

# STAINLESS STEEL CAMERA

---

- Before attempting to connect or operate this product, please read these instructions carefully and save this manual for future use.
- The design and specifications are subject to be changed without prior notice to improve product's quality.

# TABLE OF CONTENTS

|                                   |    |
|-----------------------------------|----|
| 1. PRECAUTIONS                    | 3  |
| 1. 1 IMPORTANT SAFETY INSTRUCTION | 3  |
| 2. DISCRIPTIONS                   | 4  |
| 2. 1 PACKAGE COMPONENTS           | 4  |
| 2. 2 PART NAMES AND FUNCTIONS     | 4  |
| 3. OPERATION SETTING              | 5  |
| 3. 1 EXTERNAL I/O                 | 5  |
| 4. INSTALLATION                   | 6  |
| 5. MAIN SETUP MENU                | 09 |
| 5. 1 Camera Setting               | 09 |
| 5. 2 Inteligence Setting          | 24 |
| 5. 3 Special Setting              | 34 |
| 5. 4 Factory set                  | 37 |
| 5. 5 System Reset                 | 37 |
| 6. SPECIFICATION                  | 38 |
| 6. 1 Mechanism Specification      | 38 |
| 6. 2 Camera Specification         | 39 |
| 7. DIMENSION                      | 40 |

# 1. PRECAUTIONS



## 1.1 Important Safety Instruction

---

- Read these instructions.
- Pay attention on all the warnings.
- Follow all instructions.
- Arbitrary disassembly will void product warranty.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not disassemble or insert foreign objects.
- Do not install near any heat sources such as radiation, heat registers, stoves, or other apparatus. (Including amplifiers) that produce heat.
- Do not aim the camera at the sun or any other strong light source.
- Do not install the camera in intermittent lighting environments.
- Only use attachments/accessories specified by the manufacturer.
- Use only with the 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.
- 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.
- Installation should be done only by qualified personnel and conform to all local codes.
- Installation should be done in a place strong enough to hold it.
- Use only installation methods and materials capable of supporting four times the maximum specified load.
- To prevent damage from water leakage when installing a mount outdoors on a roof or wall, apply sealant around the bolt holes between the mount and mounting surface.
- These instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.
- Only use replacement parts recommended by manufacturer.
- This manual is subject to change without notice for product improvement.

## 2. DISRIPTIONS

### 2.1 PACKAGE COMPONENTS



Camera body



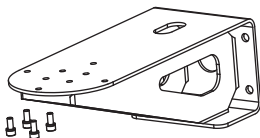
Sunshield/Sunshield bolt



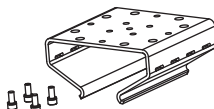
Rotation bracket



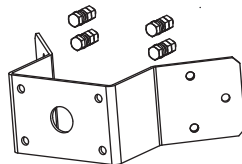
Seal fitting



Wall bracket(Optional)

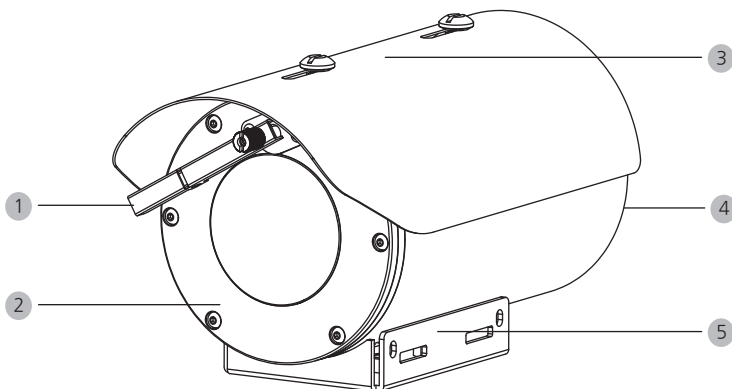


Pole bracket(Optional)



Corner bracket(Optional)

### 2.2 PART NAMES AND FUNCTIONS



1. Windshield Wiper : Wipes away water or dust on the camera screen.
2. Camera Housing : Camera module and windshield wiper system are installed in the main housing.
3. Sunshade : Protects the system from sunlight and unwanted reflections.
4. CableEntry : Attached on Seal fitting.
5. Screw for Grounding : Used to connect grounding wires.

### 3. OPERATION SETTING

Set the protocol, address and dipswitch before set the camera.



The manufacturer is not responsible for any problems after disassembling and reassembling by whom is not explosion-proof certificate holder or explosion-proof certificate approval company.

#### 3.1 EXTERNAL I/O (HD-SDI TYPE + IP TYPE)

RY1\_NO(White)  
RY1\_NC(Brown)  
RY1\_COM(Red)  
IP\_DO\_COM(Orange)  
IP\_DO\_NO(Blue)  
IP\_DO\_NC(Green)  
IP\_DIN(Brown)  
GND(Black)  
RS\_TRX+(Red)  
RS\_TRX-(Orange)  
RS\_TX+(Blue)  
RS\_TX-(Green)

MIC\_IN(Green)  
SPK\_OUT(White)  
GND(Black)  
ALARM1(Yellow)  
ALARM2(Orange)  
GND(Black)



HD-SDI(Blue)



CVBS(Yellow)



LAN



AC24V\_A(Red)



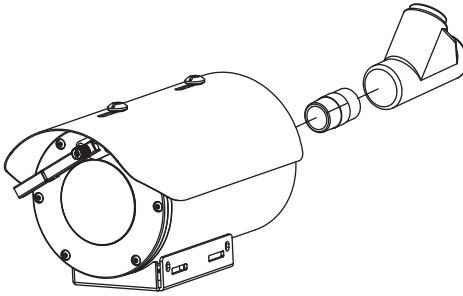
AC24V\_B(Black)

## 4. INSTALLATION

### Precautions before installation

Ensure you read out the following instructions before installing the camera:

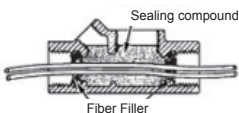
- Install the system based on the following directions. If you want to install using a different method, you should confirm the safety recommendations by making a request to the manufacturer in advance.
  - The gross weight of the system is 7 kg. Be careful when lifting the system, and put on proper anti-slip gloves.
  - It must be installed on the area (ceiling or wall) that can withstand 4 times the weight of the camera including the installation bracket.
  - Stuck-in or peeled-off cables can cause damage to the product or a fire.
  - For safety purposes, keep anyone else away from the installation site.
- And put aside personal belongings from the site, just in case.

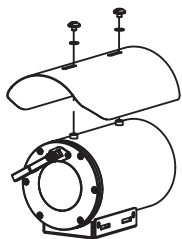


### How to install seal fitting in the cable entry

1. Install the conduit seal system according to the EN60079-14 standard.
2. Check items that are installed together with screws, conduit sealing parts, etc.
3. After connecting screws to the cable entry, tightly connect the seal fitting with an explosion-proof nipple.
4. Pass cables that are connected to the outside through the seal fitting. Conduit sealing parts should obtain ATEX certification.
5. Insert sealing parts by referring to the next figure.

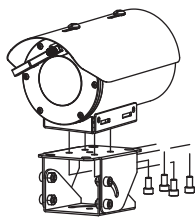
- Use sealing compounds that have obtained UL certification.





### How to install Sunshade

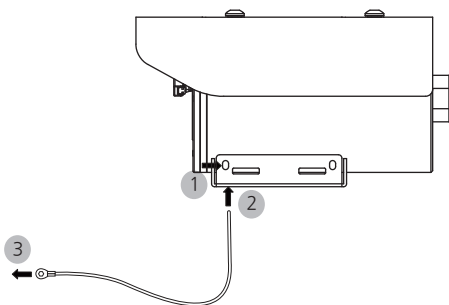
Connect the sunshade to the camera housing with screws using a wrench.



### How to install a rotation bracket on the system

1. Assemble the rotation bracket under the housing bracket using 3 or 4 screw bolts according to the angles.
2. Install the rotation bracket on the floor using screw bolts.

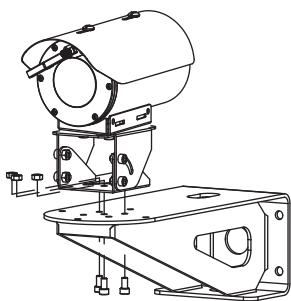
- When the camera is installed on a concrete floor, be sure to use an M8 anchor bolt.
- Use screws that can support at least 4 times the weight of the system.



### How to install the grounding wires

1. Insert the grounding wires into the cable terminal.
2. Fix the terminal using a cable clamping tool.
3. Connect the grounding cables with the external earthing rod.

- Do not disassemble the system while it is operating. You can disassemble the system for maintenance 30 minutes after the power is shut off.



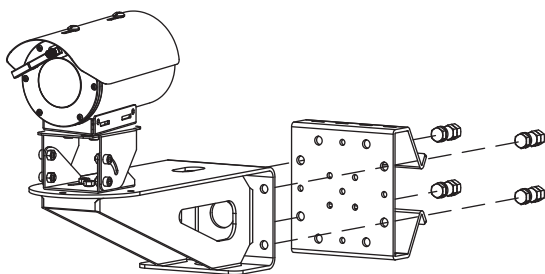
### How to install wall brackets on the system

1. Assemble the wall bracket under the rotation bracket using 4 screw bolts.
2. Install the wall bracket on the wall using screw bolts.

- When the camera is installed on a concrete floor, be sure to use an M12 anchor bolt.

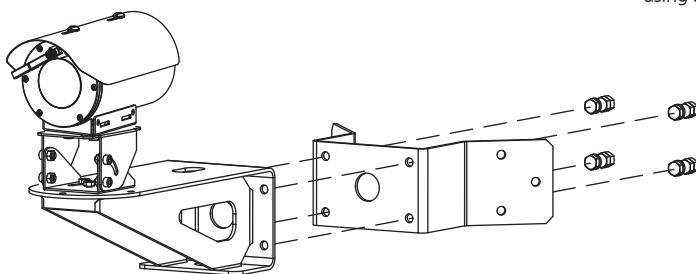
### How to install a pole bracket on the system

1. Assemble the pole bracket under the rotation bracket using 4 screw bolts.
2. Install the pole on the pole bracket using a steel band.



### How to install wall/pole brackets on the system

1. Assemble pole bracket sides with the wall bracket using a set of 4 bolts.
  - Bolt set M12 bolt X M12 spring washer X M12 nut (2EA)
2. Install the pole on the pole bracket using a steel band.



### How to install a corner bracket on the system

1. Assemble corner bracket sides with the wall bracket using a set of 4 bolts.
  - Bolt set M12 bolt X M12 spring washer X M12 nut (2EA)
2. Install the corner bracket on the wall using screw bolts.

- When the camera is installed on a concrete floor, be sure to use an M12 anchor bolt.



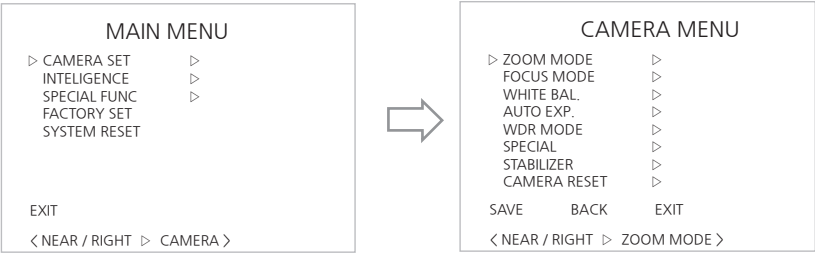
# 5. MAIN SETUP MENU

Camera menu subject to be changed without prior notice to upgrade and quality increase and we may use slip sheet for the change.

Please check the camera version and the slip sheet if the camera menu and this manual menu is not matched.

## 5.1 Camera Setting

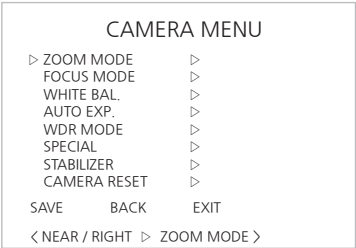
### CAMERA MENU



### CAMERA MENU

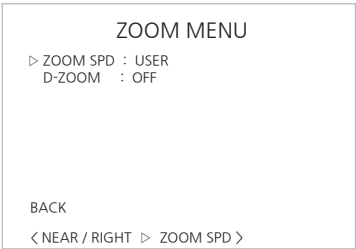
- Functions can be set-up using the Camera menu.
- In this menu, user can set the zoom, focus, white balance, auto exposure...etc functions.

#### 5.1.1 ZOOM MODE



Decide using of digital zoom function and select zoom speed.

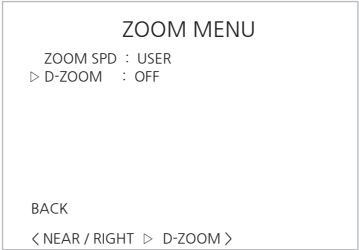
#### - ZOOM SPD



ZOOM SPD : Select from 0steps to 7 steps,  
USER (Standard speed)

Select :  JOYSTICK or  Set ON :  JOYSTICK Set OFF : 

- D-ZOOM

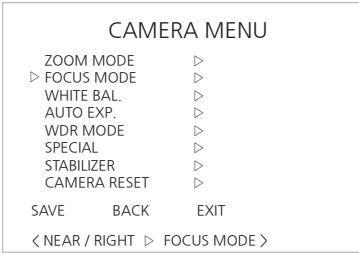


Decide using of digital zoom function.

D-ZOOM : ON/ OFF

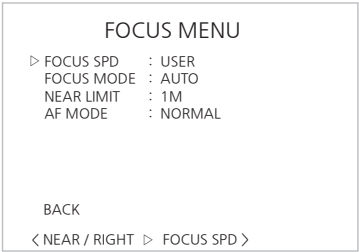
Select :  or  Set ON :  Set OFF : 

5. 1. 2 FOCUS MODE



In Focus menu, you can set up the focus speed, focus mode, near limit and AF mode.

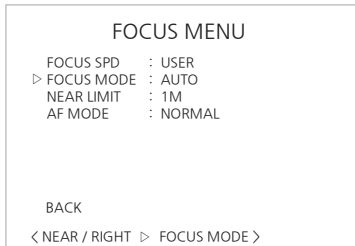
- FOCUS SPD



Set the speed for camera focusing. (0~7 USER)

Select :  or  Set ON :  Set OFF : 

## - FOCUS MODE



**AUTO** : The camera adjusts the focus automatically while monitoring the screen continuously in the auto mode. In the auto focusing mode, zoom key operation is not recognized as the input of the focus key.

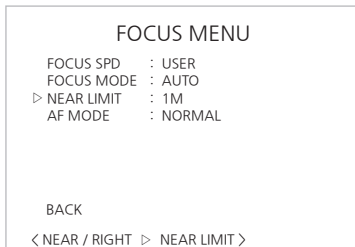
**MANUAL** : In the manual mode, users can adjust the camera focus manually.

**ONE PUSH** : Make focus with one push button and Zoom in/out operation.

**INFINITY** : infinity focus is the state where a lens forms an image of an object an infinite distance away. This corresponds to the point of focus for parallel rays.

Select :  or  Set ON :  Set OFF : 

## - NEAR LIMIT

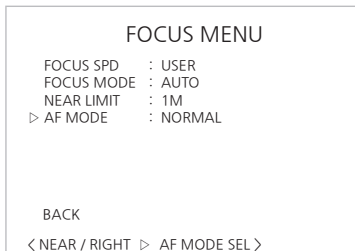


**Infinity focus** is the state where a lens forms an image of an object an infinite distance away.

This corresponds to the point of focus for parallel rays.  
 ( Over Infinity ~ 1.0CM)

Select :  or  Set ON :  Set OFF : 

## - AF MODE



Set the Auto Focus Mode.

Select :  or  Set ON :  Set OFF : 

AF MODE is work in the AUTO MODE only.

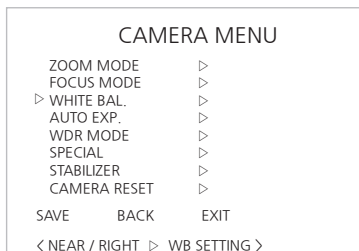
- **NORMAL** : AF is worked when the image is changed.

- **ZOOM** : AF is worked when the zoom rate is changed.

※ ZOOM features may vary by model.

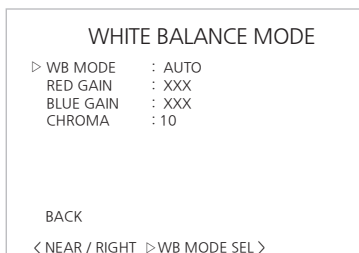
- **INTERVAL** : AF and AF STOP is repetively worked in settled time.

### 5. 1. 3 WHITE BALANCE



White balance setting is a function revising color temperature to resolve the problem that screen's colors change by the color temperature's difference according to time.

#### - WB MODE

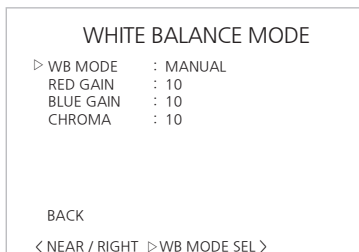


WB MODE: Set the color depend on white balance.  
WB MODE : Select AUTO, ONEPUSH, MANUAL, INDOOR, OUTDOOR or AUTO-EXT.

※ Set value depends upon the camera models.



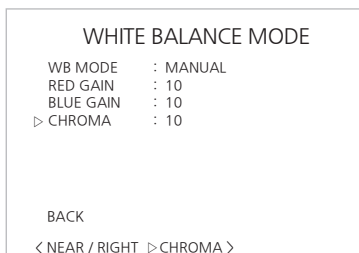
#### - WB MANUAL MODE



Adjust color level (RED, BLUE : 00~ 20)  
Standard level : RED -> 10 BLUE->10



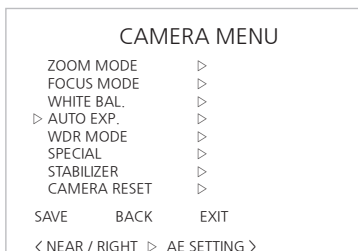
#### - WB CHROMA GAIN



Set WB Chroma Gain(00~ 20, Default : 10)

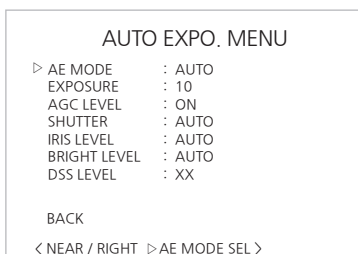


## 5. 1. 4 AUTO EXPOSURE

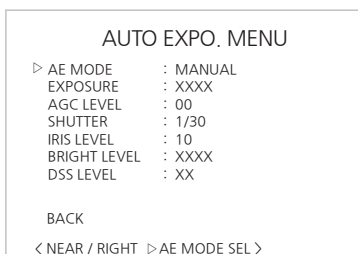


AE setting is a function adjusting shutter speed according to subject's brightness to get standard amount of exposed light.

### - AE MODE



Select AUTO, MANUAL, SHUTTER, IRIS or BRIGHT.



AE MODE setting can be changed in the MANUAL.

AGC LEVEL : Select 00~10

IRIS LEVEL : Select 00~13

- NTSC : 1/30 ~ 1/60000

- PAL : 1/25 ~ 1/60000

\* Set value depends upon the camera models.



### - EXPO MODE



Set the exposure. (00 ~20)



## - AGC LEVEL

| AUTO EXPO. MENU              |        |
|------------------------------|--------|
| AE MODE                      | : AUTO |
| EXPOSURE                     | : 10   |
| ▷ AGC LEVEL                  | : ON   |
| SHUTTER                      | : AUTO |
| IRIS LEVEL                   | : AUTO |
| BRIGHT LEVEL                 | : AUTO |
| DSS LEVEL                    | : XX   |
| BACK                         |        |
| < NEAR / RIGHT ▷ AGC LEVEL > |        |

If you set AUTO or IRIS in the AE MODE, you can set the AGC level from 00 to 10

※ Set value depends upon the camera models.

Select :  or  Set ON :  Set OFF : 

## - SHUTTER

| AUTO EXPO. MENU            |           |
|----------------------------|-----------|
| AE MODE                    | : SHUTTER |
| EXPOSURE                   | : 10      |
| AGC LEVEL                  | : ON      |
| ▷ SHUTTER                  | : 1/30    |
| IRIS LEVEL                 | : AUTO    |
| BRIGHT LEVEL               | : AUTO    |
| DSS LEVEL                  | : XX      |
| BACK                       |           |
| < NEAR / RIGHT ▷ SHUTTER > |           |

If you set SHUTTER in the AE MODE, you can control shutter speed.

- NTSC : 1/30 ~ 1/60000

- PAL : 1/25 ~ 1/60000

※ Set value depends upon the camera models.

Select :  or  Set ON :  Set OFF : 

## - IRIS LEVEL

| AUTO EXPO. MENU               |        |
|-------------------------------|--------|
| AE MODE                       | : IRIS |
| EXPOSURE                      | : 10   |
| AGC LEVEL                     | : ON   |
| SHUTTER                       | : AUTO |
| ▷ IRIS LEVEL                  | : 10   |
| BRIGHT LEVEL                  | : AUTO |
| DSS LEVEL                     | : XX   |
| BACK                          |        |
| < NEAR / RIGHT ▷ IRIS LEVEL > |        |

If you set IRIS in the AE MODE, you can set the IRIS level from 00 to 13

Select :  or  Set ON :  Set OFF : 

## - BRIGHT LEVEL

| AUTO EXPO. MENU                 |          |
|---------------------------------|----------|
| AE MODE                         | : BRIGHT |
| EXPOSURE                        | : XXXX   |
| AGC LEVEL                       | : XXX    |
| SHUTTER                         | : AUTO   |
| IRIS LEVEL                      | : XXXX   |
| ▷ BRIGHT LEVEL                  | : 10     |
| DSS LEVEL                       | : XX     |
| BACK                            |          |
| < NEAR / RIGHT ▷ BRIGHT LEVEL > |          |

To change bright level, select BRIGHT in AE MODE and set by NEAR key.

Set from 00 ~ 23.

Select :  or  Set ON :  Set OFF : 

## - DSS LEVEL

### AUTO EXPO. MENU

AE MODE : AUTO  
 EXPOSURE : 10  
 AGC LEVEL : ON  
 SHUTTER : AUTO  
 IRIS LEVEL : AUTO  
 BRIGHT LEVEL : AUTO  
 ▷ DSS LEVEL : x2

BACK

< NEAR / RIGHT ▷ DSS LEVEL >

Digital Slow Shutter : Control digital slow shutter speed.  
 - 2x ~ 64x

※ DSS LEVEL can be set when the AE MODE is set to AUTO or IRIS.

※ If you set OFF in the FLICKERLESS, you can set DSS level.

※ Set value depends upon the camera models.

Select :  JOYSTICK

or



Set ON :  JOYSTICK

Set OFF :

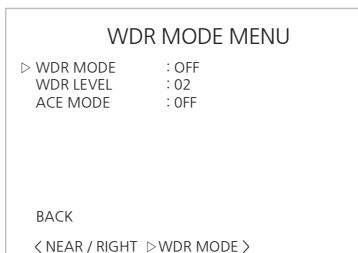


## 5. 1. 5 WDR MODE



Set WDR funtion.  
WDR(Wide Dynamic Range)

### - WDR MODE

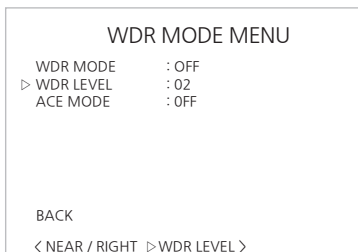


Select ON/OFF in the WDR MODE function.

※ When WDR MODE is ON, the analog is not output.



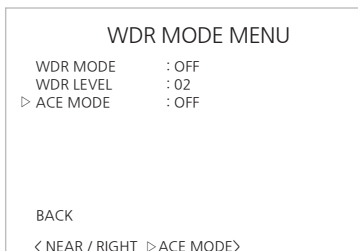
### - WDR LEVEL



Select WDR LEVEL.



### - ACE MODE



Select ON/OFF in the ACE MODE function.

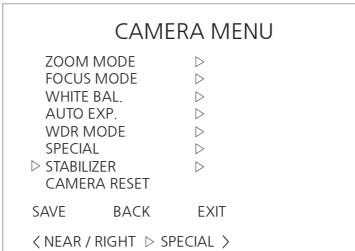
※ Defog function is disable in the ACE ON mode

※ Set value depends upon the camera models.





# 5. 1. 6 SPECIAL

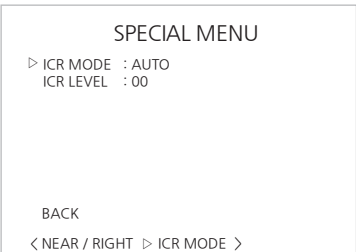


In the Special menu, it's available to set special function of the camera.

## - SPECIAL SUB



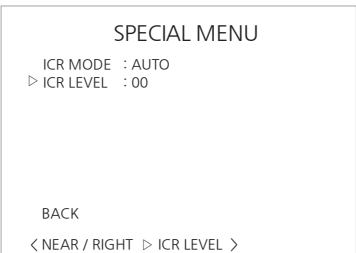
## - ICR MODE



Select AUTO, DAY and NIGHT.



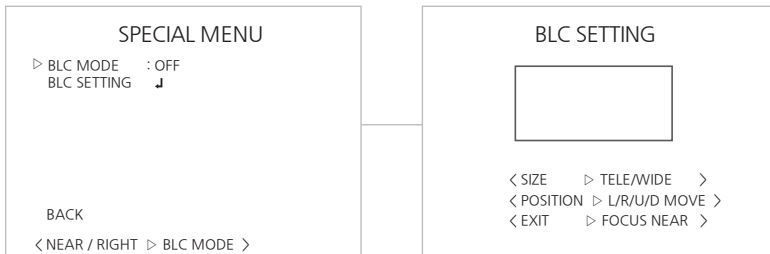
## - ICR LEVEL



Set ICR Value.(00~28



## - BLC MODE

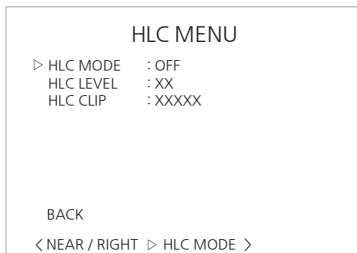


Select ON/OFF in the BACK LIGHT function.

\* If you set ON in the BACK LIGHT, you can set the BLC.

\* Position : Position setting depends upon the camera models.

## - HLC MODE

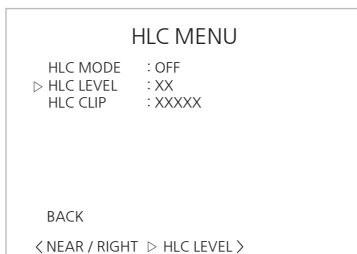


Select High Light Compensation.

When extremely bright light is projected to the camera masking is used on the portion to prevent partial saturation on the monitor.

Select :  or  Set ON :  Set OFF : 

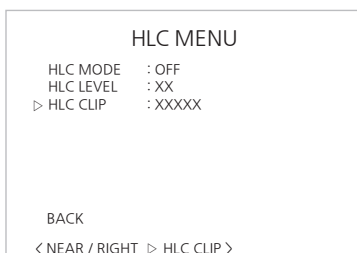
## - HLC LEVEL



HLC LEVEL : 0 ~ 20

Select :  or  Set ON :  Set OFF : 

## - HLC CLIP



BLK ~ MAG(Default : WHT)

Select :  or  Set ON :  Set OFF : 

## - MIRROR MODE



Set mirror or flip image mode.



## - FREEZE MODE



This function stops video.



## - IMAGE RANGE



Set the bit range of video image.(FULL, COMP, USER)



## - IMAGE LEVEL



If you set USER in the IMAGE RANGE, you can set the IMAGE level



## - SHARPNESS

**SP2 MENU**

▷ SHARPNESS : 07  
 DNR LEVEL : LEV2  
 DEFOG : OFF  
 FLICKERLESS : OFF  
 GAMMA LEVEL : 01

BACK

< NEAR / RIGHT ▷ SHARPNESS >

Select Sharpness.

Select :  or  Set ON :  Set OFF : 

## - DNR LEVEL

**SP2 MENU**

SHARPNESS : 07  
 ▷ DNR LEVEL : LEV2  
 DEFOG : OFF  
 FLICKERLESS : OFF  
 GAMMA LEVEL : 01

BACK

< NEAR / RIGHT ▷ DNR LEVEL >

DNR, Digital Noise Reduction funtion.  
 (OFF ~ AUTO, Default : LEV2)

Select :  or  Set ON :  Set OFF : 

## - DEFOG

**SP2 MENU**

SHARPNESS : 07  
 DNR LEVEL : LEV2  
 ▷ DEFOG : OFF  
 FLICKERLESS : OFF  
 GAMMA LEVEL : 01

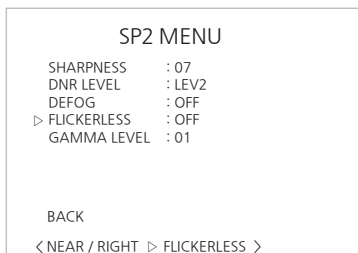
BACK

< NEAR / RIGHT ▷ DEFOG >

Defogging foggy video image.(ON/OFF)  
 (Disable in ACE MODE ON)

Select :  or  Set ON :  Set OFF : 

## - FLICKERLESS



Occurs flicker correction function in the Power frequency is different areas(50Hz/60Hz)

-Select ON, OFF or AUTO.

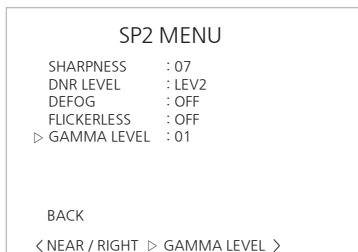
-AE MODE AUTO / IRIS MODE can be in control

※ If you set OFF in the FLICKERLESS, you can set DSS level.

※ Set value depends upon the camera models.

Select :  or  Set ON :  Set OFF : 

## - GAMMA LEVEL



Select GAMMA LEVEL.(0~3)

※ Set value depends upon the camera models.

Select :  or  Set ON :  Set OFF : 

### 5. 1. 7 STABILIZER

| CAMERA MENU                   |      |      |
|-------------------------------|------|------|
| ZOOM MODE                     | :    | ▷    |
| FOCUS MODE                    | :    | ▷    |
| WHITE BAL.                    | :    | ▷    |
| AUTO EXP.                     | :    | ▷    |
| WDR MODE                      | :    | ▷    |
| ▷ SPECIAL                     | :    | ▷    |
| STABILIZER                    | :    | ▷    |
| CAMERA RESET                  | :    | ▷    |
| SAVE                          | BACK | EXIT |
| ◁ NEAR / RIGHT ▷ STABILIZER ▷ |      |      |

Select Digital Image Stabilizer mode.

#### - STABILIZER MODE

| STABILIZER MODE                |   |      |
|--------------------------------|---|------|
| ▷ MODE                         | : | OFF  |
| RANGE                          | : | ---- |
| FILTER                         | : | ---- |
| AUTO C                         | : | ---- |
| BACK                           |   |      |
| ◁ NEAR / RIGHT ▷ MODE ON/OFF ▷ |   |      |

Set the Stabilizer mode.(ON/OFF)

Select :  or  Set ON :  Set OFF : 

#### - RANGE

| STABILIZER MODE              |   |     |
|------------------------------|---|-----|
| MODE                         | : | ON  |
| ▷ RANGE                      | : | 10% |
| FILTER                       | : | LOW |
| AUTO C                       | : | OFF |
| BACK                         |   |     |
| ◁ NEAR / RIGHT ▷ DIS RANGE ▷ |   |     |

Setting the image compensation range.(10%, 20%, 30%)

Select :  or  Set ON :  Set OFF : 

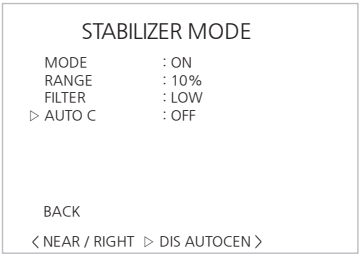
#### - FILTER

| STABILIZER MODE               |   |     |
|-------------------------------|---|-----|
| MODE                          | : | ON  |
| RANGE                         | : | 10% |
| ▷ FILTER                      | : | LOW |
| AUTO C                        | : | OFF |
| BACK                          |   |     |
| ◁ NEAR / RIGHT ▷ DIS FILTER ▷ |   |     |

Setting the sensitivity DIS function in worst case.  
(LOW, MIDDLE, HIGH)

Select :  or  Set ON :  Set OFF : 

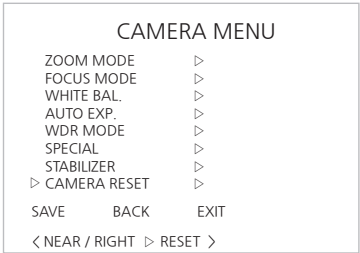
- AUTO C



Setting Auto Centering mode.(OFF, HALF, FULL)



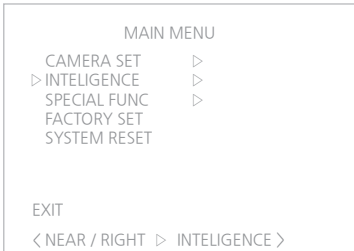
**5. 1. 8 CAMERA RESET**



Make initialize the setting value which is set in CAMERA MENU.



## 5.2 Intelligence Setting



### 5.2.1 Zoom Preset

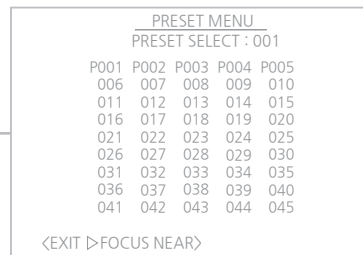
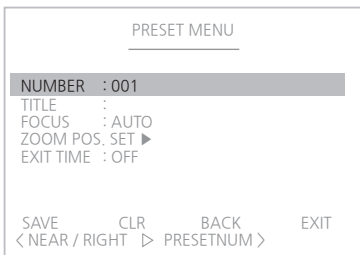


Preset function enables to move the specific zoom position that saved by user.  
Preset will be able to define 255 as maximum.

#### (1) Select the Preset number

P001 : Defined Preset number / 001 : Undefined Preset number

Move :  JOYSTICK      Select : 

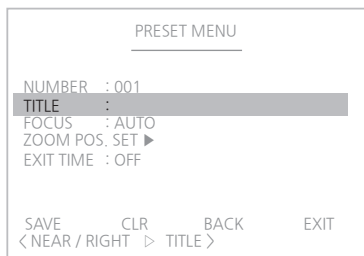




## (2) Set the Preset TITLE

Move :  or  Select :  or  Delete : 

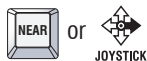
It's available to set the desired TITLE, displayed on the executing screen of Preset.



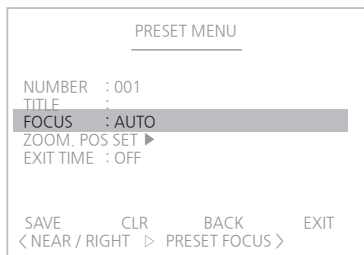
After the TITLE is set, push the NEAR button to exit.

## (3) Select the focus mode for Preset

### ① Select the Focus menu



### ② Move and set the Focus Menu

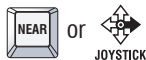


On focus menu, there are 3 modes  
 : AUTO, MANUAL, ONESHT.

\* Focus will be adjusted once after preset moving.

## (4) Define the Preset position

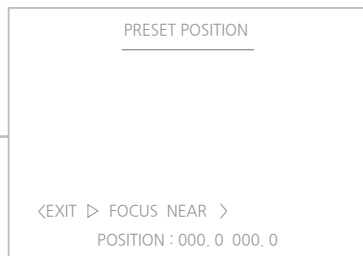
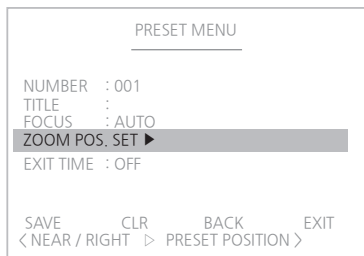
### ① Select the Position menu



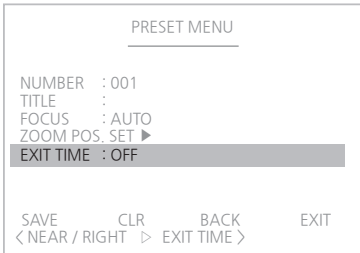
### ② Move and set the position







### ③ Set & Back



## (5) EXIT TIME



Setting the dwell time to exit Preset mode after completing Preset working.  
(OFF ~ 30MIN) ※ Default : 10SEC

Select :  or  Set ON :   
Set OFF : 



- (6) "Save" above setting Pattern data to the memory.
- (7) "CLR" means above setting Pattern data will not be saved and be cleared.
- (8) "BACK" means it goes back to the previous menu :Motion.
- (9) "EXIT" means it goes out of MENU.

5. 2. 2 Zoom Tour



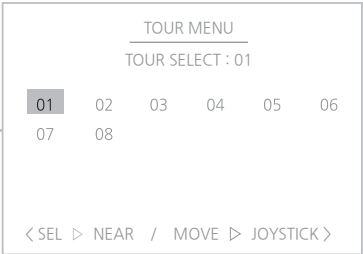
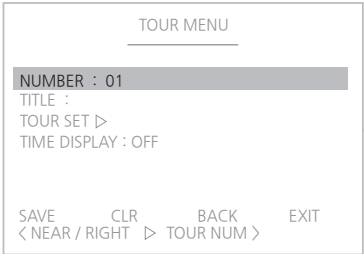
The Tour function consists of several presets run by turn. It is also adjusts the moving speed (1~63 step) and dwell time (1~99secs). Maximum of 8 Tour functions are toured in order.

(※ 1 Tour can be set for 15 presets. )

(1) Select the Tour number

T01 : Defined Tour number / 01 : Undefined Tour number

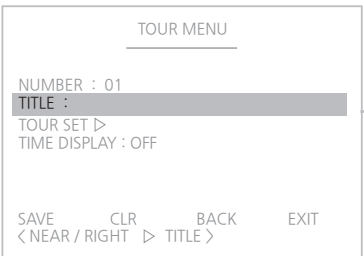
Move :  Select : 



(2) Set the Tour TITLE

Move :  Select :  or  Delete :  or 

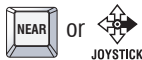
It's available to set the desired TITLE, displayed on the executing screen of Tour.



After the TITLE is set, push the NEAR button to exit.

### (3) Define the Preset position

① Move to the set-up window



TOUR MENU

NUMBER : 01  
TITLE :  
TOUR SET ▶  
TIME DISPLAY : OFF

SAVE CLR BACK EXIT  
< NEAR / RIGHT > TOUR SET >

② Move and set the position



TOUR EDIT (01)

| NO | PRESET | SPEED | DWELL |
|----|--------|-------|-------|
| 01 | ◀ 01   | 63    | 01    |
| 02 | ◀ 02   | 63    | 01    |
| 03 | XX     | XX    | XX    |
| 04 | XX     | XX    | XX    |
| 05 | XX     | XX    | XX    |
| 06 | XX     | XX    | XX    |
| 07 | XX     | XX    | XX    |
| 08 | XX     | XX    | XX    |

< SEL & NEAR PRESET & LEFT >  
< SEL & NEAR DELETE WIDE >

③ Set & Back



TOUR MENU

PRESET SELECT : 001

|      |      |      |      |      |
|------|------|------|------|------|
| P001 | P002 | P003 | P004 | P005 |
| 006  | 007  | 008  | 009  | 010  |
| 011  | 012  | 013  | 014  | 015  |
| 016  | 017  | 018  | 019  | 020  |
| 021  | 022  | 023  | 024  | 025  |
| 026  | 027  | 028  | 029  | 030  |
| 031  | 032  | 033  | 034  | 035  |
| 036  | 037  | 038  | 039  | 040  |
| 041  | 042  | 043  | 044  | 045  |

<EXIT > FOCUS NEAR >

### (4) Time Display

TOUR MENU

NUMBER : 01  
TITLE :  
TOUR SET ▶  
TIME DISPLAY : OFF

SAVE CLR BACK EXIT  
< NEAR / RIGHT > TIME DISPLAY >

Display the remain time of each Preset dwell time during Tour operation.(OFF / ON) ※ Default : OFF

Select : or

Set ON :

Set OFF :

TOUR MENU

NUMBER : 01  
TITLE :  
TOUR SET ▶  
TIME DISPLAY : OFF

SAVE CLR BACK EXIT  
< NEAR > DATA SAVE >

(5) “Save” above setting Pattern data to the memory.

(6) “CLR” means above setting Pattern data will not be saved and be cleared.

(7) “BACK” means it goes back to the previous menu :Motion.

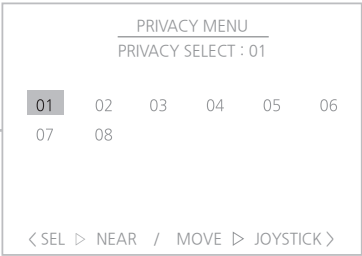
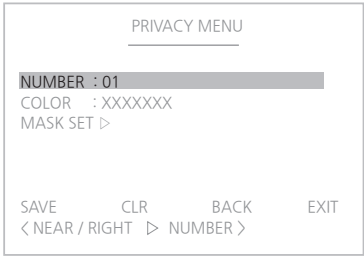
(8) “EXIT” means it goes out of MENU.

5. 2. 3 Privacy Mask

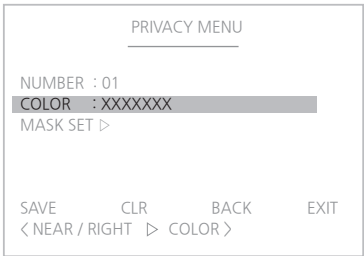


The Privacy Zone Masking function means that it sets the blocking territories to prevent camera functions for the privacy of personal reasons. Maximum of 8 Privacy Zone Masking functions are toured in order.

- (1) Select the Privacy Zone number  
R01 : Defined Alarm number / 01 : Undefined Alarm number



- (2) Color



WHITE, RED, GREEN, BLUE, CYAN, YELLOW, MAGENTA,  
BLACK, GRAY1~6

- (3) “Save” above settings of Privacy Zone data to the memory.
- (4) “CLR” means above setting of Privacy Zone data will not be saved and be cleared.
- (5) “BACK” means it goes back to the previous menu :Motion.
- (6) “EXIT” means it goes out of MENU.

PRIVACY MENU

NUMBER : 01  
COLOR : XXXXXXX  
MASK SET ▸

SAVE

CLR

BACK

EXIT

< NEAR ▸ DATA SAVE >

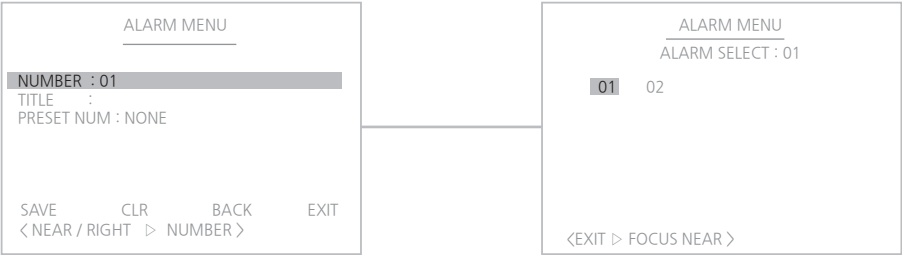
5. 2. 4 System Alarm



The Alarm function means that the camera moves to the programmed Preset position by the Alarm trigger. Maximum 2 Alarm functions are toured in order.

- (1) Select the Alarm number  
E01 : Defined Alarm number / 01 : Undefined Alarm number

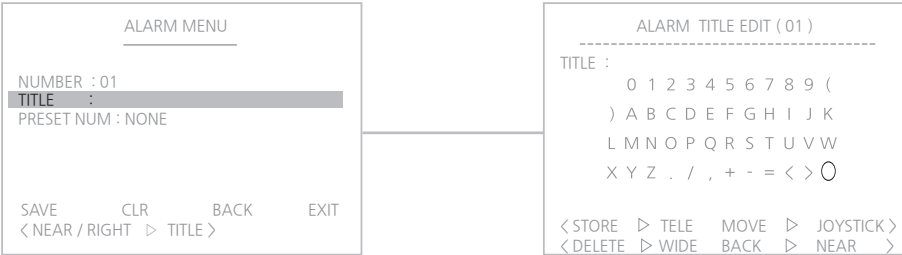
Move :  JOYSTICK      Select : 



- (2) Set the Alarm TITLE

Move :  JOYSTICK      Select :  or  JOYSTICK      Delete :  or  JOYSTICK

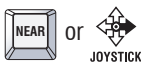
It's available to set the desired TITLE, displayed on the executing screen of Alarm.



After the TITLE is set, push the NEAR button to exit.

(3) Define the Preset position with Alarm trigger

- ① Select the “Preset Num”
- ② Move and set the position
- ③ Set & Back



ALARM MENU

NUMBER : 01

TITLE :

PRESET NUM : NONE

SAVE CLR BACK EXIT

< NEAR / RIGHT > > JOYSTICK >

ALARM MENU

PRESET SELECT : 001

|      |      |      |      |      |
|------|------|------|------|------|
| P001 | P002 | P003 | P004 | P005 |
| 006  | 007  | 008  | 009  | 010  |
| 011  | 012  | 013  | 014  | 015  |
| 016  | 017  | 018  | 019  | 020  |
| 021  | 022  | 023  | 024  | 025  |
| 026  | 027  | 028  | 029  | 030  |
| 031  | 032  | 033  | 034  | 035  |
| 036  | 037  | 038  | 039  | 040  |
| 041  | 042  | 043  | 044  | 045  |

<EXIT >FOCUS NEAR >

<SEL >NEAR /MOVE > JOYSTICK >

- (4) “Save” above setting Alarm data to the memory.
- (5) “CLR” means above setting Alarm data will not be saved and be cleared.
- (6) “BACK” means it goes back to the previous menu :Motion.
- (7) “EXIT” means it goes out of MENU

ALARM MENU

NUMBER : 01

TITLE :

PRESET NUM : NONE

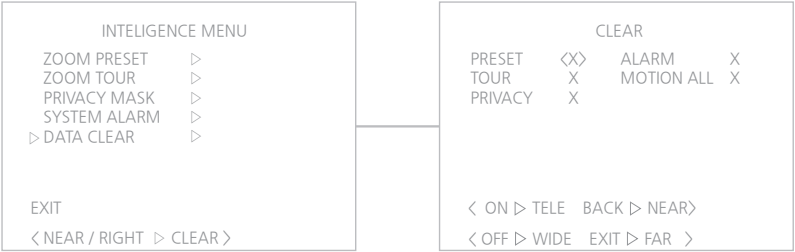
SAVE CLR BACK EXIT

< NEAR > > DATA SAVE >

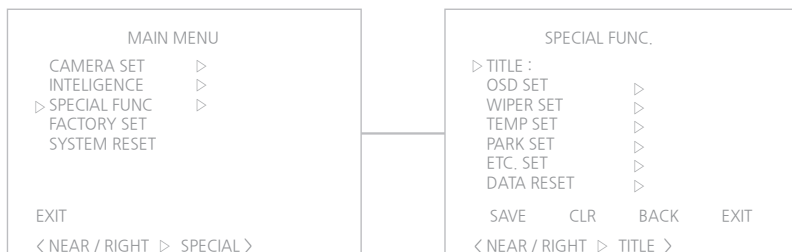


# 5. 2. 4 Data Clear

Clears the PTZ position and function value.



## 5.3 Special Setting



### 5.3.1 TITLE Set

**TITLE SET**

-----

TITLE :

0 1 2 3 4 5 6 7 8 9 (

) A B C D E F G H I J K

L M N O P Q R S T U V W

X Y Z . / , + - = < O

< STORE > TELE MOVE > JOYSTICK >

< DELETE > WIDE BACK > NEAR >

### 5.3.2 OSD ON/OFF Set

**OSD SET**

|        |     |         |   |
|--------|-----|---------|---|
| TITLE  | <o> | PRIVACY | o |
| ZOOM   | x   | ALARM   | o |
| PRESET | o   | ACTION  | x |
| TOUR   | o   |         |   |

< ON > TETLE MOVE > JOY >

< OFF > WIDE BACK > NEAR >

You can select the OSD ON to shown on the screen or clear by selecting OFF in this function.

### 5. 3. 3 WIPER Set

| WIPER SET                             |            |
|---------------------------------------|------------|
| WIPER MODE                            | : OFF MODE |
| WIPER INT. TIME                       | : XXXX     |
| WIPER ON TIME                         | : XXXX     |
| BACK<br>< NEAR / RIGHT > WIPER MODE > |            |

#### (1) WIPER MODE

Select ON MODE / OFF MODE / TIME SET to use the wiper function.  
(Default : OFF MODE)

#### (2) WIPER INTERVAL TIME

10SEC ~ 4HOUR

The wiper will be operated on as the time set on the interval.

\* The wiper will be operated during the time set on the Wiper On Time.

#### (3) WIPER ON TIME

1MIN ~ ALWAYS

The wiper will be operated during the time set on the Wiper On Time.

### 5. 3. 4 TEMPERATURE

It shows you the current temperature and you can also set the value manually.  
The compulsory Fan & Heater operation is a useful function to remove humidity.

| TEMP SET                           |          |
|------------------------------------|----------|
| HEATER ON                          | : 5 C    |
| ON TIME                            | : 30 MIN |
| HEATER OFF                         | : 30C    |
| FAN ON                             | : 50 C   |
| FAN OFF                            | : 40 C   |
| CURRENT TEMPER : 024.9             |          |
| BACK<br>< NEAR / RIGHT > ON TEMP > |          |

#### (1) HEATER ON

Set the operating temperature of the heater.(0~70℃)

#### (2) ON TIME

Set the operating time of the heater.

- By 10min. (10~60 min.)

#### (3) HEATER OFF

Set the temperature of heater OFF. (0~70℃)

#### (4) FAN ON

Set the operating temperature of the Fan. (0~70℃)

#### (5) FAN OFF

Set the temperature of Fan OFF. (0~70℃)

### 5. 3. 5 PARK MODE

| PARK SET                 |        |
|--------------------------|--------|
| ON/OFF                   | : ON   |
| TIME                     | : ---- |
| MOTION                   | : ---- |
| NUMBER                   | : ---- |
| BACK                     |        |
| < NEAR / RIGHT & ONOFF > |        |

This function enables to locate the camera to specific position automatically if operator doesn't operate the controller for a while.

- ON/OFF : ON/OFF
- TIME : 10sec~1 HOUR
- MOTION : PRESET / TOUR
- NUMBER
- PRESET : 1~255
- TOUR : 1~8

### 5. 3. 6 ETC

| ETC. SET                    |           |
|-----------------------------|-----------|
| ▷ VIDEO FORMAT              | : 1080p30 |
| POWER UP ACT.               | : OFF     |
| RESPONSE                    | : OFF     |
| BACK                        |           |
| < NEAR / RIGHT ▷ V-FORMAT > |           |

#### (1) HDSOI FORMAT

720p30(25) fps ~ 1080p30(25)

- \* Video format setting depends upon the models.
- \* Video format is not applied for analogue output.

#### (2) POWER UP

When this function is ON, the camera memorizes the latest action and restores, it from sudden power failure.

#### (5) RESPONSE TXD

When this function is ON, the camera memorizes the latest action and restores, it from sudden power failure.

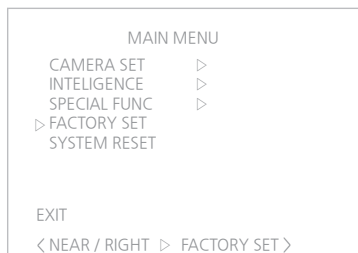
### 5. 3. 7 DATA RESET

| SPECIAL FUNC.            |      |
|--------------------------|------|
| TITLE :                  |      |
| OSD SET                  | ▷    |
| WIPER SET                | ▷    |
| TEMP SET                 | ▷    |
| PARK SET                 | ▷    |
| ETC. SET                 | ▷    |
| ▷ DATA RESET             | ▷    |
| SAVE                     | CLR  |
| BACK                     | EXIT |
| < NEAR / RIGHT ▷ TITLE > |      |

DATA initialization function.

## 5.4 Factory set

---



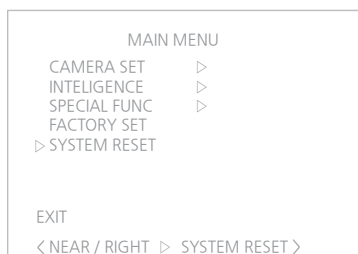
Clear the DOME, CAMERA and MOTION setting value.



Restore setting values to the factory default.  
All existing setting value will be erased.

## 5.5 System Reset

---



It is a reset function.

## 6. SPECIFICATION

### 6.1 Mechanism Specification

---

#### 6.1.1 MECHANICAL

- Weight : 5.2kg
- Dimensions Set : 140(W) x 151.8(H) x 270(D)

#### 6.1.2 ENVIRONMENTAL

- Construction : Stainless steel (SUS316L)
- Ingress Protection : IP68/IK10
- Operating Temp : -40°C to 60°C
- Humidity : 0% to 90% (non-condensing)
- Fan operate : 50°C on , 40°C off
- Heater operate : 5°C on , 30°C off

#### 6.1.3 FUNCTIONS

- Preset : 255 points
- Alarm : 2 alarm
- Privacy Zone : 8 block with title (Mask)
- Address : Up to 255 selectable ID(setting with Dip-switches)
- Data Communication Control : RS-485/ RS-422
- Protocol : Multiple Protocol (PELCO D/P, WTX, EZ)
- Baud rate : 2400, 4800, 9600, 19200, 38400, 57600, 115200 bps selectable

#### 6.1.4 ELECTRICAL

- Power : 24VAC, 2A
- Power Consumption : Max 48W

#### 6.1.5 USER CONNECTIONS

- Data communication connection : RS-422, 485 + / - Optional Control Data
- HD-SDI connection : BNC (BLUE)
- CVBS connection : BNC (YELLOW)
- Network connection : RJ45 Jack
- Alarm Inputs : 2 Programmable
- Relay : 2 Dry Contact Output Rating: 2A @30VAC
- MIC, Speaker

[Note] The default operating temperature of fan/heater may need to be changed depending on the installation environment.

## 6.2 Camera Specification

### 6.2.1 30x Camera

|                            |   |
|----------------------------|---|
| Image Sensor               | 1/3" Panasonic CMOS Sensor  |
| Total Pixels               | 1956 (H) x 1266 (V) = 2.48M Pixels  |
| Active pixels              | 1944 (H) x 1092 (V) = 2.12M Pixels  |
| Scanning system            | Progressive Scan  |
| Sync. System               | Internal  |
| Resolution                 | Digital : 1080p/30(25)fps, 720p/60(50)fps, 720p/30(25)fps<br>Analog : 700TVL                              |
| Min. illumination          | Color(1/30s) : 0.5 lux , BW(1/30s) : 0.1lux<br>Color DSS(1/7.5s) : 0.125 lux , BW DSS(1/7.5s) : 0.025 lux |
| Video Output               | NETWORK, CVBS   |
| S/N Ratio                  | more than 50dB (AGC off)  |
| Lens type                  | 30x Day & Night Zoom Lens   |
| Zoom Ratio                 | Optical 30x, Digital 32x Zoom   |
| Focal Length               | f = 4.3 mm ~ 129.0 mm   |
| Aperture Ratio             | F1.6 (wide) ~ F5.0 (tele)   |
| Focus                      | Mode / Distance / AF Mode   |
| Mode                       | Auto / One Push / Manual  |
| Distance                   | 0.1 / 1.0 / 3.0 / 6.0 / 10.0 m / Over   |
| Lens Refresh               | One Push  |
| E.Zoom                     | Off / MAX 2x ~ 32x  |
| Exposure                   | AUTO / IRIS.P / SHUT.P / MANUAL   |
| Shutter Speed              | 1/30(25) ~ 1/30,000 sec   |
| Iris                       | 0 ~ 20  |
| Digital Slow Shutter (DSS) | Off / 2x / 4x (/ 8x : 60 or 50 fps mode only)   |
| WDR/BLC                    | OFF / WDR / BLC   |
| Day&Night                  | Auto / Day / Night  |
| White Balance              | AUTO / One Push / Manual / Indoor / Outdoor   |
| DNR                        | Auto / Off / Low / Middle / High  |
| System                     | NTSC / PAL  |
| HD Format                  | 1080p/30(25)fps / 720p/30(25)fps / 720p/60(50)fps   |

\* Design and specifications are subject to change without notice.

## 7. DIMENSION

