![Digital Watchdog - Everything's Digital]

INSTRUCTION MANUAL

DWC-PTZ10x

Mini SPEED DOME CAMERA

DOME 4.5" | 100X ZOOM | DAY & NIGHT | ON SCREEN DISPLAY 123 | 360° CONTINUOUS | 360°/sec SPEED | 0.05°/sec LOW SPEED | PRESET 128 | SCAN 8 | GROUP 8 | PATTERN 4 | VECTOR MOTION | PRIVACY ZONE | ALARM 2 IN/1 OUT | SCHEDULE
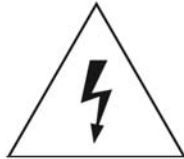
CAUTION

RISK OF ELECTRIC
SHOCK DO NOT OPEN

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

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

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

Important Safeguard

1. **Read Instructions**

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

2. **Retain Instructions**

   Save these instructions for future reference.

3. **Attachments/ Accessories**

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

4. **Water and Moisture**

   Do not use this product near water or moisture. (Indoor Version)

5. **Installation**

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

6. **Power source**

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

Precautions

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

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

❑ **Installation and Storage**
- Do not install the camera in areas that exceed the allowable temperature range. (Indoor Version)
- Avoid installing in humid or dusty places (Indoor Version)
- 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 indoor version camera to rain and water.

CONTENTS

Features

❑ **Camera Specifications**

- Sensor: ¼" Super-HAD II CCD

- 520TVL [Color] 570TVL

- Lens: 10x Digital, 10x Optical Zoom (3.8 ~38mm)

- 360° Continuous Pan Rotation

- SSNR Digital Noise Reduction

- Zoom Magnification: $\times$ 10 Optical Zoom, $\times$ 10 Digital Zoom (Max $\times$ 100 Zoom) **[To be Delete]**

- Function: True Day & Night Function (Moving IR Cut Filter)

- Focus Mode: Auto / Manual / Semi-Auto

- Auto Sensing, Multiprotocol Receiver

- Multi-language Menu-Setup: [English / Spanish / Portuguese / French / Italian / Polish /Dutch]

- Independent or General Camera Characteristic Setup in Preset operation

- 24VAC/12VDC Power Input

❑ **Powerful Pan/Tilt Functions**

- Max. 360°/sec high speed Pan/Tilt Motion

- Using Vector Drive Technology, Pan/Tilt movements are accomplished using the shortest path theory. As a result, time to target view is reduced dramatically and the video on the monitor is very natural to watch.

- For jog operation using a controller, since ultra slow speed 0.05°/sec can be reached, it is very easy to position the camera to the desired target view.

- Proportional Pan/Tilt automatically reduces or increases the pan/tilt speed in proportion to the mount of zoom. At telephoto zoom settings, the pan/tilt speeds will be slower for a given amount of joystick deflection than at wide zoom settings. This function keeps the image from moving too fast on the monitor when there is a large amount of zoom

❑ **Preset, Pattern, Scan, Group, Privacy Mask, Schedule and More...**

- 127 Presets are assignable and characteristics of each preset can be set up independently, such as White Balance, Auto Exposure, Label and so on.

- 8 Scans can be stored. This enables to move camera repetitively between two preset positions at designated speeds.

- 4 Pattern are memorized to repeat a series of Pan/Tilt, Zoom, and Preset functions that can be recalled with a command or automatically by a programmed function (Alarm, Schedule, or Power-Up)

- 8 Groups are memorized to repeat a series of Presets, Patterns, and Scans. Each group can be stored 20 entities of Preset/Pattern/Group functions. This function enables the dome camera to move in combinations of those functions repetitively.

- 4 Privacy Zone Masks can be programmed. The Masked Zones can be set anywhere in the viewing area and can be any size.

- 7 Schedules can be assigned by day and time. Appropriate actions (such as Home, Preset, Group, Pattern, Scan) can be defined for each rule. Also, it is possible to schedule these customer settings by daily and weekly requirements.

❑ PTZ (Pan/Tilt/Zoom) Control

- RS-485 control, max. 256 cameras can be controlled at the same time. [To Be Delete]

- Pelco-D/ Pelco-P /Samsung protocol can be selected as a control protocol in the current version of firmware. (Using the small Dip-switch at the back of the dome camera)

❑ **OSD (On Screen Display) Menu**

- OSD menu is provided to display the status of camera and to configure the functions interactively.

- There are currently 7 Languages that are supported in the OSD Menu:

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

- The information such as Camera ID, Pan/Tilt/Zoom/Direction, and Alarm Input & Output, date/time, current temperature and Preset can be 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 protect from external electric noise and shock, the alarm sensor Input is decoupled by using photo coupler diode.

-

- If an external sensor is activated, camera can be set to move to the corresponding Preset position.

- Relay output can be assigned to work with a certain preset.

❑ **Reserved Presets for Special Purpose**

- In addition to the standard 127 presets, direct calling of reserved presets allows users to set up many of the camera functions with or without using OSD menu. For more information, refer to "Reserved Preset" in this manual.

- In addition to 127 Presets from 1 to 128 can be assigned excluding preset 95 is reserved for Main Menu Setup

Product & Accessories

❑ Main Product & Accessories
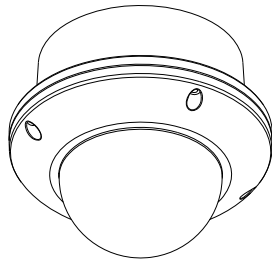
● Main Body
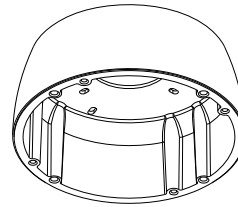
● Surface Mount Bracket

❑ Accessory

USERS' MANUAL
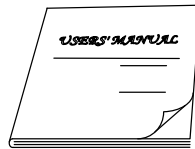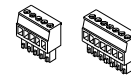
● Manual

● Terminal Block

● Torque Screw Driver

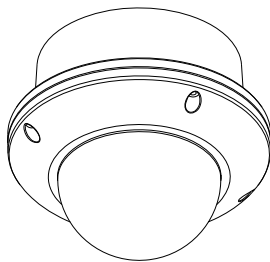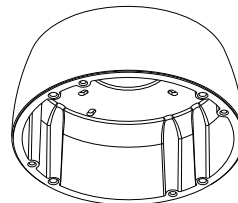❑ **Main Product**

● Main Body

● Sun Shield Housing

❑ **Accessory**
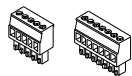
● Terminal Block

● Torque Screw Driver
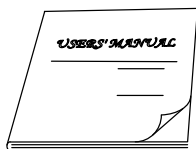
● Manual

❑ **Options**
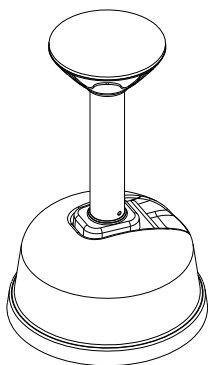
● Pendant Mount Bracket
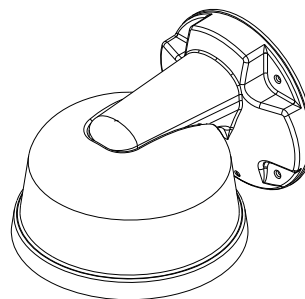
● Wall Mount Bracket

Parts Name & Functions

● Main Unit / Surface Mount Bracket   ● Back of Main Unit
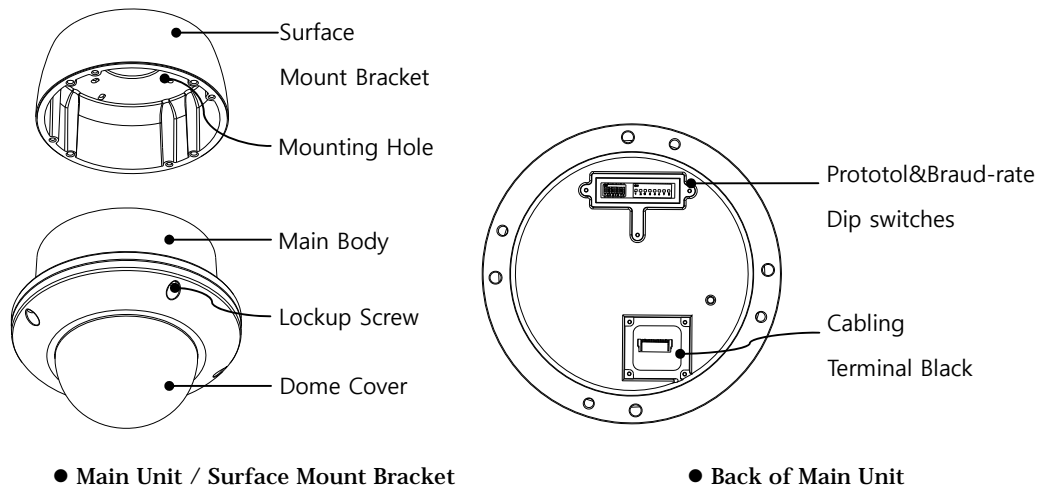
● Surface Mount Bracket		This is used to install the camera directly on the ceiling. After separating the cover attach this directly to ceiling. Camera must be assembled at the last stage.
		Do not use this bracket when installing camera on the wall with wall mount bracket or on the ceiling with ceiling mount bracket.
● Separating Slit		Using a coin, you can separate upper part lower body of the dome.
● Dome Cover		Do not detach protective vinyl from dome cover before finishing the installation process to protect dome cover from scratches or dust.
● DIP Switch		Adjusts camera ID and protocols.
● Cable Duct		When you want to install the camera on the surface of hard ceiling, you need to handle the cable through side of the dome. In this case, break the side wall bit and feed the cable through the cable duct.

DIP Switch Setup

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

Protocol
0x00 : Auto Select
0x01 : Pelco-D
0x02 : Pelco-P
0x03 : SAMSUNG

Buad Rate
0x00 : 2400
0x01 : 4800
0x02 : 9600
0x03 : 19200
0x04 : 38400

RS-485
Terminate

ID Setting (1~255)
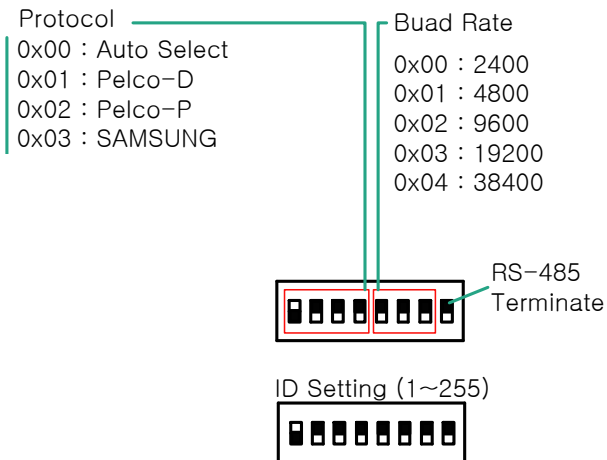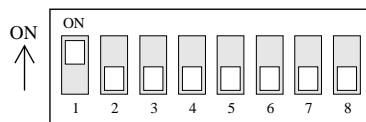
❑ **Camera ID Setup**

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

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

- The range of ID is 0~255. Factory default of Camera ID is 1.

- If you want to control a certain camera, you must match the camera ID with Cam ID setting of DVR or Controller.

❏ Communication Protocol Setup
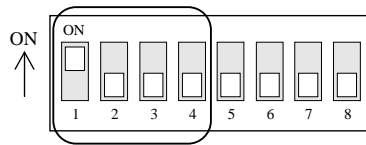
● Select the appropriate Protocol with DIP switch combination.

	Switch State			Protocol
SW-1	SW-2	SW-3	Sw-4	
OFF	**OFF**	**OFF**	**OFF**	**Auto Protocol**
ON	OFF	OFF	OFF	PELCO-D
OFF	ON	OFF	OFF	PELCO-P
ON	ON	OFF	OFF	SAMSUNG

● If you set the protocol as Auto Protocol, camera will automatically recognize the type of Protocol.

● Auto Protocol supports Pelco-D and Samsung Protocol.

● If you want to control using DVR or system keyboard, their protocol must be identical to camera. Otherwise, you cannot control the camera.

● If you changed camera protocol by changing DIP S/W, the change will be effective after you reboot the camera.

● Factory default of protocol is "Auto Protocol"

❏ Communication Baud rate Setup
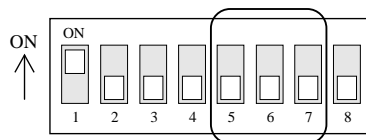
● Select the appropriate Baud rate with DIP switch combination.

	Switch State		Protocol
SW-5	SW-6	SW-7	
OFF	OFF	OFF	2400 BPS
ON	OFF	OFF	4800 BPS
OFF	**ON**	**OFF**	**9600 BPS**
ON	ON	OFF	19200 BPS
OFF	OFF	ON	38400 BPS

● Factory default of Baud rate is "9600 BPS"

❏ RS-485 Termination Resistor
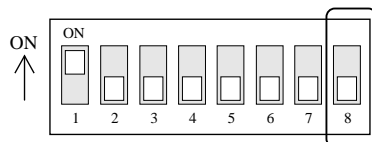
● Pin 8 is used for ON/OFF of RS-485 Termination. Normally, it must be OFF state. Especially when you have trouble with long Daisy chain style connection, turn ON this termination switch of last camera.

RS-485 Termination Resistor (On/Off)

⊙ Pin 8

Installation using Surface mount on the Ceiling

> **In ceiling mount**
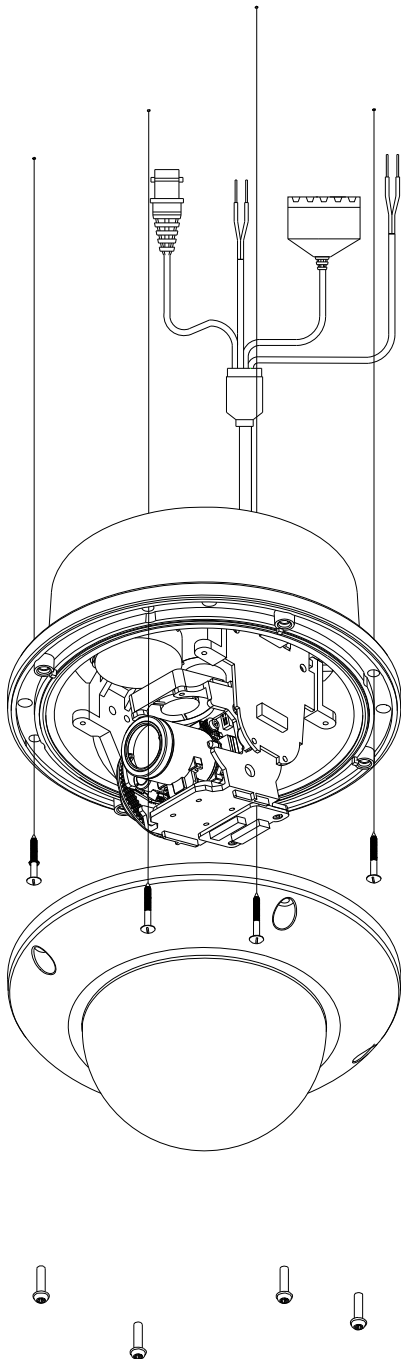
1. Pass the cables from the camera unit through the ceiling mount bracket. Then, connect video, communication, and power cables.
2. Install surface mount bracket to the ceiling using the four screws.
3. Align the four screw holes in the camera unit with the screw holes in the ceiling mount bracket. Then, secure the camera in place by tightening the four screws.
4. Carry out the settings and adjustments for the camera.
5. Secure the dome cover by tightening with screws.

Surface mount

1. Pass the cables from the camera unit through surface mount bracket.
   Then connect Video, communication, and power cables.
2. Install surface mount bracket to the ceiling usingthe four screws.
3. Align the four screw holes in the camera unit with the screw holes in the Surface mount bracket.
   Then, secure the camera in place by tightening the four screws.
4. Carry out the settings and adjustments for the camera.
5. Secure the dome cover by tightening with screws.

Installation using Pendant Mount Bracket
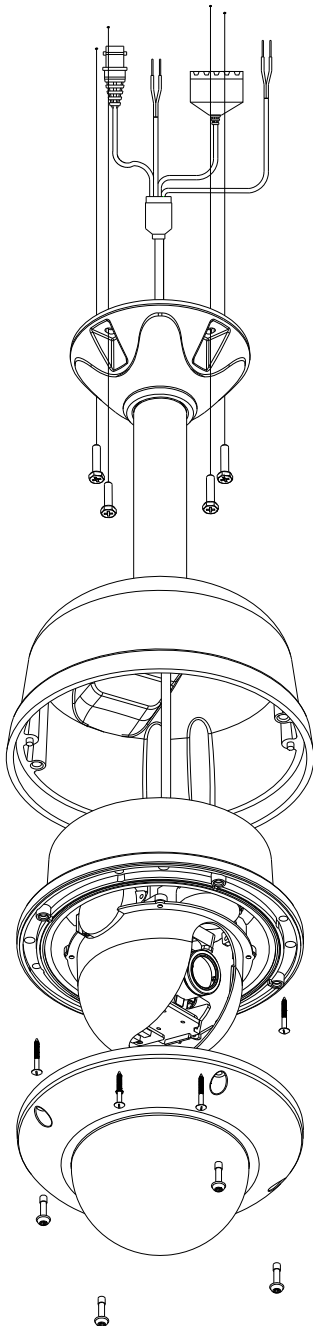
1. Pass the cables from the camera unit through the pendant mount bracket.
   Then connect Video, communication, and power cables.
2. Install pendant mount bracket to the ceiling using the four screws.
3. Align the four screw holes in the camera unit with the screw holes in the Pendant mount bracket.
   Then secure the camera in place by tightening the four screws.
4. Carry out the settings and adjustments for the camera.
5. Secure the dome cover by tightening with screws.

Installation using Wall Mount Bracket
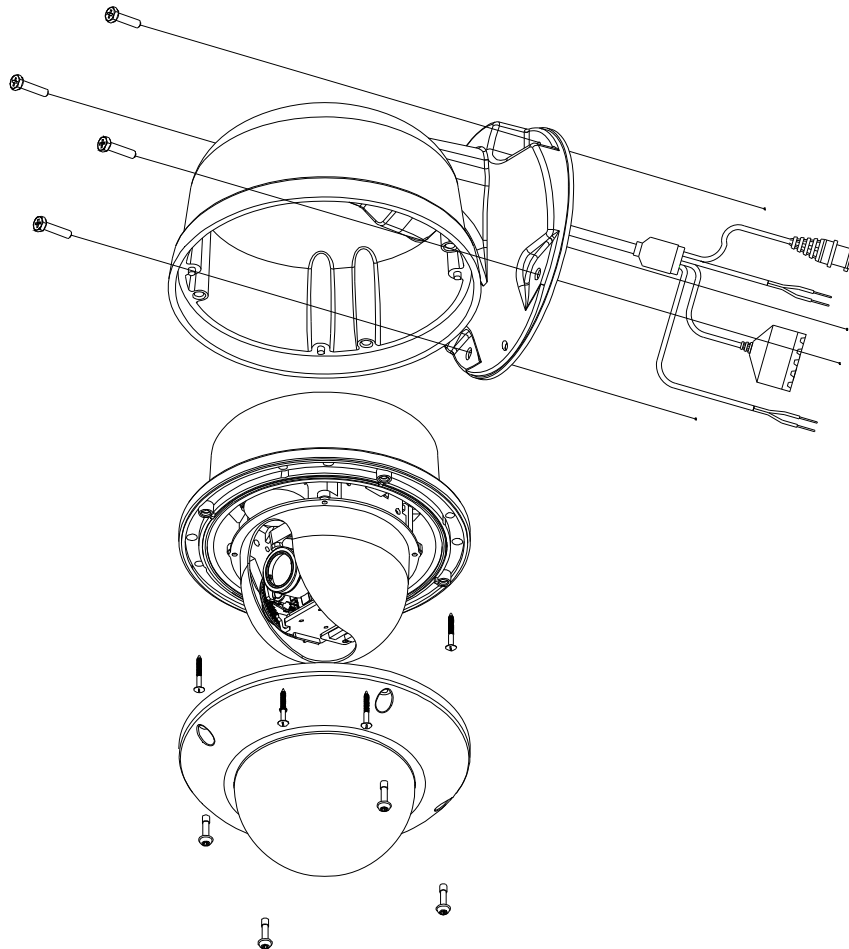
1. Pass the cables from the camera unit through the wall mount bracket.
   Then connect Video, communication, and power cables.
2. Install wall mount bracket on the wall using the four screws.
3. Attach the main unit to the wall mount bracket with the four screws.
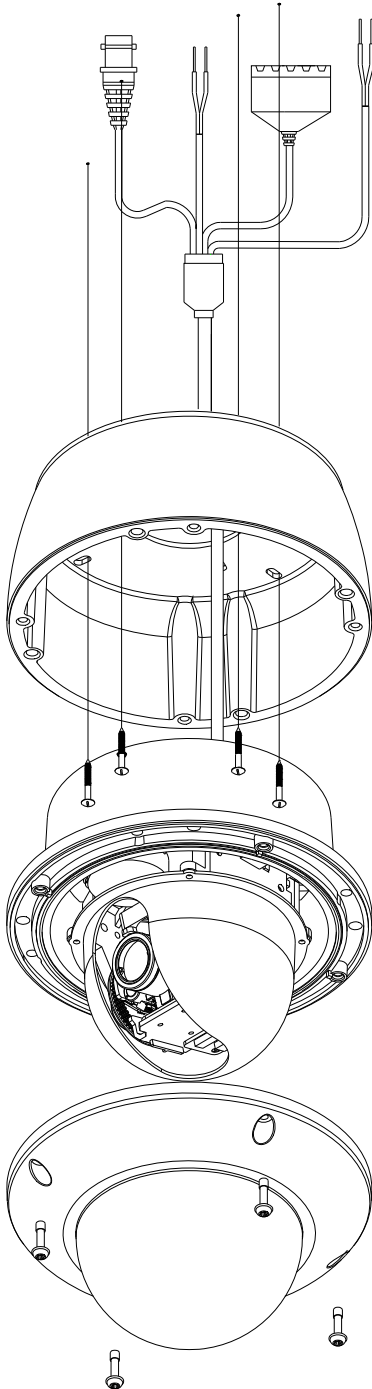4. Carry out the settings and adjustments for the camera.
5. Secure the dome cover by tightening with the screws.

Cabling

VIDEO(YELLOW)

POWER IN
VCC(RED)
GND(BLACK)

ALARM CABLE

SOLDERING — RS485
D+(BLACK)
D−(WHITE)

Dual Voltage
DC12V/AC24V

BNC Video

Monitor

RS-485
D−
D+
Controller/DVR

1 (Black): SENSOR COM
2 (Brown): SENSOR1
3 (Red): SENSOR2

IrDA
Sensor

Door
Switch

Sensors

4 (Orange): Relay COM
5 (Yellow): Relay NO

Lamp

Relay Out

Dual Voltage
DC12V/AC24V

Controller/DVR

PWR(+)
PWR(-)
F.G
RS-485(+)
RS-485(-)
VIDEO(+)
VIDEO(-)

SENSOR COM
SENSOR1
SENSOR2
Relay COM
Relay NO

IrDA
Sensor

Door
Switch

Sensors

BNC Video

Monitor

Lamp

Relay Out

Cabling Terminal Block

❑ Power Connection

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

Power Mode	Input Voltage Range	Power Consumption	
		While in Normal operation	While Heater in operation
DC 12V	DC 11V ~ 24V	14 W(MAX)	26W(MAX)
AC 24V	AC 20V ~ 28V	9W(MAX)	23W(MAX)

❑ RS-485 Communication

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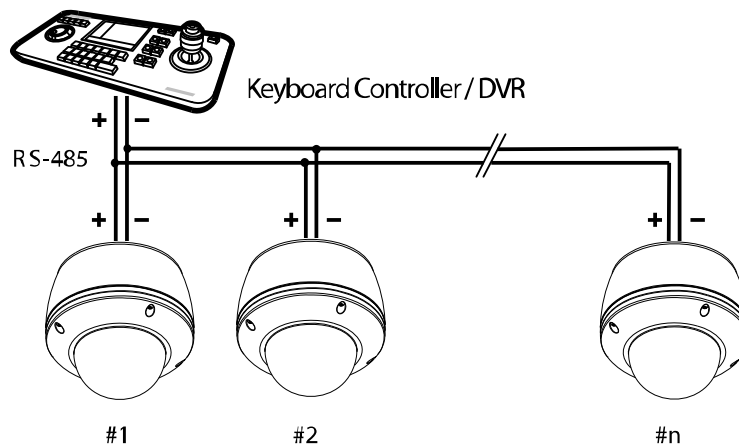
❑ Video Connection

- Connect with BNC coaxial cable.

❑ Alarm Input Connection

- Sensor Input
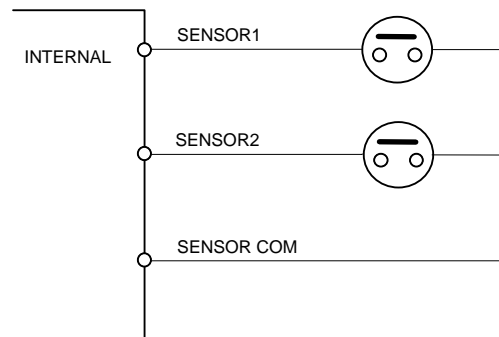
⌘ It is noted that short circuit between GND and Input pin means alarm activation.

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

⊙ Normally Open (N.O)	Sensor output is turned ON when sensor is activated
⊙ Normally Closed (N.C)	Sensor output is turned OFF when sensor is activated

- Relay Output
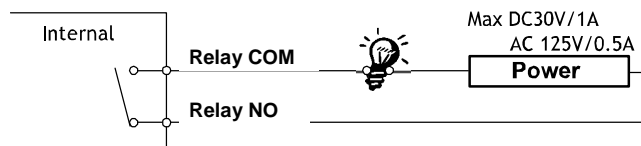
There are 4 Alarm Outputs and all of them are Relay contact type. Therefore, you do not have to care about polarity, AC/DC, and isolations between channels. Care must be taken to connect relay power as shown above.

Check Points Before Operation

- Before power is connected, please check the cables carefully.

- The camera ID of the controller must be identical to that of the camera to be controlled. The camera ID can be checked in the System Information screen of the OSD Menu.

- If your controller supports multi-protocols, the protocol must be changed to match the camera.

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

- Since the operation method can be different for each controller available, refer to the manual for your controller if camera can not be controlled properly.

Preset and Pattern Function Pre-Check

- Review Operating instructions for Preset, Group, Scan and Pattern function programming with controller or DVR prior to using camera. (refer to your System keyboard Manual)

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

Starting OSD Menu

● Function   Using the OSD menu, Preset, Pattern, Scan, Group and Alarm Input function as well as various detail camera settings can be configured in an interactive manner.

● Enter Menu   <Go Preset> [95]

Reserved Preset

● Description   Some Preset numbers are reserved for direct access to specific functions in OSD menu. These direct commands via preset provide quick execution of various functions using keyboard controller as well as simplifying the interface between DVR and IP equipments.

● Function   <Go Preset> [95]   : Enters into OSD menu

<Go Preset> [131~134]   : Runs Pattern Function 1 ~ 4

<Go Preset> [141~148]   : Runs Scan Function 1 ~ 8

<Go Preset> [151~158]   : Runs Group Function 1 ~ 8

<Go Preset> [161]   : Sets Relay Output to OFF

<Set Preset> [161]   : Sets Relay Output to ON

<Go Preset> [170]   : Sets Camera BLC Mode to OFF

<Go Preset> [171]   : Sets Camera BLC Mode to HIGH

<Go Preset> [174]   : Sets Camera Focus Mode to AUTO

<Go Preset> [175]   : Sets Camera Focus Mode to Manual

<Go Preset> [176]   : Sets Camera Focus Mode to SEMI-AUTO

<Go Preset> [177]   : Sets Day & Night Mode to AUTO

<Go Preset> [178]   : Sets Day & Night Mode to NIGHT

<Go Preset> [179]   : Sets Day & Night Mode to DAY

<Go Preset> [190]   : Sets OSD Display Mode to AUTO (Except Privacy Mask)

<Go Preset> [191]   : Sets OSD Display Mode to OFF (Except Privacy Mask)

<Go Preset> [192]   : Setting OSD Display Mode to ON (Except Privacy Mask)

<Go Preset> [193]   : Sets all Privacy Mask Display to OFF

<Go Preset> [194]   : Sets all Privacy Mask Display to ON

<Go Preset> [167]   : Zoom Proportional Jog ON

<Set Preset>[167]   : Zoom Proportional Jog OFF

<Go Preset> [195]   : Heater ON (Turn off after 5mins and switch to Auto mode)

<Go Preset> [196]   : Heater OFF (Turn off and switch to Manual mode)

<Go Preset> [197]   : Fan ON (Turn off after 5mins and switch to Auto mode)

<Go Preset> [198]   : Fan OFF (Turn off and switch to Manual mode)

<Go Preset>[200]   : Digital Zoom ON

<Go Preset>[201]   : Digital Zoom OFF

Preset

● Function

Max. 127 positions can be stored as Preset positions. The Preset number can be assigned from 1 to 128. It is noted that preset "**95**" is reserved for starting OSD menu.

Camera characteristics (i.e. White Balance, Auto Exposure) can be set up independently for each preset and they are adjusted by using OSD menu. Four relay outputs can be controlled in conjunction with one Preset.

● Set Preset   <Set Preset> [1~128]

● Run Preset   <Go Preset> [1~128]

● Delete Preset   To delete Preset, use OSD menu.

Scan

● Function

By using Scan function, you can make the camera move between 2 Preset positions repeatedly. When Scan function runs, the camera moves from the preset assigned as the 1st point to the preset assigned as the 2nd point in a CW(Clockwise) direction. Then camera moves from the preset assigned as the 2nd point to the preset assigned as the 1st point in a CCW(Counterclockwise) direction.
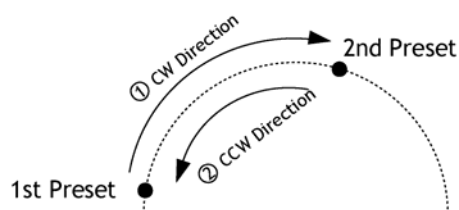
In a case where the preset assigned as the 1st point is the same as the preset assigned as the 2nd point, camera turns on its axis 360° in a CW(Clockwise) direction and then it turns on its axis 360° in a CCW(Counterclockwise) direction.

Speed can be set up from 1°/sec to 180°/sec.

● Set Scan   To set Scan, use OSD menu.

● Run Scan   Method1) <Run Scan> [Scan NO.] [Enter]

                     Method2) <Go Preset> [Scan NO.+140]   ex) Run Scan 2 : <Go Preset> [142]

● Delete Scan   To delete Scan, use OSD menu.
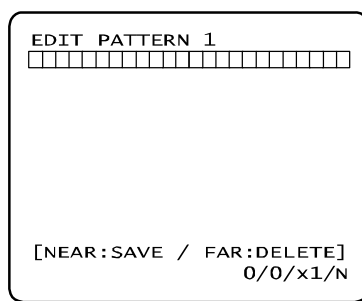
Pattern

● Function

Pattern Function enables the camera to memorize the path (mostly curve path) created by keyboard controller. By running the pattern, the memorized path can be reconstructed exactly as memorized whenever required.

4 Patterns are available and Maximum 1000 communication commands can be stored in a pattern.

● Set Pattern

Pattern can be created by one of the following two methods.

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

○ Pattern editing screen is displayed as below.

```
EDIT PATTERN 1
░░░░░░░░░░░░░░░░░░░░░░░




[NEAR:SAVE / FAR:DELETE]
              0/0/x1/N
```

○ Movement by Joystick and preset movement can be memorized in a pattern.

○ The available memory size is displayed in progress bar.

○ To save the recording, press **NEAR** key and to cancel, press **FAR** key.

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

● Run Pattern

Method 1) <Run Pattern> [Pattern NO.]   ex) Run Pattern 2 : <Run Pattern> [2]

Method 2) <Go Preset> [Pattern ex) Run Pattern 2: <Go Preset> [132] NO.+130]

● Delete Pattern

Use OSD menu to delete a Pattern.

✄ When the pattern is saved or executed, the PAN/TILT is operated with Auto Flip OFF mode.

Group

● Function

The Group function allows camera to run in a sequence of Presets, Patterns and/or Scans. Max 8 Group can be stored. Each Group can have max 20 action entities which can be preset, pattern or Scan. Dwell time means the time interval between actions and is adjustable in the menu. Additionally, there is an option number with which Preset speed as well as the repetition number of Pattern and Scan can be set.
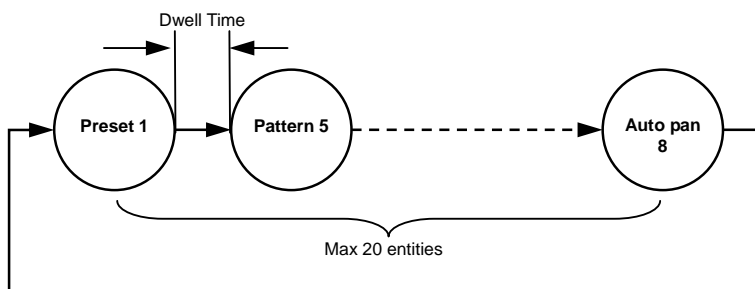
● Set Group

Use OSD Menu to create a Group.

● Run Group

Method1)　<Run　Pattern>　[Group　ex) Run Group 7 : <Run Pattern> [27]
NO.+20]

Method2)　<Go　Preset>　[Group　ex) Run Group 7 : <Go Preset> [157]
NO.+150]

● Delete Group

Use OSD Menu to delete.

Schedule

● Function

The Schedule function allows running an appropriate function like Preset, Scan, Group, Pattern, Home move at a designated day and time. For example, if you setup a rule Tuesday at 9:00AM and Preset 1 (say Main Gate), the camera will move to Main Gate every Tuesday at 9:00AM. If you choose Weekday, camera will move to Main Gate every day except the weekend.

It is noted that due to the real time clock, the time data will be kept regardless of blackout. The initial time and day setup is essential for proper Schedule function.

● Set Schedule   Use OSD Menu to create a Schedule

● Run Schedule   Use OSD Menu of Schedule Master Enable

● Delete Schedule   Use OSD Menu to Delete.

Other Functions

- **Preset Lock** This function is made to protect preset data from unauthorized overwriting. If Preset Lock is ON, Preset save command using Hot Key is disabled while saving a Preset via the OSD Menu is acceptable.

- **Power Up Action** This function enables the camera to resume programmed actions such as preset, Pattern, and Scan when the power been cycled

- **Auto Flip** In case the tilt angle arrives at the top of tilt orbit (83°), the zoom module camera keeps moving to opposite tilt direction (180°) to keep tracing targets. As soon as the zoom module camera passes through the top of tilt direction (83°), images should be reversed automatically and F appears in screen. If this function is set to OFF, tilt movement range is 0 ~ 95°.

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

- **Alarm Input** 2 Alarm Inputs are available. If an external sensor is activated, camera can be set to move to corresponding preset position. It is noted that the latest alarm input is effective if multiple sensors are activated.

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

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

  During jog operation, General WB/AE value should be applied. All Special WB/AE value will not be changed regardless of General WB/AE value change.

- **Semi Auto Focus** This mode enables the camera to switch focus mode automatically operation by operation. Manual focus mode is selected during preset operation and Auto focus mode is recovered if jog operation is started. During Preset action, instead of auto focusing, manual focus data stored when it is created will be applied as soon as camera arrives to the preset. This is helpful to get well-focused image in a short time.

OSD Display of Main Screen
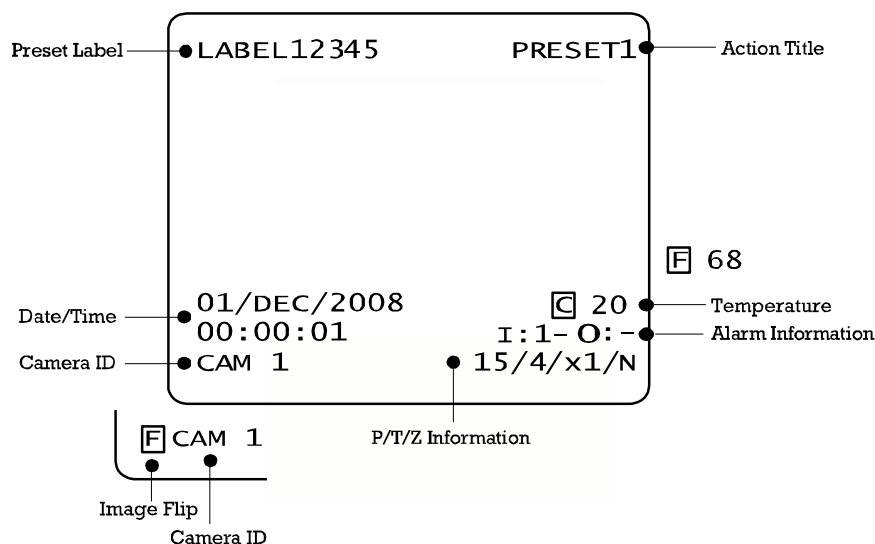
- P/T/Z Current Pan/Tilt angle in degree, zoom magnification and a compass direction.
- Camera ID Current Camera ID(Address).
- Action Title The followings are possible Action Titles and their meanings.

  "SET PRESET ×××" When Preset ××× is stored

  "PRESET ×××" When camera reaches Preset ×××

  "PATTERN ×" When Pattern × is in action

  "AUP×/PRESET ×××" When Group × is in action

  "UNDEFINED" When undefined function is called to run

- Preset Label The Label stored for specific Preset.

- Alarm Information This information shows the current state of the Alarm Input. The "I" means Input and "O" is output. If an Input is in the **ON** state it will show the number of the input. If an Input is in the **OFF** state, '**-**' will be displayed. In the same way "O:1" means output 1 is ON "O:- " is OFF.

  Ex) When Point 2 of inputs are **ON,** and Output 1 is On,   OSD will show as below

- Image Flip Shows that images are currently reversed by Auto Flip Function.
- Temperature Current Temperature: Boxed "C" and "F" means Celsius and Fahrenheit
- Date/Time Displays Current Date and Time.

General Rules of Key Operation for Menu

- The menu item enclosed with <   > always means it has a sub menu.
- For all menu levels, to go into sub menu, press **NEAR** key.
- To go up one menu level, press **FAR** key.
- To move from item to item in the menu, use joystick in the **Up/Down** or **Left/Right** directions.
- To change a value of an item, use **Up/Down** of the joystick on the controller.
- Press **NEAR** key to save values and Press **FAR** key to cancel values.

Main Menu

```
 ROOT MENU
 ----------------------
→<SYSTEM INFORMATION>
 <DISPLAY SETUP>
 <MOTION SETUP>
 <FUNCTION SETUP>
 <CAMERA SETUP>
 <SYSTEM SETUP>
 <SYSTEM INITIALIZE>

 EXIT
```

- System Information Shows System information such as current firmware version and communication settings.

- Display Setup Enable/Disable OSD display on Main Screen.

- Motion Setup Setup for motion related settings.

- Function Setup Setup for various functions such as Preset, Auto Pan, Pattern, Scan 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.

System Information

```
SYSTEM INFORMATION
--------------------------
FIRMWARE VER    1.02SO
COLOR SYSTEM    NTSC
PROTOCOL        SAMSUNG
BAUD RATE       9600
ADDRESS         255


→BACK
 EXIT
```

- Firmware Ver.   Shows current firmware version of camera.

- Color System   Shows current analog video system of the camera.

- Protocol   Shows current Protocol for PTZ control

- Baud Rate   Shows current Baud Rate of PTZ control.

- Address   Shows current Camera ID for PTZ control.

Display Setup

```
DISPLAY SETUP
--------------------------
→CAMERA ID          ON
 PTZ INFORMATION    AUTO
 ACTION TITLE       AUTO
 RESET LABEL        AUTO
 ALARM I/O          AUTO
 DATE/TIME          ON
 TEMERATURE         CELSIUS
 <PRIVACY ZONE>
 BACK
 EXIT
```

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

- Camera ID   [ON/OFF]

- PTZ Information   [ON/OFF/AUTO]

- Action Title   [ON/OFF/AUTO]

- Preset Label   [ON/OFF/AUTO]

- Alarm I/O   [ON/OFF/AUTO]

- Date/Time   [ON/OFF]

- Temperature   [CELSIUS/FAHRENHEIT/OFF]

Privacy Zone Mask Setup

```
 PRIVACY ZONE
 -----------------------
→MASK NO      1
              UNDEFINED
 DISPLAY      OFF
 CLEAR MASK   CANCEL
 <EDIT MASK>


 BACK
 EXIT
```
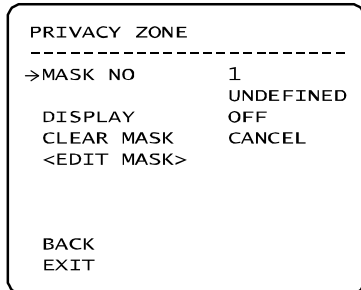
Select area in image to mask.

● Mask No   [1~4]

Select Mask number. If the selected mask already has data, camera moves as it was set.   Otherwise, "UNDEFINED" will be displayed under "Mask NO".

● Display   [ON/OFF]

Defines whether or not camera mask shows on images.

● Clear Mask   [CANCEL/OK]

Deletes data in the selected mask NO.

❑ Privacy Zone Area Setup

```
 EDIT MASK 1
 -----------------------




 MOVE TO TARGET POSITION
 [NEAR:SELECT/FAR:CANCEL]
              0/0/X1/N
```
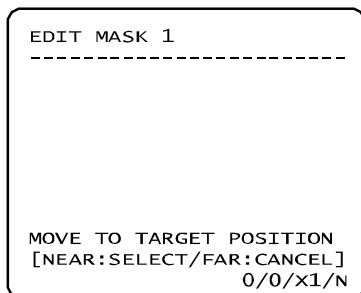
Move the camera to area to be masked. Then the menu to adjust mask size will be displayed.

❑ Privacy Zone Size Adjustment

```
 EDIT MASK  1
 -------------------------




 [←→: ADJUST MASK HEIGHT]
 [↑↓: ADJUST MASK HEIGHT]
 [NEAR: SAVE / FAR: CANCEL]
```
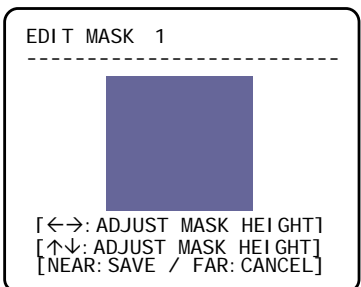
Adjust mask size. Use joystick or arrow buttons to adjust mask size.

● ←→ (Left/Right)   Adjusts mask width.

● ↑↓ (Up/Down)   Adjusts mask height.

✐ **It is noted that during PAN/TILT control like jog action, the object behind the privacy mask can be disclosed for a short period of time.**

✐ To hide a certain zone completely regardless of high speed PT motions, it is recommended that the size of mask must be 20% bigger than original

Motion Setup

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

Setup the general functions of Pan/Tilt motions.

● Preset Lock   [ON/OFF]

This function is made to protect preset data from unauthorized overwriting. If Preset Lock is ON, it is impossible to create and delete Preset, Auto Pan, Pattern and Scan. It is only possible to run those functions. To create and delete those functions, use OSD menu.

● Power Up Action   [ON/OFF]

Refer to "Other Functions" section.

● Auto Flip   [ON/OFF]

Refer to "Other Functions" section.

● Jog Max Speed   [2°/sec ~200°/sec]

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

● Jog Direction   [INVERSE/NORMAL]

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

● Freeze in Preset

This function freezes the preset scene on the monitor when switching to another preset. This allows for smooth transition from one preset scene to another. Preset freeze also reduces bandwidth when used with digital network systems such, and guarantees that blanked areas will not be revealed when going to a preset.

❏ Parking Action Setup

```
PARKING ACTION SETUP
-----------------------
→PARK ENABLE    OFF
 WAIT TIME      00:10:00
 PARK ACTION    HOME



 BACK
 EXIT
```

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

- ● Park Enable   [ON/OFF]

- ● Wait Time   [5 seconds ~ 4 hour]

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

- ● Park Action   [HOME/PRESET/PATTERN/AUTOPAN/SCAN]

  Ex) If HOME is selected for Park Action, camera will move to home position when there is no PTZ command during assigned "Wait Time."

❏ Alarm Input Setup

```
ALARM INPUT SETUP
------------------------
→ALARM1   N.O    PRESET1
 ALARM2   N.C    NOT USED




 BACK
 EXIT
```

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

- ● Alarm Type   [Normal OPEN(N.O) / Normal CLOSE](N.C)]

  Sets sensor input type.

- ● Alarm Action   [NOT USED/HOME/PRESET 1~128/SCAN 1~8, PATTERN1~4, SCAN 1~4]

  For each Alarm input, you can assign counteraction functions (Preset, Auto Pan, Pattern and Scan).

Function Setup

```
FUNCTION SETUP
--------------------------
→<PRESET SETUP>
 <AUTO PAN SETUP>
 <PATTERN SETUP>
 <SCAN SETUP>
 <SCHEDULE SETUP>


 BACK
 EXIT
```
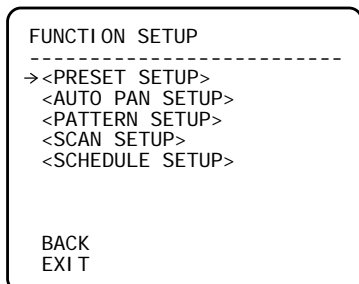
Configure 5 Special Functions with this menu

● Preset Setup   127 Presets from the number 1 to 128 can be assigned excluding preset 95 which are reserved for Menu.

● Auto Pan Setup   Up to 8 Auto Pans are available, which makes camera move slowly between two preset points.

● Pattern Setup   Up to 4 patterns can be stored in the dome.

                        In this function, path data created by manual move of Joystick is recorded and you can playback the identical path automatically whenever required.

● Scan Setup   Up to 8 Scans can be defined.

                        In a Scan, max 20 entities are assigned from any combinations of Preset/Auto Pan/Pattern. If you run a Scan, camera will execute each entry sequentially.

● Schedule Setup   7 rules of Schedule can be assigned by day and time. Appropriate actions (such as Home, Preset, Auto Pan, Pattern and Scan) can be defined for each rule. Also, it is possible to use Weekday and Weekend in a

Preset Setup

```
 PRESET SETUP
 - - - - - - - - - - - - - - - - - - - - - - - - -
→PRESET NO.        1

 <EDIT SCENE>
 <LABEL>       NORTH GATE
 CLR PRESET    CANCEL
 CAM ADJUST    GENERAL
 ALARM OUT     -

 BACK
 EXIT
```
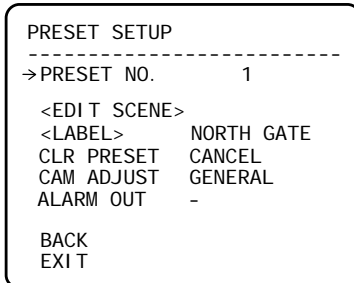
● Preset Number   [1~128]

If a selected preset is already defined, camera moves to pre-defined position and preset characteristics such as Label and Relay Outputs show on monitor. If a selected preset is not defined, "UNDEFINED" shows on monitor.

● Edit Preset Scene   Redefine current Preset scene position (i.e. PTZ).

● Edit Preset Label   Edits Label to show on monitor when preset runs. MAX. 10 characters are allowed.

● Clear Preset   [CANCEL/OK]

Delete current Preset data

● CAM Adjust   [GENERAL/SPECIAL]

WB(White Balance) and AE(Auto Exposure) can be set up independently for each preset. There are 2 modes, "General" mode & "Special" mode. The General mode means that WB or AE can be set up globally for all presets in "CAMERA SETUP" menu.

The Special mode means that WB or AE can be set up independently or separately for each preset in each preset setup menu. Each Special WB/AE value will be applied when camera arrives to the preset location. During jog operation, General WB/AE value should be applied.

All Special WB/AE values will not be affected by General WB/AE value changes. If "Special" is selected, Menu to set WB/AE shows on monitor. Its default is GENERAL.

● Alarm out   Relay Output can be linked with Preset run. The character "-" means disable while the number "1" representing each bit means ON.

Ex) If it is set to "1", Output relay will be ON whenever you call this Preset.

❑ **Edit Preset Scene**

```
┌─────────────────────────┐
│                         │
│  EDIT SCENE - PRESET 1  │
│  ---------------------- │
│                         │
│                         │
│                         │
│                         │
│                         │
│                         │
│                         │
│  MOVE TO TARGET POSITION│
│  [NEAR:SAVE / FAR:CANCEL]│
│              0/0/x1/N   │
│                         │
└─────────────────────────┘
```
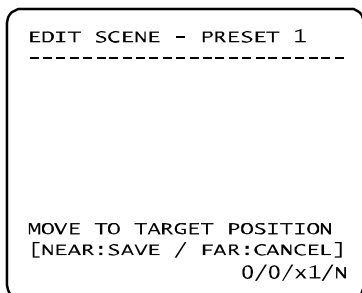
① Using Joystick, move camera to desired position.

② Press **NEAR** key to save current PTZ data.

③ Press **FAR** key to cancel.

❑ **Edit Preset Label**

```
┌─────────────────────────┐
│                         │
│  EDIT LABEL  - PRESET 1 │
│ ----------------------- │
│→[█           ]          │
│  ----------             │
│  1234567890  OK         │
│  ABCDEFGHIJ  CANCEL     │
│  KLMNOPQRST             │
│  UVWXYZabcd             │
│  efghijklmn             │
│  opqrstuvwx             │
│  yz<>-/:. ←             │
│                         │
└─────────────────────────┘
```
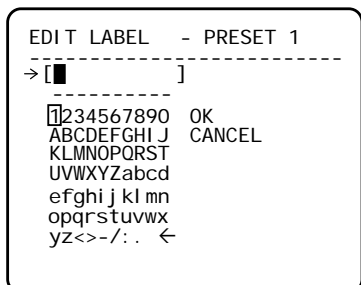
① Edits label to show on monitor when camera arrives at presets. In Edit Label menu, a reverse rectangular is cursor. As soon as finishing selecting alphabet, cursor moves to the next digit.

$$[\; \blacksquare \qquad\qquad]$$

Current Cursor Position

② Using **Left/Right/Up/Down** of joystick, move to an appropriate character from the Character set. To choose that character, press the **NEAR** key.

```
1234567890
ABCDEFGHIJ
KLMNOPQRST
UVWXYZabcd
efghijklmn
opqrstuvwx
yz<>-/:. ←
```

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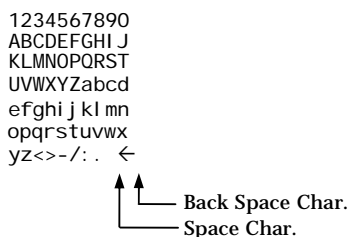
If you want to use blank, choose Space character (" "). If you want to delete a character before, use back space character (" ←").

③ After completing 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.

Scan Setup

```
AUTO PAN SETUP
--------------------------
→APAN NO.        1
 1ST POS.           NOT USED
 2ND POS.           NOT USED

 APAN SPEED 30/SEC
 CLEAR APAN CANCEL


 BACK
 EXIT
```
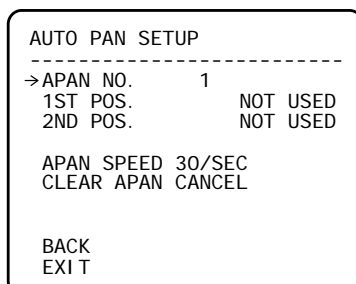
- **APAN Number**

  [1~8]

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

- **1st Position**

  2nd Position

  [PRESET 1~128]

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

```
AUTO PAN SETUP
--------------------------
→APAN NO.        1
  1ST POS.          PRESET5
  2ND POS.          NOT USED
       ⟶            UNDEFINED
```
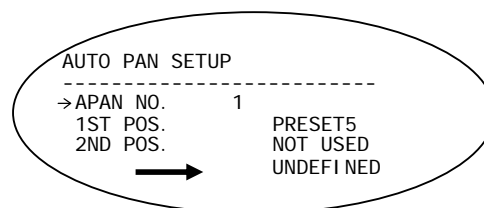
When Auto Pan function runs, camera moves from the preset assigned as the 1st point to the preset assigned as the 2nd point in CW (Clockwise) direction. Then camera moves from the preset assigned as the 2nd point to the preset assigned as the 1st point in CCW (Counterclockwise) direction. In case that the preset assigned as the 1st point is same as the preset assigned as the 2nd point, camera turns on its axis by 360° in CW direction and then it turns on its axis by 360° in CCW direction.

- **APAN Speed**

  [1°/sec ~180°/sec]

  Sets Auto Pan speed from 1°/sec to 180°/sec.

- **Clear APAN**

  [CANCEL/OK]

  Deletes current Auto Pan data.

Pattern Setup

```
PATTERN SETUP
-----------------------
→PATTERN NO.    1
                UNDEFINED
 CLR PATTERN     CANCEL
 <EDIT PATTERN>



 BACK
 EXIT
```
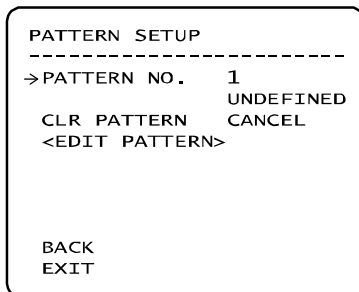
- Pattern Number   [1~4]

  Selects Pattern number to edit.

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

- Clear Pattern   [CANCEL/OK]

  Deletes data in current pattern

- Edit Pattern   Starts editing pattern.

❑ Edit Pattern

```
EDIT PATTERN 1
-----------------------




MOVE TO START POSITION
[NEAR:START/ FAR:CANCEL]
             0/0/x1/N
```
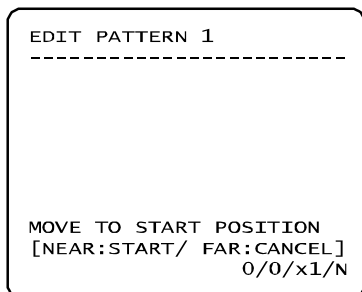
① Using Joystick, move to start position with appropriate zoom. To start pattern recording, press **NEAR** key. To exit this menu, press **FAR** key.

```
EDIT PATTERN 1
▯▯▯▯▯▯▯▯▯▯▯▯▯▯▯▯▯▯▯▯▯▯▯




[NEAR:SAVE / FAR:DELETE]
             0/0/x1/N
```

② Move camera with joystick of controller or run preset function to memorize the path (mostly curve path) in a selected pattern. The total memory size and the available memory size are displayed in the form of a bar. Maximum 1200 communication commands can be stored in a pattern.

③ To save data and exit, press **NEAR** key. To cancel recording and delete record data, press **FAR** key.

Group Setup

```
SCAN SETUP
------------------------
→SCAN NO.        1
                UNDEFINED
 CLEAR SCAN     CANCEL
 <EDIT SCAN>


 BACK
 EXIT
```
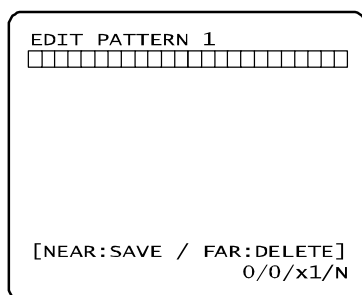
- Scan Number   [1~8]

  Selects Scan number to edit.

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

- Clear Scan   [CANCEL/OK]

  Deletes data in current Scan

- Edit Scan   Starts editing Scan.

❑ Edit Group

```
EDIT SCAN      1
------------------------
→NO. ACTION NO. DWELL OPT
------------------------
  1 NONE
  2 NONE
  3 NONE
  4 NONE
  5 NONE
------------------------
 SAVE
 CANCEL          [NEAR:
 EDIT]
```

① Press **Near** key in "NO" list to start Scan setup.

```
EDIT SCAN      1
------------------------
 NO. ACTION NO. DWELL OPT
------------------------
→ 1 NONE
  2 NONE
  3 NONE
  4 NONE
  5 NONE
------------------------
 SAVE      [NEAR:EDIT ACT]
 CANCEL    [FAR :EDIT END]
```

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

```
EDIT SCAN      1
------------------------
 NO. ACTION NO. DWELL OPT
------------------------
  1 NONE
  2 NONE
  3 NONE
  4 NONE
  5 NONE
------------------------
 SAVE     [←→:MOVE CURSOR]
 CANCEL [↑↓: CHANGE VAL.]
```

③ Set up Action, Dwell time and Option. Note that selected item is displayed in reverse. Move cursor **Left**/**Right** to select items and move cursor **Up**/**Down** to change each value.

- Action NO.   [NONE/PRESET/AUTO PAN/PATTERN]
- DWELL   [0 second ~ 4 minutes]

  Sets Dwell Time between functions

- OPT   Option. It represents preset speed (2~360) when preset is selected. It should be the number of repetition (1~255) when Pattern or Auto Pan is selected for Action

```
EDIT SCAN      1
--------------------------
 NO. ACTION NO. DWELL OPT
--------------------------
 1 PRESET   [1]00:03  360
 2 NONE
 3 NONE
 4 NONE
 5 NONE
--------------------------
SAVE    [←→:MOVE CURSOR]
CANCEL [↑↓:CHANGE VAL. ]
```

④ Set up items such as Action, NO., Dwell and OPT.

```
EDIT SCAN      1
--------------------------
 NO. ACTION ### DWELL OPT
--------------------------
→ 1 PRESET    1 00:03  360
  2 NONE
  3 NONE
  4 NONE
  5 NONE
--------------------------
 SAVE    [NEAR: EDIT ACT]
 CANCEL  [FAR:  EDIT END]
```

⑤ After finishing setting up an Action, press **Near** key to move up a menu level (Step ②). Move cursor **Up/Down** to select Action number and repeat Step ② ~ Step ④ to edit selected Scan.

```
EDIT SCAN      1
--------------------------
 NO. ACTION ### DWELL OPT
--------------------------
 1 1 PRESET   1 00:03  360
 2 NONE
 3 NONE
 4 NONE
 5 NONE
--------------------------
→SAVE
 CANCEL
```

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

Schedule Setup

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

● Master Enable   [ON/OFF]

Decide whether Schedule function is active or not.

● Clear Schedule   [CANCEL/OK]

Delete all data in current Menu

● Edit Schedule   Start editing Schedule.

❑ Edit Schedule

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

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

```
SCHEDULE SETUP
--------------------------
MASTER ENABLE           ON
    DAY  TIME  ACT   NO   ON
→ 1 MON 01:20 HOM        ON
 2 WEN 07:35 PRS   12    ON
 3 THU 11:40 SCN    3    ON
 4 SAT 15:17 PAT    1    ON
 5 WEK 23:00 HOM         ON
 6 UNDEFINED
 7 UNDEFINED
 BACK
```

④ After moving the Cursor to the number by using **Up/Down keys, press** "Near"(Enter) Key to edit.

⑤ Each field can be selected by **Left/Right** keys and the values in the field are changed using **Up/Down** keys.

The meaning of each value:

DAY   Days: MON > TUE > WED> THU > FRI > SAT > SUN

WKD: Weekday

ALL: All days(Everyday)

TIME   24hour Format

ACT   PRS(Preset),   AUP(Auto   Pan),   PTN(Pattern), SCN(Scan)

HOM(Home)

ON/OFF   Decide to make this rule active or not.

If you finish a rule, press **Near** key to select another rule.

Repeat this procedure to fill up the schedule in mind.
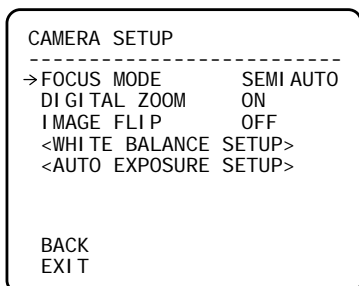
⑥ Example: see left setup.

- The second rule means camera will move to Preset 12 position at 7:35 on every Wednesday.

* Note: If rules conflict with each other, the higher the number is, the higher priority it has.

* Note: If you assign undefined function, there will be no action.

Camera Setup

Setup the general functions of zoom camera module.

```
CAMERA SETUP
--------------------------
→FOCUS MODE        SEMIAUTO
 DIGITAL ZOOM      ON
 IMAGE FLIP        OFF
 <WHITE BALANCE SETUP>
 <AUTO EXPOSURE SETUP>


 BACK
 EXIT
```

● Focus Mode   [AUTO/MANUAL/SEMIAUTO]

Sets camera focus mode.

○ SEMIAUTO Mode

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

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

● Digital Zoom   [ON/OFF]

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

● Image Flip   [ON/OFF]

To display Upside down image.

❑ White Balance Setup

```
WB SETUP - GLOBAL
-----------------------
→WB MODE          AUTO
 ●RED  ADJUST     ---
 ●BLUE ADJUST     ---



 BACK
 EXIT
```
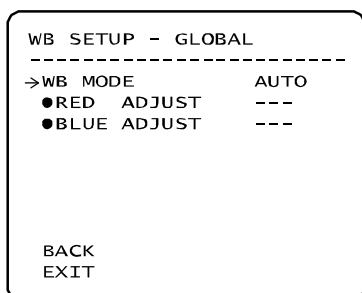
● WB Mode   [AUTO/MANUAL]

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

● Red Adjust   [10~60]

● Blue Adjust   [10~60]

❑ **Auto Exposure Setup**

```
AE SETUP - GLOBAL
-------------------------
→BACK LIGHT      OFF
 DAY/NIGHT    AUTO1
 BRIGHT       25
 IRIS         AUTO
 SHUTTER      ESC
 AGC      NORMAL
 SSNR     MIDDLE
 SENS-UP      <AUTO>
 BACK
 EXIT
```

BACK LIGHT   [ON/OFF]

Sets Backlight Compensation

DAY / NIGHT   [AUTO1/AUTO2/DAY/NIGHT]

AUTO1 exchanges Day/Night mode faster than AUTO2.

BRIGHT   [0~100]

Adjusts brightness of images. Iris, Shutter Speed and Gain are adjusted automatically in correspondence with this value.

IRIS   [AUTO/MANUAL(0~100)]

If Iris is set to Auto, Iris should have highest priority in adjusting AE and Shutter Speed should be fixed.

If Iris is set to Manual, Iris should be fixed and Iris has lower priority in adjusting AE, in comparison with others.

SHUTTER   [ESC/A. Flicker/Manual(×128~1/120000 sec)]

If Iris is set to Manual and Shutter Speed is set to ESC, Shutter Speed should have highest priority. If Shutter Speed is set to A. Flicker, to remove Flicker, Shutter Speed should be set to 1/100 sec. for NTSC and 1/120 for PAL.

AGC   [OFF/NORMAL/HIGH]

Enhances image brightness automatically in case luminance level of image signal is too low.

SSNR   [OFF/LOW/MIDDLE/HIGH]

Enhances images by reducing noises when gain level of images is too high.

SENS-UP   [AUTO(2~128)/OFF]

Activates Slow Shutter function when luminance of image (signal) is too dark.

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

System Setup

```
 SYSTEM SETUP
 -------------------------
→<DATE/TIME SETUP>
  <RELAY TYPE>
  <PASSWORD>
  <SET HOME POSITION>
  <SET NORTH DIRECTION>
  LANGUAGE     ENGLISH
  <FAN/HEATER SETUP>

  BACK
  EXIT
```

● SYSTEM SETUP   You can set up DATE/TIME, ALARM OUTPUT RELAY, PASSWORD, HOME POSITION, NORTH POSITION.

● DATE   Date is displayed in dd/mmm/yyyy format. The day is automatically calculated when you set the day.

● TIME   Time is displayed in HH:MM:SS format.

```
 DATE/TIME SETUP
 -----------------------
→DATE   01/JAN/2008(TUE)
  TIME   00:00:01(H/M/S)




  BACK
  EXIT
```

● DATE/TIME Setup   After you press the Near key, each field can be selected by Left/Right keys and the values in the field are changed using Up/Down keys. To save the updated data, press the Near key again

✎ It is noted that the range of date setup is limited from 01/JAN/2000 to 31/DEC/2037.

```
 RELAY TYPE SETUP
 -------------------------
→RELAY1   NORMAL OPEN




  BACK
  EXIT
```

● RELAY TYPE SETUP   Contact types of 1 Ch. RELAY OUTPUTS are defined. (NORMAL OPEN / NORMAL CLOSE)

NORMAL OPEN

NORMAL CLOSE

```
 EDIT PASSWORD
 -------------------------
  [█   ]
   ----------
   1234567890    OK
   ABCDEFGHIJ    CANCEL
   KLMNOPQRST
   UVWXYZabcd   DISABLE
   efghijklmn
   opqrstuvwx
   yz<>-/:. ←
   ----------
```
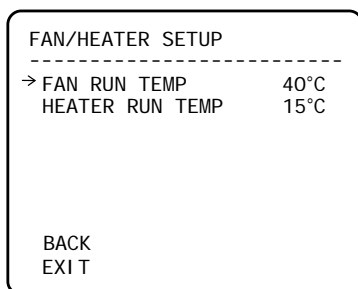
● PASSWORD SETUP   You can define a 4 characters long password. If this function is set to ENABLE, it is required to type this password whenever to enter OSD MENU.

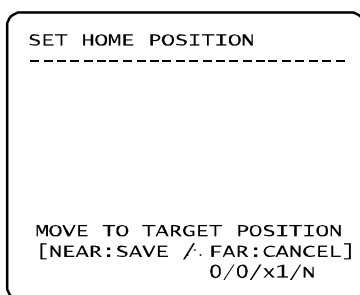It is noted that MASTER PSSWORD : "4321"

```
┌─────────────────────────────┐
│                             │
│  FAN/HEATER SETUP           │
│  ─────────────────────────  │
│ →FAN RUN TEMP        40℃     │
│  HEATER RUN TEMP    15℃      │
│                             │
│                             │
│                             │
│  BACK                       │
│  EXIT                       │
│                             │
└─────────────────────────────┘
```

● FAN RUN TEMP — Above this temperature, the blower fan will start automatically.

Range: 30 ~ 80℃ (86 ~ 176℉)

● HEATER RUN TEMP — Bellow this temperature, the Heater will be tuned on automatically.

Range: -10 ~ 20℃ (14~ 68℉)

```
┌─────────────────────────────┐
│                             │
│  SET HOME POSITION          │
│  ─────────────────────────  │
│                             │
│                             │
│                             │
│                             │
│  MOVE TO TARGET POSITION    │
│  [NEAR:SAVE /. FAR:CANCEL]  │
│          0/0/x1/N           │
│                             │
└─────────────────────────────┘
```
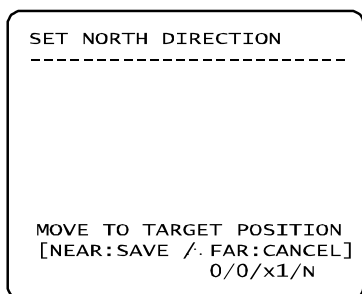
● SET HOME POSITION — HOME position means the origin of PAN angle calculation. The value of PAN angle displayed on the screen is based on this HOME position.

Using Joystick, move the camera to the desired position and press ENTER (NEAR/SAVE).

It is noted that Home does not affect Tilt angle.

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

```
┌─────────────────────────────┐
│                             │
│  SET NORTH DIRECTION        │
│  ─────────────────────────  │
│                             │
│                             │
│                             │
│                             │
│  MOVE TO TARGET POSITION    │
│  [NEAR:SAVE /. FAR:CANCEL]  │
│          0/0/x1/N           │
│                             │
└─────────────────────────────┘
```

● SET NORTH DIRECTION — You can set up North direction.

Using Joystick, move the camera to the desired NORTH position and press ENTER (NEAR/SAVE).

The direction will be displayed in the screen

[PAN AXIS / TILT AXIS / ZOOM / DD]

DD is direction and will be displayed from:

N/NE/E/SE/S/SW/W/NW

● LANGUAGE — You can select a preferred Language of OSD display from 7 choices.

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

After selecting a language, press Enter (NEAR) key.

TIP: 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 same pan orientation. Therefore, all function data depending on pan orientation such as preset, pattern, Group, Scan, 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. It is recommendable to memorize the target scene of current Home position.

System Initialize

```
SYSTEM INITIALIZE
-----------------------
→CLEAR ALL DATA        NO
 ■CLR DISPLAY SET      NO
 ■CLR CAMERA SET       NO
 ■CLR MOTION SET       NO
 ■CLR FUNCTION SET     NO
 REBOOT CAMERA         NO
 REBOOT SYSTEM         NO

 BACK
 EXIT
```

- Clear All Data   Deletes all configuration data such as display, camera and motion setup and so on.

- Clear Display Set   Initializes Display Configuration

- Clear Camera Set   Initializes Camera Configuration

- Clear Motion Set   Initializes Motion Configuration

- Clear Function Se   Deletes Preset Data, Group Data, Pattern Data, Scan Data and Schedule Data

- Reboot Camera   Reboots Zoom Camera module

- Reboot System   Reboots Speed Dome Camera

❑ Initial Configuration Table

● Display Configuration		● Camera Configuration	
Camera ID	ON	Focus Mode	SEMIAUTO
PTZ Information	AUTO	Digital Zoom	ON
Action Title	AUTO	Image Flip	OFF
Preset Label	AUTO	White Balance	AUTO
Alarm I/O	AUTO	Backlight	OFF
Date/Time	ON	Day/Night	AUTO1
Temperature	CELSIUS	Brightness	25
North Direction	Pan 0°	Iris	AUTO
Privacy Zone	Undefined	Shutter	ESC
		AGC	NORMAL
		DNR	MIDDLE
● Motion Configuration		SENS-UP	AUTO (4 Frame)
Preset Lock	OFF		
Power Up Action	ON		
Auto Flip	ON		
Jog Max Speed	140°/sec	● Function Data	
Jog Direction	NORMAL	Preset 1~128	Undefined
Freeze In Preset	OFF	Scan 1~8	Undefined
Park Action	OFF	Pattern 1~4	Undefined
Alarm I/O Action	OFF	Group 1~8	Undefined
		Schedule 1~7	Undefined
● Communication Setup			
Protocol	AUTO		
Baud Rate	9600		

Specifications

| Model			
Video Signal System		NTSC	PAL
Camera	CCD	1/4'' Super-HAD IT CCD	
	Max. Pixels	811(H)×508(V) 410K	795(H)×596(V) 470K
	Effective Pixels	768(H)×494(V) 380K	752(H)×582(V) 440K
	Horizontal Res.	500 TV Line(Color), 570 TV Line(B/W)	
	S/N Ratio	50 dB (AGC Off)	
	Zoom	×10 Optical Zoom, ×10 Digital Zoom	
	Focal length	F1.8, f=3.8~38mm	
	Min. illumination	0.7 Lux (Color) / 0. 02 Lux (B/W), 50 IRE	
	Day & Night	Auto 1 +2 / Day / Nigh	
	Focus	Auto / Manual / SemiAuto	
	Iris	Auto / Manual	
	Shutter Speed	x128 ~ 1/120000 sec, Anti Flickerless	
	AGC	Normal / High / Off	
	White Balance	Auto / Manual(Red, Blue Gain Adjustable)	
	BLC	Low / Middle / High / Off	
	SSNR	Low / Middle / High / Off	
Pan/Tilt	Range	Pan : 0-360°(Endless)	
		Tilt : 15 ~ 83°	
	Pan/Tilt Speed	Preset : 360°/sec	
		Manual : 0.05 ~ 360°/sec (proportional to zoom)	
		Scan : 1~ 180°/sec	
	Preset	127 Preset (Label, Camera Image Setting)	
	Pattern	4 Pattern, 1000 commands/Pattern (about 5 minute in normal operations)	
	Scan	8 Scan	
	Group	8 Group (20 action entities per Group)	
	Other Functions	Auto Flip, Auto Parking, Power Up Action etc.	
General	Communication	RS-485	
	Protocol	Auto, Pelco-D, Pelco-P, Samsung selectable	
	Privacy Zone	4 Zone	
	Alarm Input	2 Input	
	Alarm Output	1 Relay Output	
	OSD	Menu / PTZ information etc Support 7 Languages: [ENGLISH/ESPAÑOL/FRANÇAIS/DEUTSCH/ITALIANO/РУССКИЙ/PORTUGUÊS]	
	Rated Power**	AC 24V(23W) / DC 12V(26W) / Dual Voltage	
	Dimension	Dome ∅100.5 Housing ∅142 × 84.5(H) mm	
	Weight	about 1.85 Kg	
	Operating Temp.	-10℃ ~ 50℃	

* Specifications of this product are subject to change without notice.

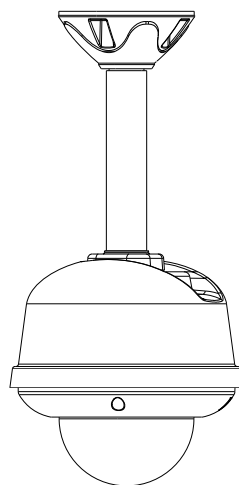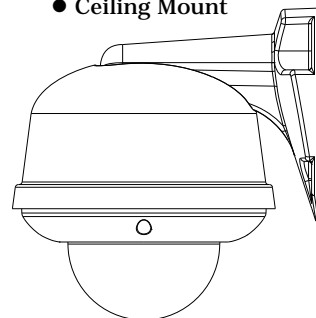** Check the voltage and current capacity of rated power carefully.
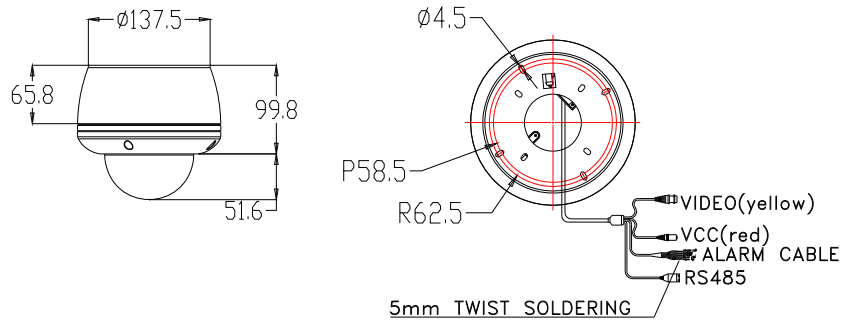
■ Appearance
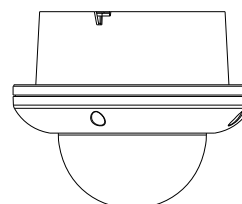
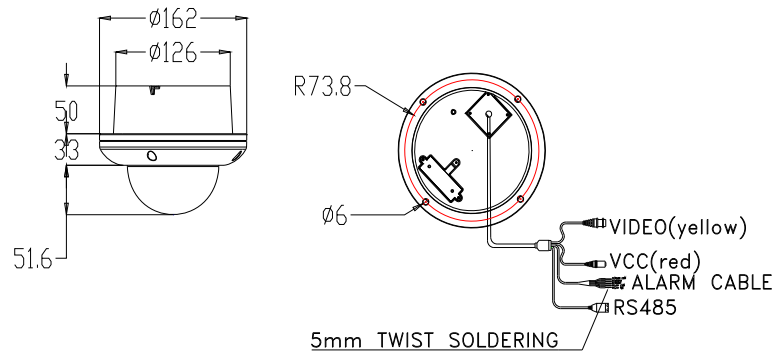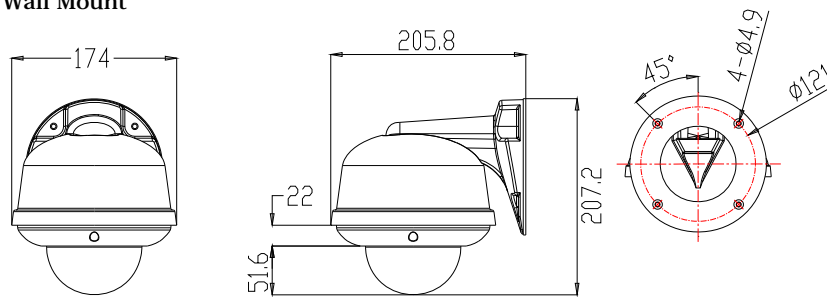

● Main Unit
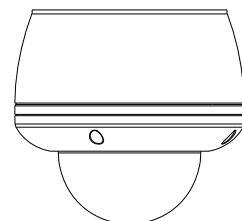
● Flush Mount

● Ceiling Mount

● Wall Mount

Dimension

● **Surface Mount**

● **In ceiling Mount**

● **Wall Mount**

Unit (mm)

● **Pendant Mount**