ON	OFF	OFF
64	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF
65	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF
66	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF
67	ON	ON	OFF	OFF	OFF	OFF	ON	OFF
68	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF
69	ON	OFF	ON	OFF	OFF	OFF	ON	OFF
70	OFF	ON	ON	OFF	OFF	OFF	ON	OFF
71	ON	ON	ON	OFF	OFF	OFF	ON	OFF
72	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF
73	ON	OFF	OFF	ON	OFF	OFF	ON	OFF
74	OFF	ON	OFF	ON	OFF	OFF	ON	OFF
75	ON	ON	OFF	ON	OFF	OFF	ON	OFF
76	OFF	OFF	ON	ON	OFF	OFF	ON	OFF
77	ON	OFF	ON	ON	OFF	OFF	ON	OFF
78	OFF	ON	ON	ON	OFF	OFF	ON	OFF
79	ON	ON	ON	ON	OFF	OFF	ON	OFF
80	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF
81	ON	OFF	OFF	OFF	ON	OFF	ON	OFF
82	OFF	ON	OFF	OFF	ON	OFF	ON	OFF
83	ON	ON	OFF	OFF	ON	OFF	ON	OFF
84	OFF	OFF	ON	OFF	ON	OFF	ON	OFF
85	ON	OFF	ON	OFF	ON	OFF	ON	OFF
86	OFF	ON	ON	OFF	ON	OFF	ON	OFF



# Appendix I

## Setting the Camera's ID using the DIP Switch

---

Pin	1	2	3	4	5	6	7	8
Pin Value	1	2	4	8	16	32	64	128
ID								
87	ON	ON	ON	OFF	ON	OFF	ON	OFF
88	OFF	OFF	OFF	ON	ON	OFF	ON	OFF
89	ON	OFF	OFF	ON	ON	OFF	ON	OFF
90	OFF	ON	OFF	ON	ON	OFF	ON	OFF
91	ON	ON	OFF	ON	ON	OFF	ON	OFF
92	OFF	OFF	ON	ON	ON	OFF	ON	OFF
93	ON	OFF	ON	ON	ON	OFF	ON	OFF
94	OFF	ON	ON	ON	ON	OFF	ON	OFF
95	ON	ON	ON	ON	ON	OFF	ON	OFF
96	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF
97	ON	OFF	OFF	OFF	OFF	ON	ON	OFF
98	OFF	ON	OFF	OFF	OFF	ON	ON	OFF
99	ON	ON	OFF	OFF	OFF	ON	ON	OFF
100	OFF	OFF	ON	OFF	OFF	ON	ON	OFF
101	ON	OFF	ON	OFF	OFF	ON	ON	OFF
102	OFF	ON	ON	OFF	OFF	ON	ON	OFF
103	ON	ON	ON	OFF	OFF	ON	ON	OFF
104	OFF	OFF	OFF	ON	OFF	ON	ON	OFF
105	ON	OFF	OFF	ON	OFF	ON	ON	OFF
106	OFF	ON	OFF	ON	OFF	ON	ON	OFF
107	ON	ON	OFF	ON	OFF	ON	ON	OFF
108	OFF	OFF	ON	ON	OFF	ON	ON	OFF
109	ON	OFF	ON	ON	OFF	ON	ON	OFF
110	OFF	ON	ON	ON	OFF	ON	ON	OFF
111	ON	ON	ON	ON	OFF	ON	ON	OFF
112	OFF	OFF	OFF	OFF	ON	ON	ON	OFF
113	ON	OFF	OFF	OFF	ON	ON	ON	OFF
114	OFF	ON	OFF	OFF	ON	ON	ON	OFF
115	ON	ON	OFF	OFF	ON	ON	ON	OFF
116	OFF	OFF	ON	OFF	ON	ON	ON	OFF
117	ON	OFF	ON	OFF	ON	ON	ON	OFF
118	OFF	ON	ON	OFF	ON	ON	ON	OFF
119	ON	ON	ON	OFF	ON	ON	ON	OFF
120	OFF	OFF	OFF	ON	ON	ON	ON	OFF
121	ON	OFF	OFF	ON	ON	ON	ON	OFF
122	OFF	ON	OFF	ON	ON	ON	ON	OFF
123	ON	ON	OFF	ON	ON	ON	ON	OFF
124	OFF	OFF	ON	ON	ON	ON	ON	OFF
125	ON	OFF	ON	ON	ON	ON	ON	OFF
126	OFF	ON	ON	ON	ON	ON	ON	OFF
127	ON	ON	ON	ON	ON	ON	ON	OFF
128	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
129	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON
130	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON
131	ON	ON	OFF	OFF	OFF	OFF	OFF	ON
132	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON
133	ON	OFF	ON	OFF	OFF	OFF	OFF	ON
134	OFF	ON	ON	OFF	OFF	OFF	OFF	ON

# Appendix I

## Setting the Camera's ID using the DIP Switch

---

Pin	1	2	3	4	5	6	7	8
Pin Value	1	2	4	8	16	32	64	128
ID								
135	ON	ON	ON	OFF	OFF	OFF	OFF	ON
136	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON
137	ON	OFF	OFF	ON	OFF	OFF	OFF	ON
138	OFF	ON	OFF	ON	OFF	OFF	OFF	ON
139	ON	ON	OFF	ON	OFF	OFF	OFF	ON
140	OFF	OFF	ON	ON	OFF	OFF	OFF	ON
141	ON	OFF	ON	ON	OFF	OFF	OFF	ON
142	OFF	ON	ON	ON	OFF	OFF	OFF	ON
143	ON	ON	ON	ON	OFF	OFF	OFF	ON
144	OFF	OFF	OFF	OFF	ON	OFF	OFF	ON
145	ON	OFF	OFF	OFF	ON	OFF	OFF	ON
146	OFF	ON	OFF	OFF	ON	OFF	OFF	ON
147	ON	ON	OFF	OFF	ON	OFF	OFF	ON
148	OFF	OFF	ON	OFF	ON	OFF	OFF	ON
149	ON	OFF	ON	OFF	ON	OFF	OFF	ON
150	OFF	ON	ON	OFF	ON	OFF	OFF	ON
151	ON	ON	ON	OFF	ON	OFF	OFF	ON
152	OFF	OFF	OFF	ON	ON	OFF	OFF	ON
153	ON	OFF	OFF	ON	ON	OFF	OFF	ON
154	OFF	ON	OFF	ON	ON	OFF	OFF	ON
155	ON	ON	OFF	ON	ON	OFF	OFF	ON
156	OFF	OFF	ON	ON	ON	OFF	OFF	ON
157	ON	OFF	ON	ON	ON	OFF	OFF	ON
158	OFF	ON	ON	ON	ON	OFF	OFF	ON
159	ON	ON	ON	ON	ON	OFF	OFF	ON
160	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON
161	ON	OFF	OFF	OFF	OFF	ON	OFF	ON
162	OFF	ON	OFF	OFF	OFF	ON	OFF	ON
163	ON	ON	OFF	OFF	OFF	ON	OFF	ON
164	OFF	OFF	ON	OFF	OFF	ON	OFF	ON
165	ON	OFF	ON	OFF	OFF	ON	OFF	ON
166	OFF	ON	ON	OFF	OFF	ON	OFF	ON
167	ON	ON	ON	OFF	OFF	ON	OFF	ON
168	OFF	OFF	OFF	ON	OFF	ON	OFF	ON
169	ON	OFF	OFF	ON	OFF	ON	OFF	ON
170	OFF	ON	OFF	ON	OFF	ON	OFF	ON
171	ON	ON	OFF	ON	OFF	ON	OFF	ON
172	OFF	OFF	ON	ON	OFF	ON	OFF	ON
173	ON	OFF	ON	ON	OFF	ON	OFF	ON
174	OFF	ON	ON	ON	OFF	ON	OFF	ON
175	ON	ON	ON	ON	OFF	ON	OFF	ON
176	OFF	OFF	OFF	OFF	ON	ON	OFF	ON
177	ON	OFF	OFF	OFF	ON	ON	OFF	ON
178	OFF	ON	OFF	OFF	ON	ON	OFF	ON
179	ON	ON	OFF	OFF	ON	ON	OFF	ON
180	OFF	OFF	ON	OFF	ON	ON	OFF	ON
181	ON	OFF	ON	OFF	ON	ON	OFF	ON
182	OFF	ON	ON	OFF	ON	ON	OFF	ON

# Appendix I

## Setting the Camera's ID using the DIP Switch

---

Pin	1	2	3	4	5	6	7	8
Pin Value	1	2	4	8	16	32	64	128
ID								
183	ON	ON	ON	OFF	ON	ON	OFF	ON
184	OFF	OFF	OFF	ON	ON	ON	OFF	ON
185	ON	OFF	OFF	ON	ON	ON	OFF	ON
186	OFF	ON	OFF	ON	ON	ON	OFF	ON
187	ON	ON	OFF	ON	ON	ON	OFF	ON
188	OFF	OFF	ON	ON	ON	ON	OFF	ON
189	ON	OFF	ON	ON	ON	ON	OFF	ON
190	OFF	ON	ON	ON	ON	ON	OFF	ON
191	ON	ON	ON	ON	ON	ON	OFF	ON
192	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON
193	ON	OFF	OFF	OFF	OFF	OFF	ON	ON
194	OFF	ON	OFF	OFF	OFF	OFF	ON	ON
195	ON	ON	OFF	OFF	OFF	OFF	ON	ON
196	OFF	OFF	ON	OFF	OFF	OFF	ON	ON
197	ON	OFF	ON	OFF	OFF	OFF	ON	ON
198	OFF	ON	ON	OFF	OFF	OFF	ON	ON
199	ON	ON	ON	OFF	OFF	OFF	ON	ON
200	OFF	OFF	OFF	ON	OFF	OFF	ON	ON
201	ON	OFF	OFF	ON	OFF	OFF	ON	ON
202	OFF	ON	OFF	ON	OFF	OFF	ON	ON
203	ON	ON	OFF	ON	OFF	OFF	ON	ON
204	OFF	OFF	ON	ON	OFF	OFF	ON	ON
205	ON	OFF	ON	ON	OFF	OFF	ON	ON
206	OFF	ON	ON	ON	OFF	OFF	ON	ON
207	ON	ON	ON	ON	OFF	OFF	ON	ON
208	OFF	OFF	OFF	OFF	ON	OFF	ON	ON
209	ON	OFF	OFF	OFF	ON	OFF	ON	ON
210	OFF	ON	OFF	OFF	ON	OFF	ON	ON
211	ON	ON	OFF	OFF	ON	OFF	ON	ON
212	OFF	OFF	ON	OFF	ON	OFF	ON	ON
213	ON	OFF	ON	OFF	ON	OFF	ON	ON
214	OFF	ON	ON	OFF	ON	OFF	ON	ON
215	ON	ON	ON	OFF	ON	OFF	ON	ON
216	OFF	OFF	OFF	ON	ON	OFF	ON	ON
217	ON	OFF	OFF	ON	ON	OFF	ON	ON
218	OFF	ON	OFF	ON	ON	OFF	ON	ON
219	ON	ON	OFF	ON	ON	OFF	ON	ON
220	OFF	OFF	ON	ON	ON	OFF	ON	ON
221	ON	OFF	ON	ON	ON	OFF	ON	ON
222	OFF	ON	ON	ON	ON	OFF	ON	ON
223	ON	ON	ON	ON	ON	OFF	ON	ON
224	OFF	OFF	OFF	OFF	OFF	ON	ON	ON
225	ON	OFF	OFF	OFF	OFF	ON	ON	ON
226	OFF	ON	OFF	OFF	OFF	ON	ON	ON
227	ON	ON	OFF	OFF	OFF	ON	ON	ON
228	OFF	OFF	ON	OFF	OFF	ON	ON	ON
229	ON	OFF	ON	OFF	OFF	ON	ON	ON
230	OFF	ON	ON	OFF	OFF	ON	ON	ON

# Appendix I

## Setting the Camera's ID using the DIP Switch

---

Pin	1	2	3	4	5	6	7	8
Pin Value	1	2	4	8	16	32	64	128
ID								
231	ON	ON	ON	OFF	OFF	ON	ON	ON
232	OFF	OFF	OFF	ON	OFF	ON	ON	ON
233	ON	OFF	OFF	ON	OFF	ON	ON	ON
234	OFF	ON	OFF	ON	OFF	ON	ON	ON
235	ON	ON	OFF	ON	OFF	ON	ON	ON
236	OFF	OFF	ON	ON	OFF	ON	ON	ON
237	ON	OFF	ON	ON	OFF	ON	ON	ON
238	OFF	ON	ON	ON	OFF	ON	ON	ON
239	ON	ON	ON	ON	OFF	ON	ON	ON
240	OFF	OFF	OFF	OFF	ON	ON	ON	ON
241	ON	OFF	OFF	OFF	ON	ON	ON	ON
242	OFF	ON	OFF	OFF	ON	ON	ON	ON
243	ON	ON	OFF	OFF	ON	ON	ON	ON
244	OFF	OFF	ON	OFF	ON	ON	ON	ON
245	ON	OFF	ON	OFF	ON	ON	ON	ON
246	OFF	ON	ON	OFF	ON	ON	ON	ON
247	ON	ON	ON	OFF	ON	ON	ON	ON
248	OFF	OFF	OFF	ON	ON	ON	ON	ON
249	ON	OFF	OFF	ON	ON	ON	ON	ON
250	OFF	ON	OFF	ON	ON	ON	ON	ON
251	ON	ON	OFF	ON	ON	ON	ON	ON
252	OFF	OFF	ON	ON	ON	ON	ON	ON
253	ON	OFF	ON	ON	ON	ON	ON	ON
254	OFF	ON	ON	ON	ON	ON	ON	ON

# Appendix II

## Reserved Presets

---

### Reserved Preset

Some preset numbers are reserved to special functions.

---

- 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 + 161~164:** 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
-

# Appendix III

## How to Move Around the OSD Menu Using a USB Mouse

---

### Start OSD Menu

Using the OSD menu, preset, pattern, scan, group, and alarm input function can be configured for each application.

1. Select Full Screen view on the selected PTZ camera
2. Right-Click the screen & Select 'PTZ'
3. Right-Click the screen again, & select 'Preset'
4. Enter 95 to access the OSD menu

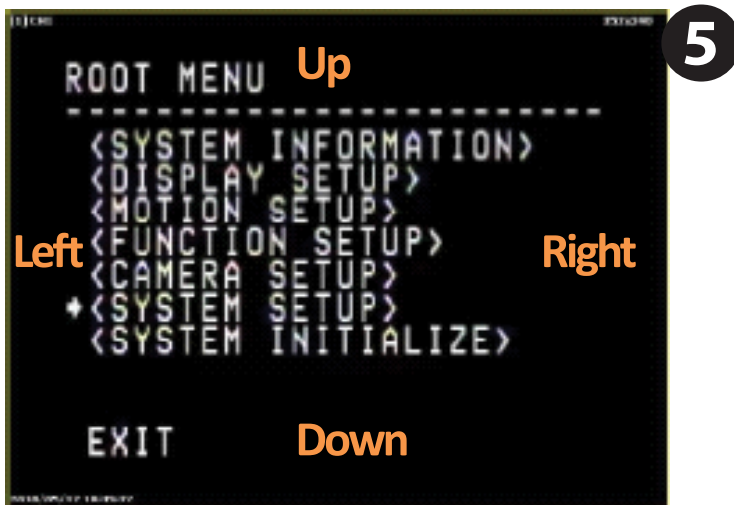


## Appendix III

# How to Move Around the OSD Menu Using a USB Mouse

---

- Using the mouse, click on the are of the screen labeled:
  - UP: to scroll up the menu
  - DOWN: to scroll down the menu
  - Left: Vertically move from one edit tab to the one to its left
  - RIGHT: Vertically move from one edit tab to the one to its right.
- Using the mouse's wheel, move:
  - Forward: to save changes and enter from the Root menu to a sub-menu
  - Backwards: to cancel changes and exit a sub-menu back to the Root menu



Note: to enter a sub-menu or edit mode, be sure our USB mouse is set to "FOCUS" on the DVR's options. To do so, right click on the screen, and select Focus from the pop-up menu.

## Appendix III

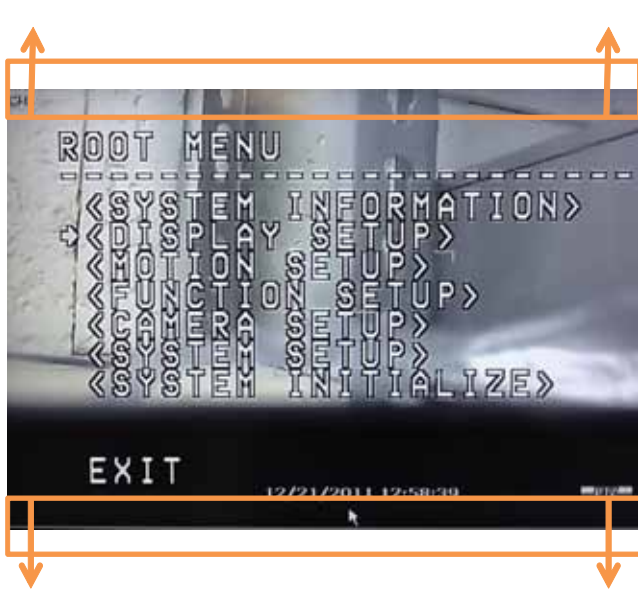
# How to Move Around the OSD Menu Using a USB Mouse

To move to a sub-menu

1. Click on the top/bottom of the screen to select the desired sub-menu from the list.
2. Once you have selected the sub-menu you want to enter, scroll the mouse's wheel forward

To exit a sub-menu

3. When you have completed all desired modifications, scroll the mouse's wheel backwards to return to the Root menu.





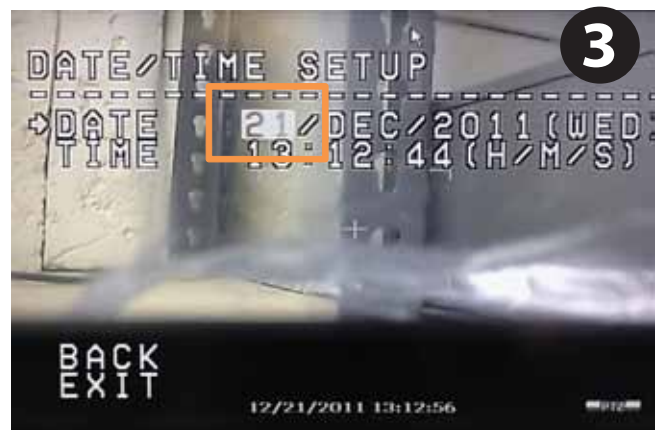
# Appendix III

## How to Move Around the OSD Menu Using a USB Mouse

---

To move between input tabs

1. Using previous instructions, select the sub-menu and category you wish to modify
2. Scroll the mouse's wheel forward to enter edit mode
3. The system will show it is in edit mode by highlighting the first tab

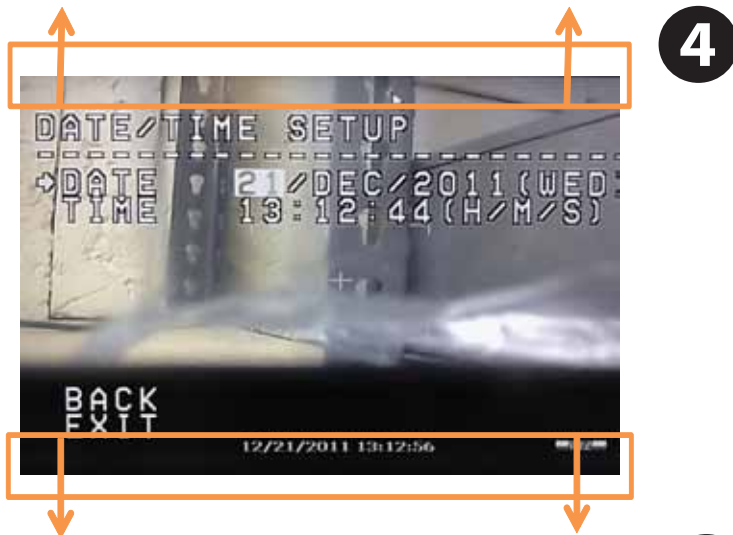


# Appendix III

## How to Move Around the OSD Menu Using a USB Mouse

---

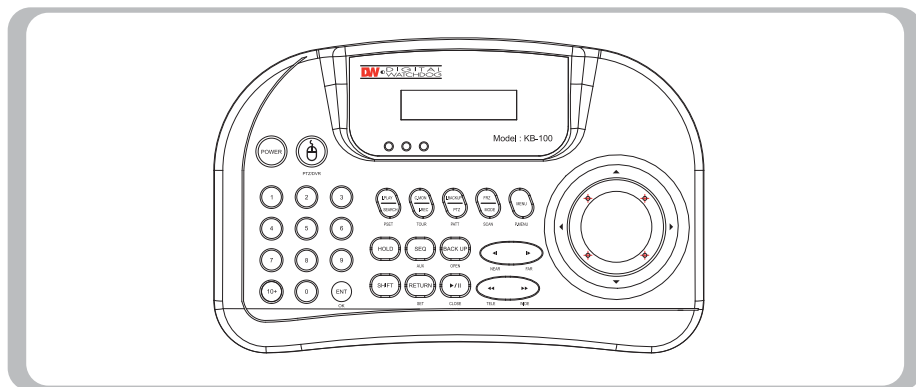
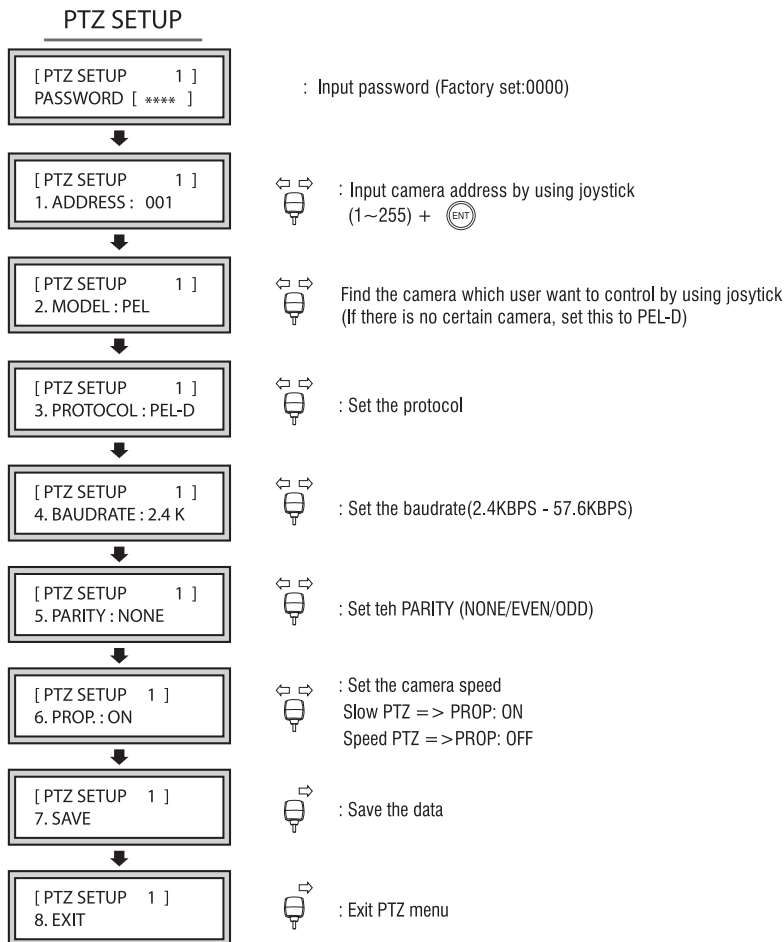
4. Click on the top/bottom of the screen to increase/reduce the values of the data you are modifying
5. When you have completed modifying the first data tab, click on the left side of the screen to move to the next data tab.
6. The system will show it is in edit mode by highlighting the second tab
- Repeat as necessary
7. When editing is complete, scroll the mouse's wheel forward to save all changes, or backwards to cancel all changes.



# Appendix IV

## How to Move Around the OSD Menu Using DW-KB100 Joystick Keyboard

Press [1] button and Press and Hold  button. The default password is [0000].



Note: Please consult your Joystick Controller's manual for additional information and instructions.



5436 W Crenshaw St. Tampa, FL 33634

Tel : 866-446-3595 / 813-888-9555

Fax : 813-888-9262

[www.Digital-Watchdog.com](http://www.Digital-Watchdog.com)

[technicalsupport@dwcc.tv](mailto:technicalsupport@dwcc.tv)

Technical Support Hours : Monday-Friday

8:30am to 8:00pm Eastern 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.