INSTALLATION / OPERATING MANUAL

Rugged IR PTZ 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. INFORMATION FOR USER

1. 1   WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECTS THROUGH THE VENTILATION GRILLS OR OTHER OPENINGS ON THE EQUIPMENT.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

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

1. 2   EXPLANATION OF GRAPHICAL SYMBOLS

The lightning flash with an arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

1. 3   FCC COMPLIANCE STATEMENT

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

1. 4   CE COMPLIANCE STATEMENT

WARNING - This is a CLASS A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

CAUTION - Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

**This installation should be made by a qualified service person and should conform to all local codes.

* This manual is subject to change without notice for product improvement.

2. PRECAUTIONS

■ **Do not install the camera in extreme temperature conditions.**
Do use the camera under conditions where temperatures are within -20°C to 60°C (in continuous operation). Under high temperatures, ensure proper ventilation.

■ **Do not install or use the camera in an environment where the humidity is high.**
It can cause the image quality to be poor.

■ **Do not install the camera under unstable lighting conditions.**
Severe lighting change or flicker can cause the camera to work improperly.

■ **Never use the camera close to a gas or oil leak.**
It can cause malfunctions to occur.

■ **Do not disassemble the camera.**
There are no user-serviceable parts inside it.

■ **Do not drop the camera or subject them to physical shocks.**
It can cause malfunctions to occur.

■ **Do not allow direct sunlight into the camera.**
It can damage CCD.

■ **Do not expose the camera to rain or spill beverages on it.**
If it gets wet, wipe it dry immediately. Liquids can contain minerals that corrode the electronic components.

■ **To prevent electric shock and risk of fire hazards.**

■ **Do not use power sources other than that specified.**

■ **If there are strong radio waves (ex: radio, antenna, ETC ..) around this product, it may affect the function of the product.**

■ **Note**
If the camera is exposed to spotlight or object reflecting the strong light, smear or blooming may occur.
Please check the power whether it satisfies the normal specification before connecting the camera.

3. FEATURES

Unobstructed 360˚rotation and 120 ˚flip

Heavy-duty long life slip ring allows for 360˚endless panning and unobstructed 120˚flip.

Light Function

It's built-in 14 pcs Super IR LED(W.LED).

Built-in Fan & Heater

Built-in Wiper System

True Day & Night (ICR Filter Change)

The IR cut filter is when the camera is operating as a color camera for precise color reproduction. With ICR, the filter is removed which allows for much greater light sensitivity in monochrome mode.

OSD (On Screen Display)

The camera IDs, camera preset numbers, preset names, area names, and camera operation status are displayed on the monitor, allowing set up of various camera functions through the OSD menu screen.

Auto-focus 36X Optical Zoom

The built-in 36X optical zoom lens with auto-focus is combined with a 32X digital zoom, providing a maximum of 1152X zoom.

Wide Range Auto functions

Preset : Up to 255 programmable presets.
Tour : Up to 8 programmable Tours consisting of presets with individual dwell time.
Scan : Repeatedly pan & tilt operating between two positions. (Max.8)
Pattern : Up to 4 programmable Patterns memorizing the PTZ movement.
Area : Up to 16 programmable Area display sets.
Alarm : Move the camera to programmed Preset position with Alarm trigger.(Max.1)
Privacy: Up to 8 programmable Privacy masking.
Home Postion : Home Postion specify the main image display area.

WDR (Wide dynamic range)

The Camera delivers clear, high quality pictures even in backlight, by increasing exposure in dark areas while decreasing it in bright areas a corrected image with clear details results.

Variable speed Pan/Tilt control

In manual mode, sophisticated operating is possible at zoom in state by speed correcting function.

Eco-friendly Green Energy product

Minimize power consumption and save the earth by utilizing the WTK Series all-in-one camera system.

4. SETTING & INSTALLATION

4.1 Unpacking
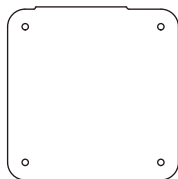
Installation Guide   Manual   Wiper
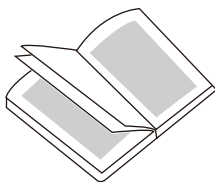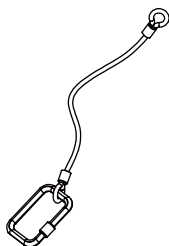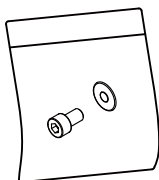
BOLT&WASHER

Detaching Hook   Accessories

Option

1.AC SUPPLY
2.DC SUPPLY
3.Not included
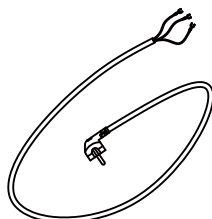
This power cable only comes with DC power supply.

Switched-Mode Power Supply   POWER CABLE

4. 2   DIP Switch Setting

Before starting up the camera, set the protocol, camera address and details with dip-switches referring to the following.
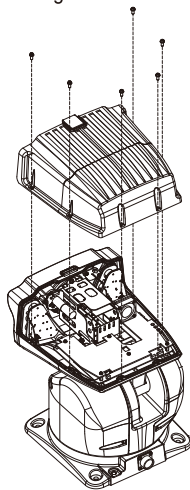
Before operating the camera, open the HEAD TOP COVER and configure the communication setup using dip switch.

1. Use the screwdriver to disassemble
   (SUS, MS PH (+) / M4 * 10) BOLT.
2. Open the HEAD TOP COVER to set the DIP switch.

Camera ID (ADDRESS)
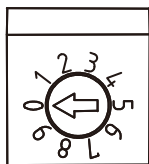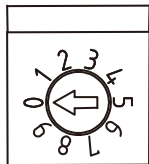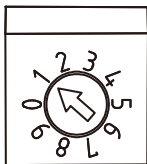
S3   S2   S1

S1 : 1 digit of ID
S2 : 10 digit of ID
S3 : 100 digit of ID
Ex) : S3 = 0 / S2=0 / S1=1
Address = 001

Each camera must have a unique address(ID). Identical ID's on the same line may damage the control circuit caused by an electric short.

Protocol, Baudrate, Camera setting

1	2	3	PROTOCOL
OFF	OFF	OFF	PELCO-D
OFF	OFF	ON	PELCO-P
OFF	ON	OFF	WTX
OFF	ON	ON	EZP
ON	OFF	OFF	NC
ON	OFF	ON	NC
ON	ON	OFF	NC
ON	ON	ON	NC
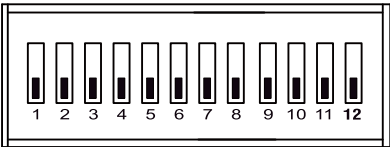
4	5	6	BAUDRATE
OFF	OFF	OFF	2400
OFF	OFF	ON	4800
OFF	ON	OFF	9600
OFF	ON	ON	19200
ON	OFF	OFF	38400
ON	OFF	ON	57600
ON	ON	OFF	115200
ON	ON	ON	NC

7	RSMODE
OFF	RS-422
ON	RS-485

9	RS LOOP
OFF	OFF
ON	ON

11	12	PARITY
OFF	OFF	NONE
OFF	ON	EVEN
ON	OFF	ODD
ON	ON	NONE

8	NTSC/PAL
OFF	NTSC
ON	PAL

10	IP SELECT
OFF	IP OFF
ON	IP ON

4. 3 Cable Connection

4. 3. 1 Basic Diagram of Cable Connection
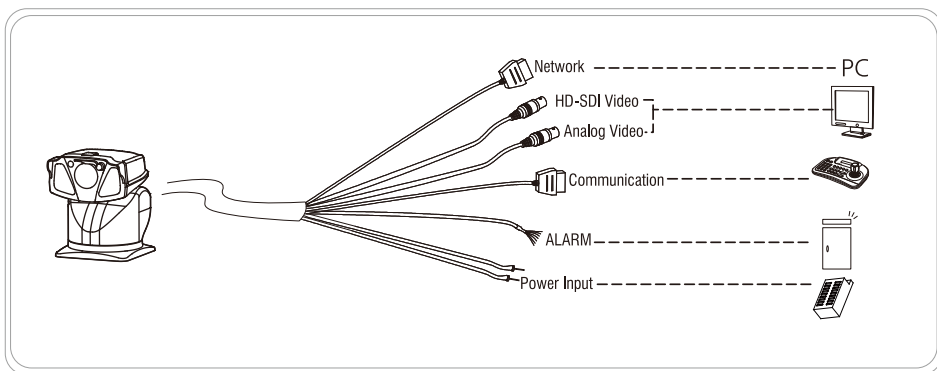
4. 3. 2 Video Output Connection
Connect the video out (BNC) to the monitor or HD SDI video input of DVR.

4. 3. 3 RS-485 / RS-422 Communication Connection
It can be remotely controlled by an external device or control system, such as a control keyboard or DVR, using RS-485 half-duplex, RS-422 duplex or simplex serial communication signals.
After inserting 4pin communication terminal of accessory package to green port of main cable, connect marked RX+, RX- to TX+ and TX- of the RS-485 control system. If control system is RS-422, connect TX+,TX- of controller to RX+ and RX- of the camera. And also connect the TX+, TX- of camera to RX+, RX- of the control device respectively. Total length of the cable for communication should not exceed 1.2Km.

4. 3. 4 Alarm Connection
It can operate specific motion receiving external Alarm Device(Sensor) signal(Max 1 Alarm.)
Connect the alarm cable to external Alarm Device referring to below, directions.
- Black color line : Ground / Red color lines : Alarm 1

4. 3. 5 Power Connection
- Connect the 2 lines of power cable to the AC terminal of SMPS.
- Connect the main cable to the SMPS terminal.

Main cable	SMPS
Red	+ (Red)
Black	- (Black)

- Connect the power of DC12~24/AC24 to this camera.
- Use certified Class 2 power supply transformers only.

4. 4 Installation

- The following steps of installation and connection work should only be done by qualified service personnel or system installers and should conform to all local codes.
- Be sure to switch the camera off before installation is completed.
- Do not install the camera near the air outlet of an air conditioner.
- Before installation, set camera system with Dip-switches on the 8 pages.

1
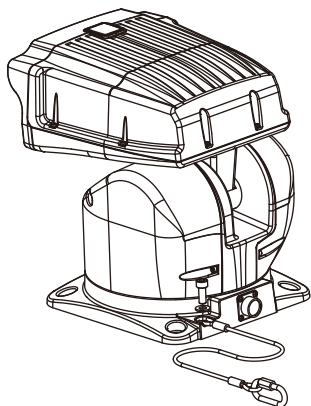
Use the M8 bolts and washers included in the product to connect the safety hooks to the base of the product and the product.

2
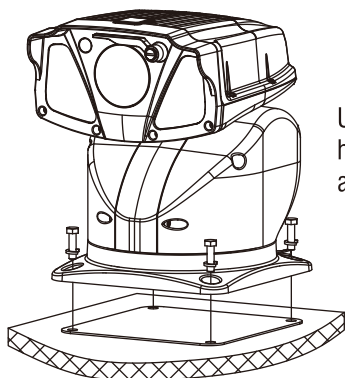
Using the attached guide sticker, make four M8 screw holes in the proper position and assemble with M8 bolts and spring washers.

4. 5 Basic Configuration

RX+ RX- TX+ TX-

HD-SDI

RS-485
INPUT

Multi-Converter

RS-232

RS-485
OUTPUT

DVR

HD-SDI Out
Monitor

Keyboard Controller
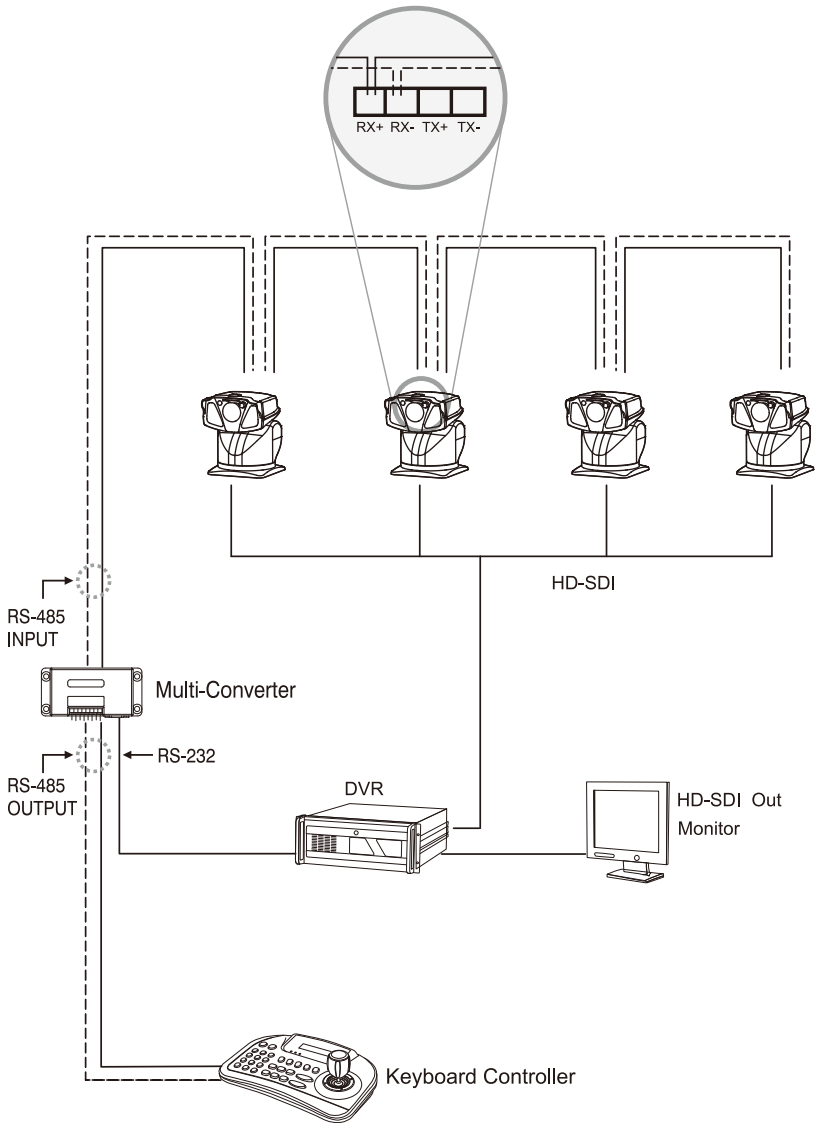
5. MAIN SETUP MENU

5. 1   Initialize

When the device is powered on, you can check the address,
version, protocol and video setting values.

```
                   INITIALIZE
PTZ ID        : 001
VERSION       : X. XX
D-OUTPUT      : 1080p30/NTSC

PROTOCOL      : IP PROTOCOL
CONTROL       : PELCO D, RS-422
BAUDRATE      : 2400, N, 1, L-OFF
CAMERA        : MMC

 ▷ PAN INIT    . . . .      OK
 ▷ TILT INIT    . . . .      OK
 ▷ NORMAL SETTING WAIT . .
```

5. 2   Motion Setting

5. 2. 1   Preset

```
              MAIN MENU
              ─────────

MOTION          ▶
DOME            ▷
CAMERA          ▷
CLEAR           ▷
FACTORY SET
PTZ RESET


   EXIT
< NEAR / RIGHT   ▷  MOTION >
```

```
              MOTION MENU
              ───────────

PRESET          ▶
TOUR            ▷
SCAN            ▷
PATTERN         ▷
AREA            ▷
ALARM           ▷
PRIVACY         ▷
HOME POS ▷
 BACK                    EXIT
< NEAR / RIGHT   ▷  PRESET >
```
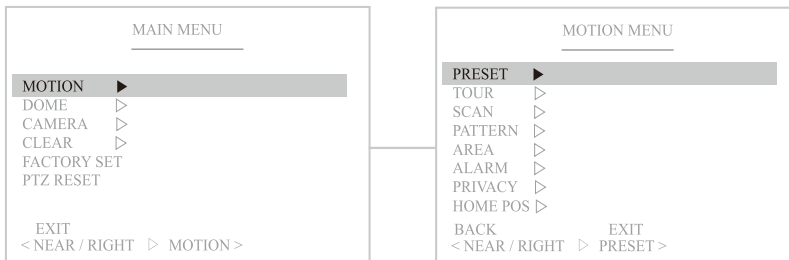
The preset function is that the camera memorizes positions of the pan/tilt and zoom.
This function is a representative function of the speed dome which can find memorized
preset positions just by selecting the preset No. A Maximum of 255 Preset positions are toured in order.

(1) Select the Preset number
    P001 : Defined Preset number / 001 : Undefined Preset number

    Move :   JOYSTICK   Select :   NEAR

```
              PRESET MENU
              ───────────

NUMBER    : 001
TITLE       :
FOCUS       : AUTO
POSITION SET ▶
EXIT TIME  : OFF
EXTEND SET ▶


 SAVE        CLR        BACK        EXIT
< NEAR / RIGHT   ▷  PRESETNUM >
```

```
           PRESET MENU
         PRESET SELECT (1)
        001  002  003  004  005
        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
     <SEL ▷NEAR /MOVE & JOYSTICK>
     <EXIT ▷FOCUS NEAR>
```
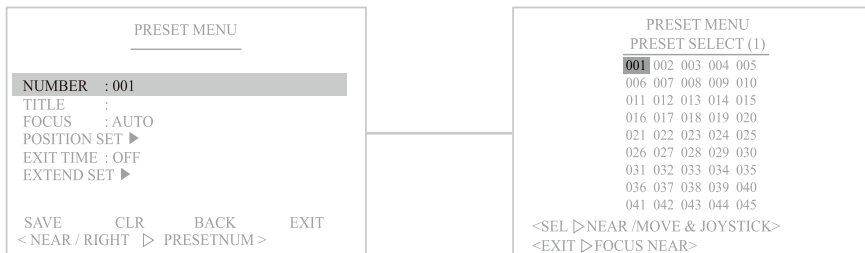
(2) Set the Preset TITLE

Move : [JOYSTICK]   Select : [TELE] or [JOYSTICK]   Delete : [WIDE] or [JOYSTICK]

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

```
              PRESET MENU
              ───────────

  NUMBER   : 001
  TITLE        :
  FOCUS       : AUTO
  POSITION SET ▶
  EXIT TIME  : OFF
  EXTEND SET ▶

   SAVE         CLR        BACK         EXIT
  < NEAR / RIGHT    ▷  TITLE >
```

```
            PRESET TITLE EDIT
  ----------------------------------------
  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 .  / ,  + - = < > @

  < STORE   ▷  TELE      MOVE    ▷   JOYSTICK >
  < DELETE  ▷ WIDE     BACK     ▷    NEAR     >
```
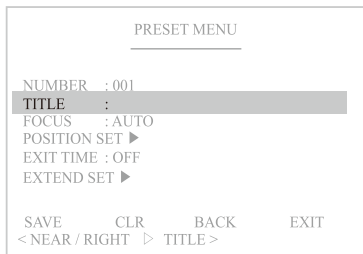
After the TITLE is set, push the NEAR button to exit.

(3) Select the focus mode for Preset

① Select the Focus menu

[NEAR] or [JOYSTICK]
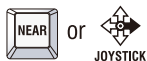
② Move and set the Focus Menu

[JOYSTICK]

```
              PRESET MENU
              ───────────

  NUMBER    : 001
  TITLE        :
  FOCUS       : AUTO
  POSITION SET ▶
  EXIT TIME  : OFF
  EXTEND SET ▶


   SAVE         CLR        BACK         EXIT
  < NEAR / RIGHT    ▷   PRESET FOCUS >
```
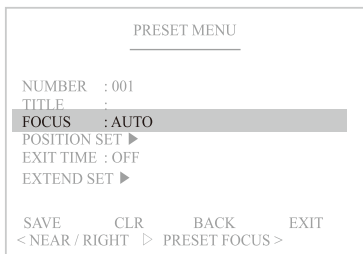
On focus menu, there are 3 modes : AUTO, MANUAL, ONESHT. It allows detailed settings for the preset.

(4) Define the Preset position

① Select the Position menu

[NEAR] or [JOYSTICK]

② Move and set the position

[JOYSTICK]

③ Set & Back

[NEAR]

```
              PRESET MENU
              ───────────

  NUMBER    : 001
  TITLE        :
  FOCUS       : AUTO
  POSITION SET ▶
  EXIT TIME  : OFF
  EXTEND SET ▶

   SAVE         CLR        BACK         EXIT
  < NEAR / RIGHT    ▷   PRESET POSITION >
```

```
             PRESET POSITION
             ───────────




       < EXIT  ▷  FOCUS  NEAR  >
             POSITION : 000. 0  000. 0
```

13

(5) EXIT TIME
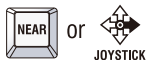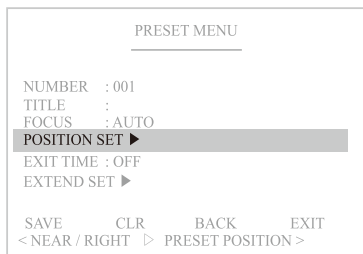
```
              PRESET MENU
              _____

 NUMBER    : 001
 TITLE       :
 FOCUS      : AUTO
 POSITION SET ▶
 EXIT TIME  : OFF
 EXTEND SET ▶


  SAVE        CLR        BACK        EXIT
 < NEAR / RIGHT   ▷   EXIT TIME >
```

Setting the dwell time to exit Preset mode after
completing Preset working.
(OFF/5SEC/10SEC/20SEC/30SEC/1MIN/5MIN/10MIN/30MIN)
※ Default : OFF

Select : [JOYSTICK] or [NEAR]   Set ON : [JOYSTICK] Set OFF : [NEAR]

(6) EXTEND SET

```
              PRESET MENU
              _____

 NUMBER    : 001
 TITLE       :
 FOCUS      : AUTO
 POSITION SET ▶
 EXIT TIME  : OFF
 EXTEND SET ▶


  SAVE        CLR        BACK        EXIT
 < NEAR / RIGHT   ▷   EXTEND SET >
```
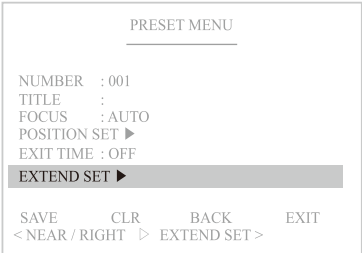
Set the addtional preset functions.

AE MODE

```
              PRESET MENU
              _____

 AE MODE  :  PASS
 SHT SPD  :  -------
 IRIS SET  :  -----
 WDR SET  :  PASS
 ICR SET  :  PASS
 ICR RT : 10SEC
 LIGHT SET  :  PASS
 WIPER SET  :  PASS

 BACK
 < NEAR / RIGHT   ▷   PRESET AE >
```
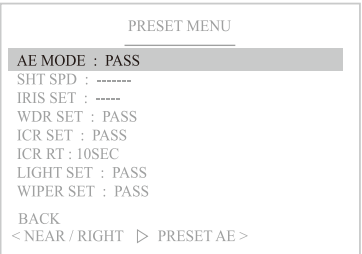
Select AUTO, SHUTTER, IRIS and PASS MODE.

Select : [JOYSTICK] or [NEAR]   Set ON : [JOYSTICK] Set OFF : [NEAR]

SHUTTER SPD

```
              PRESET MENU
              _____

 AE MODE  :  SHT Pri.
 SHT SPD  :  1/60
 IRIS SET  :  -----
 WDR SET  :  PASS
 ICR SET  :  PASS
 ICR RT : 10SEC
 LIGHT SET  :  PASS
 WIPER SET  :  PASS

 BACK
 < NEAR / RIGHT   ▷   PRESET SHT >
```
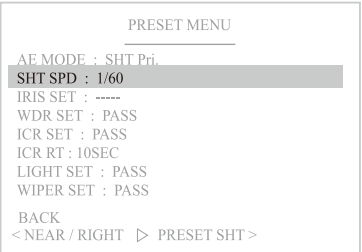
Set shutter speed in the AE MODE.

Select : [JOYSTICK] or [NEAR]   Set ON : [JOYSTICK] Set OFF : [NEAR]

IRIS SETTING

```
              PRESET MENU
              ──────────
 AE MODE  :  IRIS Pri.
 SHT SPD  :  -------
 IRIS SET  :  00
 WDR SET  :  PASS
 ICR SET  :  PASS
 ICR RT : 10SEC
 LIGHT SET  :  PASS
 WIPER SET  :  PASS

 BACK
 < NEAR / RIGHT   ▷   PRESET IRIS >
```

Set IRIS value in the AE MODE. (0~13)

Select : [JOYSTICK]   or [NEAR]   Set ON : [JOYSTICK]   Set OFF : [NEAR]

WDR ON/OFF

```
              PRESET MENU
              ──────────
 AE MODE  :  PASS
 SHT SPD  :  -------
 IRIS SET  :  -----
 WDR SET  :  PASS
 ICR SET  :  PASS
 ICR RT : 10SEC
 LIGHT SET  :  PASS
 WIPER SET  :  PASS

 BACK
 <NEAR / RIGHT   ▷   PRESET WDR>
```

Set WDR funtion.

Select PASS, ON and OFF.

Select : [JOYSTICK]   or [NEAR]   Set ON : [JOYSTICK]   Set OFF : [NEAR]

ICR SETTING

```
              PRESET MENU
              ──────────
 AE MODE  :  PASS
 SHT SPD  :  -------
 IRIS SET  :  -----
 WDR SET  :  PASS
 ICR SET  :  PASS
 ICR RT : 10SEC
 LIGHT SET  :  PASS
 WIPER SET  :  PASS

 BACK
 <NEAR / RIGHT   ▷   PRESET ICR>
```

Select PASS, DAY, NIGHT and AUTO in the IR LED.

Select : [JOYSTICK]   or [NEAR]   Set ON : [JOYSTICK]   Set OFF : [NEAR]

ICR RT SETTING

```
              PRESET MENU
              ──────────
 AE MODE  :  PASS
 SHT SPD  :  -------
 IRIS SET  :  -----
 WDR SET  :  PASS
 ICR SET  :  PASS
 ICR RT : 10SEC
 LIGHT SET  :  PASS
 WIPER SET  :  PASS

 BACK
 <NEAR / RIGHT   ▷   PRESET ICR RT>
```

After checking an image, Set IR synchronization time.

(Factory default is 10SEC)

Select : [JOYSTICK]   or [NEAR]   Set ON : [JOYSTICK]   Set OFF : [NEAR]

LIGHT ON/OFF

```
              PRESET MENU
            ──────────────
 AE MODE  :  PASS
 SHT SPD  :  -------
 IRIS SET  :  -----
 WDR SET  :  PASS
 ICR SET  :  PASS
 ICR RT : 10SEC
 LIGHT SET  :  PASS
 WIPER SET  :  PASS

 BACK
 <NEAR / RIGHT   ▷   PRESET LIGHT>
```

Select PASS, ON and OFF.

Select : [JOYSTICK]   or   [NEAR]   Set ON : [JOYSTICK]   Set OFF : [NEAR]

WIPER ON/OFF

```
              PRESET MENU
            ──────────────
 AE MODE  :  PASS
 SHT SPD  :  -------
 IRIS SET  :  -----
 WDR SET  :  PASS
 ICR SET  :  PASS
 ICR RT : 10SEC
 LIGHT SET  :  PASS
 WIPER SET  :  PASS

 BACK
 <NEAR / RIGHT   ▷   PRESET WIPER>
```
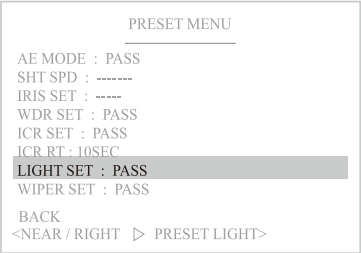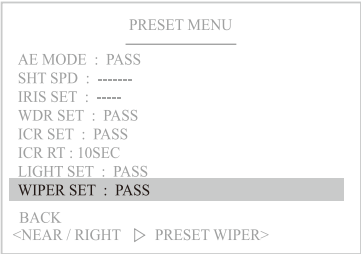
Select PASS, ON and OFF.

* It works when WIPER of DOME MENU is activated as ON MODE.

Select : [JOYSTICK]   or   [NEAR]   Set ON : [JOYSTICK]   Set OFF : [NEAR]

```
              PRESET MENU
            ──────────────

 NUMBER    : 001
 TITLE       :
 FOCUS       : AUTO
 POSITION SET ▶
 EXIT TIME  : OFF
 EXTEND SET ▶

  SAVE         CLR        BACK         EXIT
 < NEAR ▷  DATA SAVE >
```

(7) "Save" above setting Pattern data to the memory.

(8) "CLR" means above setting Pattern data will not be

     saved and be cleared.

(9) "BACK" means it goes back to the previous

      menu :Motion.

(10) "EXIT" means it goes out of MENU.

5. 2. 2   Tour

```
                    MAIN MENU
                   _____

 MOTION        ▶
 DOME          ▷
 CAMERA        ▷
 CLEAR         ▷
 FACTORY SET
 PTZ RESET


  EXIT
 < NEAR / RIGHT   ▷  MOTION >
```

```
                   MOTION MENU
                   _____

 PRESET        ▷
 TOUR          ▶
 SCAN          ▷
 PATTERN       ▷
 AREA          ▷
 ALARM         ▷
 PRIVACY       ▷
 HOME POS ▷
  BACK              EXIT
 < NEAR / RIGHT   ▷  TOUR >
```
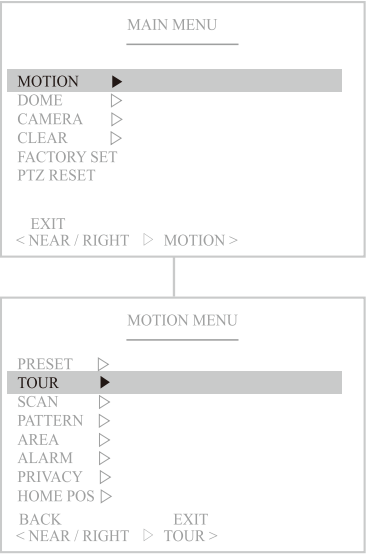
Tour Quick Operating Guide

Set Tour   :   71~78 + [PRESET] 3sec.

Set Tour   :   1~8   + [TOUR] 3sec.

Go to Tour   :   71~78 + [PRESET]

Go to Tour   :   1~8   + [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 16 presets.)

(1) Select the Tour number
    T01 : Defined Tour number / 01 : Undefined Tour number

Move :   [JOYSTICK]   Select :   [NEAR]
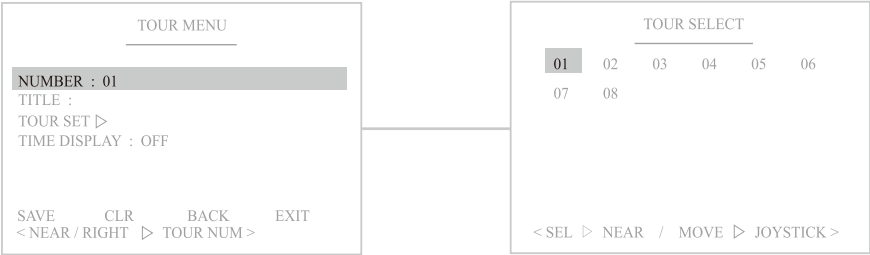
```
                   TOUR MENU
                   _____

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


 SAVE       CLR       BACK       EXIT
 < NEAR / RIGHT   ▷  TOUR NUM >
```

```
                   TOUR SELECT
                   _____

  01     02      03      04      05      06
  07      08




 < SEL  ▷  NEAR   /   MOVE  ▷  JOYSTICK >
```

(2) Set the Tour TITLE

Move : [JOYSTICK]   Select : [TELE] or [JOYSTICK]   Delete : [WIDE] or [JOYSTICK]

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

```
                TOUR MENU
              _____

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



  SAVE        CLR        BACK        EXIT
  < NEAR / RIGHT   ▷  TOUR TITLE >
```

```
              TOUR TITLE EDIT
  -------------------------------------
  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  .  /  ,  +  -  =  <  >  @

  < STORE    ▷  TELE     MOVE    ▷    JOYSTICK >
  < DELETE   ▷ WIDE     BACK    ▷     NEAR      >
```

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

(3) Define the Preset position

① Move to the set-up window   ② Move and set the position   ③ Set & Back

[NEAR] or [JOYSTICK]   [JOYSTICK]   [NEAR]

```
               TOUR MENU
              _____

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



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

```
                TOUR EDIT (01)
              _____
  NO      PRESET       SPEED       DWELL
  01       001           63          07
  02      <002>          63          07
  03      XXX           XX          XX
  04      XXX           XX          XX
  05      XXX           XX          XX
  06      XXX           XX          XX
  07      XXX           XX          XX
  08      XXX           XX          XX
  < SEL  &  NEAR          PRESET  &  LEFT >
  < SEL  &  NEAR          DELETE     WIDE >
```

```
                TOUR MENU
             PRESET SELECT  1
  P001  002  003  004  005
        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
  <SEL ▷ NEAR /MOVE & JOYSTICK>
  <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 : [JOYSTICK] or [NEAR]   Set ON : [JOYSTICK]

Set OFF : [NEAR]

```
                    TOUR MENU
                  _____

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


  SAVE        CLR        BACK        EXIT


  < NEAR ▷  DATA SAVE >
```

(4) "Save" above setting Pattern data to the memory.

(5) "CLR" means above setting Pattern 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.

5. 2. 3 Scan

```
                    MAIN MENU
                   _____

  MOTION      ▶
  DOME          ▷
  CAMERA        ▷
  CLEAR         ▷
  FACTORY SET
  PTZ RESET


   EXIT
  < NEAR / RIGHT   ▷   MOTION >
```

```
                    MOTION MENU
                   _____

  PRESET     ▷
  TOUR       ▷
  SCAN       ▶
  PATTERN   ▷
  AREA       ▷
  ALARM      ▷
  PRIVACY   ▷
  HOME POS ▷
  BACK              EXIT
  < NEAR / RIGHT   ▷   SCAN >
```
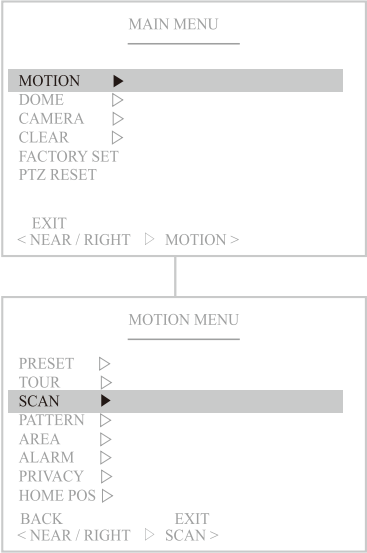
Scan Quick Operating Guide
_____

Set Scan   :   81~88 + [PRESET] 3sec.

Set Scan   :   1~8   + [Scan]   3sec.

Go to Scan   :   81~88 + [PRESET]

Go to Scan   :   1~8   + [Scan]

The Scan function means that the camera keeps panning between two programmed pan positions.
It is also adjusts the moving speed(1~63 step). Maximum 8 Scan functions are toured in order.

(1) Select the Scan number
    S01 : Defined Scan number / 01 : Undefined Scan number

    Move :   [JOYSTICK]   Select :   [NEAR]
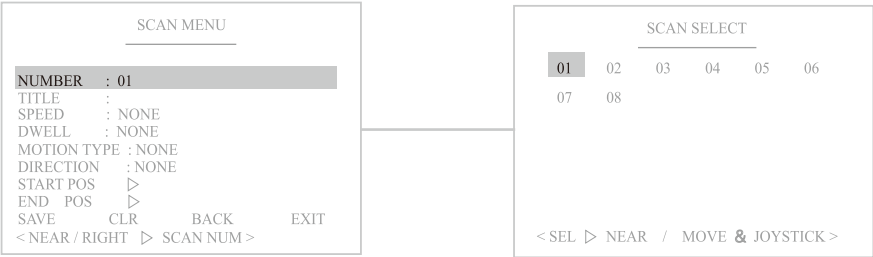
```
                    SCAN MENU
                   _____

  NUMBER     :  01
  TITLE        :
  SPEED        :  NONE
  DWELL        :  NONE
  MOTION TYPE  : NONE
  DIRECTION      : NONE
  START POS      ▷
  END  POS       ▷
  SAVE        CLR         BACK         EXIT
  < NEAR / RIGHT   ▷  SCAN NUM >
```

```
                    SCAN SELECT
                   _____

   01      02      03      04      05      06
   07      08




  < SEL  ▷  NEAR   /   MOVE  &  JOYSTICK >
```

(2) Set the Scan TITLE

Move : [JOYSTICK]   Select : [TELE] or [JOYSTICK]   Delete : [WIDE] or [JOYSTICK]

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

```
                SCAN MENU
                _____

NUMBER       :  01
TITLE        :
SPEED        :  NONE
DWELL        :  NONE
MOTION TYPE  :  NONE
DIRECTION    :  NONE
START POS        ▷
END   POS        ▷
SAVE        CLR        BACK        EXIT
< NEAR / RIGHT   ▷  SCAN TITLE>
```

```
              SCAN  TITLE EDIT
    ------------------------------------
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  . / , + - = < > @

< STORE   ▷  TELE     MOVE   ▷   JOYSTICK >
< DELETE  ▷ WIDE     BACK    ▷    NEAR    >
```
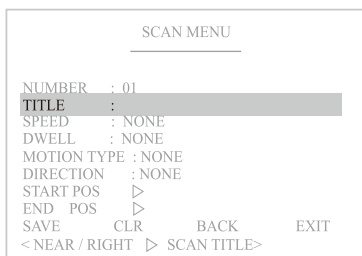
After the TITLE is set, push NEAR button to go out.

(3) Set the Scan speed

Increase : [TELE] or [JOYSTICK]

Decrease : [WIDE] or [JOYSTICK]

It adjusts the moving speed from 1~63 steps.

```
                SCAN MENU
                _____

NUMBER       :  01
TITLE        :
SPEED        :  NONE
DWELL        :  NONE
MOTION TYPE  :  NONE
DIRECTION    :  NONE
START POS        ▷
END   POS        ▷
SAVE        CLR        BACK        EXIT
< NEAR / RIGHT   ▷  MOVE SPEED>
```
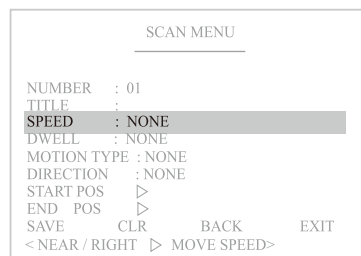
(4) Set the Dwell Time

Increase : [TELE] or [JOYSTICK]

Decrease : [WIDE] or [JOYSTICK]

Dwell time means the time that the camera stay at
the start & end pan positions.
It's adjustable from 00~59 seconds.

```
                SCAN MENU
                _____

NUMBER       :  01
TITLE        :
SPEED        :  NONE
DWELL        :  NONE
MOTION TYPE  :  NONE
DIRECTION    :  NONE
START POS        ▷
END   POS        ▷
SAVE        CLR        BACK        EXIT
< NEAR / RIGHT   ▷  DWELL>
```
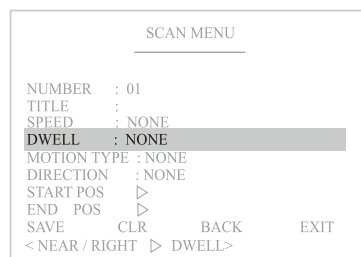
(5) Set the Motion Type

Set PAN/TILT direction
When PAN is set,PAN SCAN is proceeded with the specified coordinate value.
When TILT is set,TILT SCAN is proceeded with the specified coordinate value.

Select :　　　　or　　　　Set ON :
JOYSTICK　　NEAR　　JOYSTICK

Set OFF :　NEAR

```
              SCAN MENU
              ─────────

NUMBER      :  01
TITLE         :
SPEED        :  NONE
DWELL       :  NONE
MOTION TYPE  : NONE
DIRECTION     : NONE
START POS       ▷
END   POS       ▷
SAVE         CLR        BACK         EXIT
< NEAR / RIGHT   ▷ MOTION TYPE>
```

(6) Set the Direction

PAN : Select Clock Wise or C_Clock Wise direction

When select C_Clock WISE, counterclockwise progression
When select Clock WISE, clockwise progression

TILT : Set the UP & DOWN.

Select :　　　　or　　　　Set ON :
JOYSTICK　　NEAR　　JOYSTICK

Set OFF :　NEAR

```
              SCAN MENU
              ─────────

NUMBER      :  01
TITLE         :
SPEED        :  NONE
DWELL       :  NONE
MOTION TYPE  : NONE
DIRECTION     : NONE
START POS       ▷
END   POS       ▷
SAVE         CLR        BACK         EXIT
< NEAR / RIGHT   ▷ DIRECTION>
```

(7) Define the Start position

① Select Start Pos menu   ② Move and set the position   ③ Go back

NEAR or JOYSTICK   JOYSTICK   NEAR

```
              SCAN MENU
              ─────────

NUMBER      :  01
TITLE         :
SPEED        :  NONE
DWELL       :  NONE
MOTION TYPE  : NONE
DIRECTION     : NONE
START POS       ▶
END   POS       ▷
SAVE         CLR        BACK         EXIT
< NEAR / RIGHT   ▷ START POS>
```

```
              STRAT POSITION
              ──────────────




              POSITION : 000. 0  000. 0
              < EXIT   ▷ FOCUS NEAR >
```

(8) Define the End position

① Select End Pos menu　　　　② Move and set the position　　③ Go back

NEAR　or　JOYSTICK　　　　JOYSTICK　　　　NEAR

```
            SCAN MENU
          _____

NUMBER      :  01
TITLE       :
SPEED       :  NONE
DWELL       :  NONE
MOTION TYPE  : NONE
DIRECTION     : NONE
START POS        ▶
END    POS       ▶
SAVE        CLR        BACK        EXIT
< NEAR / RIGHT   ▷ END POS>
```

```
            END POSITION
          _____




              POSITION : 000. 0  000. 0
        < EXIT   ▷ FOCUS NEAR >
```

- - When Motion type is PAN, Pan is available.
- - When Motion type is TILT, TILT is available.

(9) "Save" above setting Pattern data to the memory.

(10) "CLR" means above setting Pattern data will not be
　　　saved and be cleared.

(11) "BACK" means it goes back to the previous
　　　　menu :Motion.

(12) "EXIT" means it goes out of MENU.

```
            SCAN MENU
          _____

NUMBER      :  01
TITLE       :  NONE
SPEED       :  NONE
DWELL       :  NONE
MOTION TYPE  : NONE
DIRECTION     : NONE
START POS        ▶
END    POS       ▶

SAVE        CLR        BACK        EXIT
< NEAR ▷  DATA SAVE >
```

5. 2. 4 Pattern

MAIN MENU
──────────

MOTION ▶
DOME   ▷
CAMERA   ▷
CLEAR   ▷
FACTORY SET
PTZ RESET

  EXIT
< NEAR / RIGHT   ▷ MOTION >

MOTION MENU
──────────

PRESET   ▷
TOUR   ▷
SCAN   ▷
PATTERN ▶
AREA   ▷
ALARM   ▷
PRIVACY   ▷
HOME POS ▷
BACK   EXIT
< NEAR / RIGHT   ▷ PATTERN >
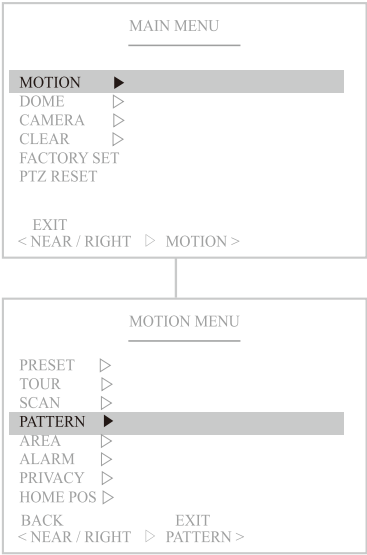
Pattern Quick Operating Guide
────────────────────

Set Pattern   :   91~94 + [PRESET] 3sec.

Set Pattern   :   1~4   + [Pattern] 3sec.

Go to Pattern   :   91~94 + [PRESET]

Go to Pattern   :   1~4   + [Pattern]

The Pattern function memorizes User's random moving path and zoom ratio. Total recording time limit is 65secs and maximum 4 Pattern functions are toured in order.

(1) Select the Pattern number
    PAT01 : Defined Pattern number / 01 : Undefined Pattern number

    Move : [JOYSTICK]   Select : [NEAR]

PATTERN MENU
──────────

NUMBER : 01
TITLE   :
RECORD   ▷
PLAY   ▷

 SAVE   CLR   BACK   EXIT
 < NEAR / RIGHT   ▷ PATTERN NUM >

PATTERN MENU
PATTERN SELECT
  01   02   03   04

< SEL ▷ NEAR   /   MOVE & JOYSTICK >
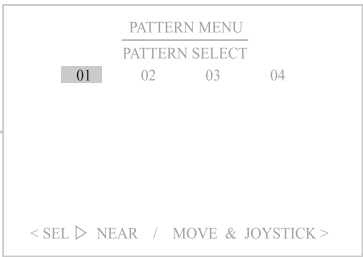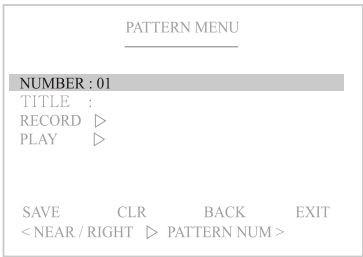
(2) Set the Pattern TITLE

Move : [JOYSTICK]   Select : [TELE] or [JOYSTICK]   Delete : [WIDE] or [JOYSTICK]

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

```
              PATTERN MENU
              _____

  NUMBER : 01
  TITLE     :
  RECORD   ▷
  PLAY        ▷


   SAVE        CLR        BACK        EXIT
  < NEAR / RIGHT  ▷  PATTERN TITLE >
```

```
              PATTERN TITLE EDIT
   --------------------------------------
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  .  /  ,  +  -  =  <  >  @

  < STORE    ▷  TELE     MOVE    ▷   JOYSTICK >
  < DELETE  ▷ WIDE     BACK    ▷    NEAR    >
```

After the TITLE set, push NEAR button to go out.

(3) Record and Save the User's random Pattern data

① Select the "Record" Menu   ② Move and record the pattern   ③ NEAR -> EXIT
                                                                          FAR -> RECORD ON

[NEAR] or [JOYSTICK]   [JOYSTICK]
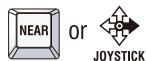
```
              PATTERN MENU
              _____

  NUMBER : 01
  TITLE     :
  RECORD   ▶
  PLAY        ▷


   SAVE        CLR        BACK        EXIT
  < NEAR / RIGHT  ▷  RECORD >
```

```
              PATTERN RECORD
   --------------------------------------------




   < NEAR ▷ EXIT >

   < FAR   ▷ ON >        06/60          000.0,  000.0
```

(4) Play back the recorded Pattern data

```
              PATTERN MENU
              _____

  NUMBER : 01
  TITLE     :
  RECORD   ▷
  PLAY        ▶


   SAVE        CLR        BACK        EXIT
  < NEAR / RIGHT   ▷   PLAY >
```

```
              PATTERN PLAY              x01
              _____




   < NEAR ▷ EXIT >
     xx/xxSec        [001/005]
        POSITION  :  XXX.X  XXX.X
```

(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.

PATTERN MENU

NUMBER : 01
TITLE   :
RECORD   ▷
PLAY   ▷

SAVE   CLR   BACK   EXIT
< NEAR ▷ DATA SAVE >

5. 2. 5   Area

```
                MAIN MENU                                    MOTION MENU
            ─────────────                                ─────────────

 MOTION        ▶                            PRESET     ▷
 DOME          ▷                            TOUR       ▷
 CAMERA        ▷                            SCAN       ▷
 CLEAR         ▷                            PATTERN    ▷
 FACTORY SET                                AREA       ▶
 PTZ RESET                                  ALARM      ▷
                                            PRIVACY    ▷
                                            HOME POS   ▷
    EXIT                                     BACK              EXIT
 < NEAR / RIGHT   ▷  MOTION >               < NEAR / RIGHT   ▷  AREA >
```

The Area function means that it displays the Area name between two programmed pan positions.
Maximun 16 Area functions are toured in order.

(1) Select the Area number
AR 01 : Defined Area number / 01 : Undefined Area number

Move : [JOYSTICK]   Select : [NEAR]

```
              AREA MENU                              AREA SELECT
          ─────────────                          ─────────────

 NUMBER  : 01                              01      02      03      04      05
 TITLE       :                             06      07      08      09      10
 DIRECTION  : NONE                         11      12      13      14      15
 S PAN POS.   ▷                            16
 E PAN  POS.  ▷

  SAVE        CLR        BACK       EXIT
 < NEAR / RIGHT   ▷  AREA  NO >             <SEL & MEAR / MOVE & JOYSTICK>
```

(2) Set the Area TITLE

Move : [JOYSTICK]   Select : [TELE] or [JOYSTICK]   Delete : [WIDE] or [JOYSTICK]

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

```
              AREA MENU                            AREA  TITLE EDIT
          ─────────────                   ------------------------------------
                                          TITLE  :
 NUMBER  : 01                                  0  1  2  3  4 5  6  7  8 9 (
 TITLE       :                                )A  B  C D E F G H  I  J  K
 DIRECTION  : NONE                            L M N O P Q R S T U V W
 S PAN POS.   ▷                               X Y  Z  .  /  ,  +  -  =  <  >  @
 E PAN  POS.  ▷

  SAVE        CLR        BACK       EXIT    < STORE   ▷  TELE     MOVE   ▷   JOYSTICK >
 < NEAR / RIGHT   ▷  AREA  TITLE >          < DELETE   ▷ WIDE     BACK   ▷   NEAR     >
```
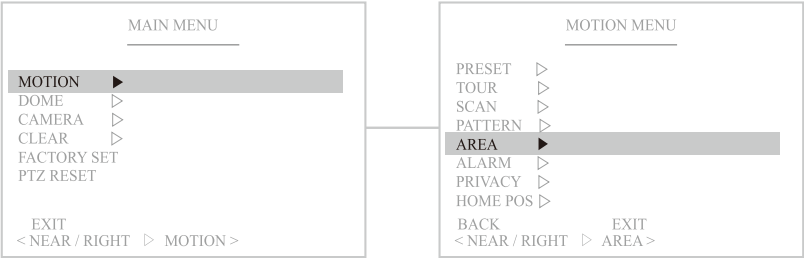
After the TITLE set, push NEAR button to go out.

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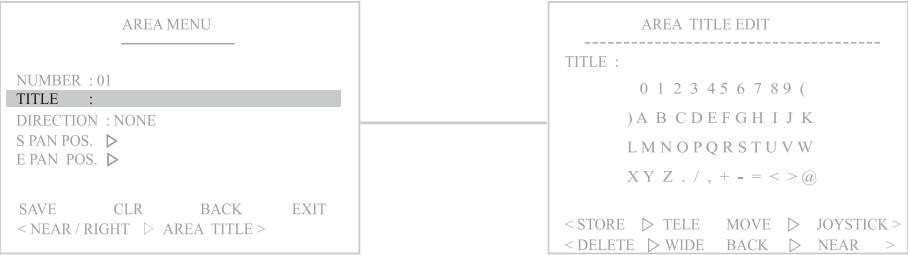
(3) Set the Direction

Select : JOYSTICK   or   NEAR   Set ON : JOYSTICK   Set OFF : NEAR

C_Clock WISE is counterclockwise mark, Clock WISE is clockwise mark.

```
              AREA MENU
              _____

NUMBER  : 01
TITLE      :
DIRECTION  : <C_CLOCK WISE>
S PAN POS.  ▷
E PAN  POS.  ▷


 SAVE          CLR          BACK          EXIT
 < CHANGE ▷ UP/DN  SEL ▷ NEAR >
```

(4) Define the Start pan position
　① Select the "Start Pan Pos" menu   ② Move and set the position   ③ Set & Back

NEAR   or   JOYSTICK   JOYSTICK   NEAR

```
              AREA MENU
              _____

NUMBER  : 01
TITLE      :
DIRECTION  : NONE
S PAN POS.   ▶
E PAN  POS.  ▷


 SAVE          CLR          BACK          EXIT
 < NEAR / RIGHT ▷  START POS >
```

```
         AREA START PAN POSITION
         _____




                   POSITION : 000. 0  000. 0
         < EXIT   ▷ FOCUS NEAR >
```

(5) Define the END pan position
　① Select the "END Pan Pos" Menu   ② Move and set the position   ③ Set & Back
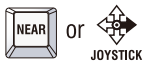
NEAR   or   JOYSTICK   JOYSTICK   NEAR

```
              AREA MENU
              _____

NUMBER  : 01
TITLE      :
DIRECTION  : NONE
S PAN POS.   ▷
E PAN  POS.  ▶


 SAVE          CLR          BACK          EXIT
 < NEAR / RIGHT ▷  END POS >
```

```
         AREA END PAN POSITION
         _____




                   POSITION : 000. 0  000. 0
         < EXIT   ▷ FOCUS NEAR >
```

(6) "Save" above setting Area data to the memory.

(7) "CLR" means above setting Area 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

```
                    AREA MENU
                _____

    NUMBER  : 01
    TITLE     :
    DIRECTION  : NONE
    S PAN POS.  ▷
    E PAN  POS.  ▷


    SAVE          CLR          BACK          EXIT
    < NEAR  ▷  DATA SAVE >
```
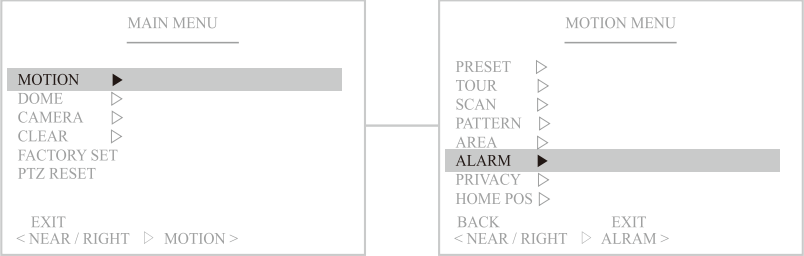
5. 2. 6   Alarm

```
               MAIN MENU
               ─────────────

 MOTION        ▶
 DOME          ▷
 CAMERA        ▷
 CLEAR         ▷
 FACTORY SET
 PTZ RESET


   EXIT
 < NEAR / RIGHT   ▷  MOTION >
```

```
               MOTION MENU
               ─────────────

 PRESET        ▷
 TOUR          ▷
 SCAN          ▷
 PATTERN       ▷
 AREA          ▷
 ALARM         ▶
 PRIVACY       ▷
 HOME POS ▷
  BACK                EXIT
 < NEAR / RIGHT   ▷  ALRAM >
```
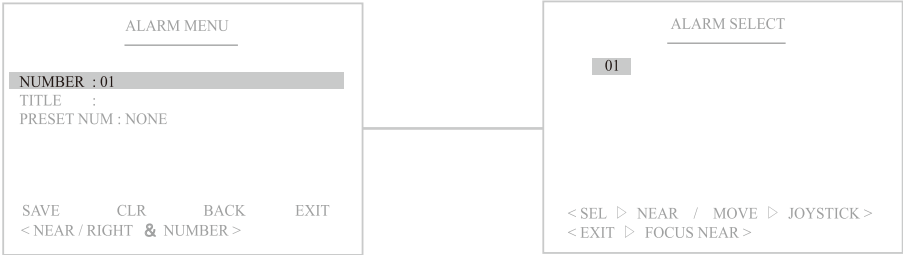
The Alarm function means that the camera moves to the programmed Preset position by the Alarm trigger.
1 Alarm functions are toured in order.

(1) Select the Alarm number
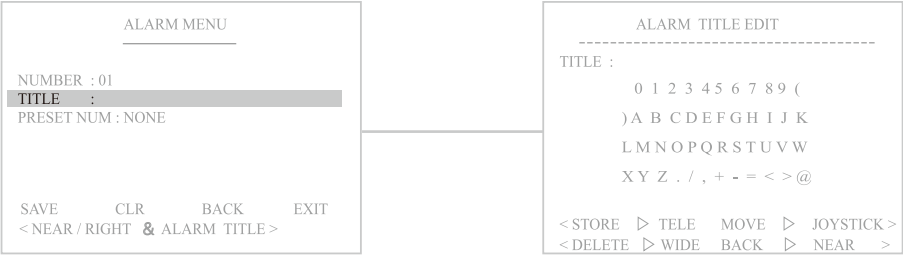   A01 : Defined Alarm number / 01 : Undefined Alarm number

   Move :   [JOYSTICK]   Select :   [NEAR]

```
               ALARM MENU
               ─────────────

 NUMBER  : 01
 TITLE      :
 PRESET NUM : NONE



  SAVE        CLR        BACK        EXIT
 < NEAR / RIGHT   &  NUMBER >
```

```
               ALARM SELECT
               ─────────────

     01




 < SEL  ▷  NEAR   /   MOVE  ▷  JOYSTICK >
 < EXIT  ▷  FOCUS NEAR >
```

(2) Set the Alarm TITLE

   Move :   [JOYSTICK]   Select :   [TELE] or [JOYSTICK]   Delete :   [WIDE] or [JOYSTICK]

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

```
               ALARM MENU
               ─────────────

 NUMBER  : 01
 TITLE      :
 PRESET NUM : NONE



  SAVE        CLR        BACK        EXIT
 < NEAR / RIGHT   &  ALARM  TITLE >
```

```
               ALARM  TITLE EDIT
  ------------------------------------
 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  . / , + - = < > @

 < STORE    ▷  TELE     MOVE    ▷    JOYSTICK >
 < DELETE   ▷ WIDE     BACK     ▷     NEAR      >
```

   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

[NEAR] or [JOYSTICK]   [JOYSTICK]   [NEAR]

```
        ALARM MENU
       ──────────────

  NUMBER  : 01
  TITLE     :
  PRESET NUM : NONE




   SAVE        CLR        BACK        EXIT
  < NEAR / RIGHT   &  SELECT PRESET >
  < MOVE & NEAR / JOYSTICK >
```

```
              PRESET SELECT
             ──────────────

        001  002  003  004  005  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  046  047  048
        049  050  051  052  053  054
   <EXIT ▷FOCUS NEAR>
```

(4) "Save" above setting Alarm data to the memory.

(5) "CLR" means above setting Alarm data will not be
     saved and be cleared.

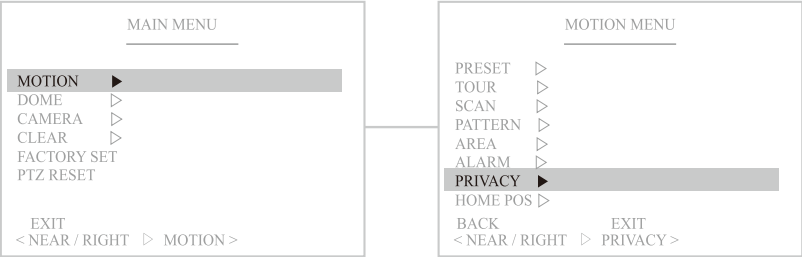(6) "BACK" means it goes back to the previous
     menu :Motion.

(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. 7   Privacy Zone Masking

```
              MAIN MENU
              _____

  MOTION        ▶
  DOME          ▷
  CAMERA        ▷
  CLEAR         ▷
  FACTORY SET
  PTZ RESET

     EXIT
  < NEAR / RIGHT   ▷   MOTION >
```

```
              MOTION MENU
              _____

  PRESET      ▷
  TOUR        ▷
  SCAN        ▷
  PATTERN     ▷
  AREA        ▷
  ALARM       ▷
  PRIVACY     ▶
  HOME POS ▷
  BACK                 EXIT
  < NEAR / RIGHT   ▷   PRIVACY >
```

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
   PR01 : Defined Alarm number / 01 : Undefined Alarm number
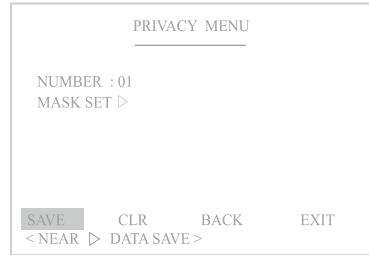
   Move :   [JOYSTICK]   Select :   [NEAR]

```
           PRIVACY MENU
           _____

  NUMBER  : 01
  MASK SET ▷




  SAVE        CLR        BACK        EXIT
  < NEAR / RIGHT   ▷   PRIVACY NUM >
```

```
           PRIVACY SELECT
           _____

    01      02        03        04        05
   06      07        08




  < SEL  ▷  NEAR   /   MOVE  ▷  JOYSTICK >
  <EXIT ▷FOCUS NEAR>
```

(2) Mask set

   Move :   [JOYSTICK]   Select :   [TELE] or [JOYSTICK]   Delete :   [WIDE] or [JOYSTICK]

   It's available to set the desired position and size of the blocking territories freely.

```
           PRIVACY MENU
           _____

  NUMBER  : 01
  MASK SET ▷




  SAVE        CLR        BACK        EXIT
  < NEAR / RIGHT   ▷   MASK SET >
```

```
           PRIVACY MASK SET
           _____




  MASK SIZE : <OPEN / CLOSE >
  POSITION : 000. 0  000. 0
```
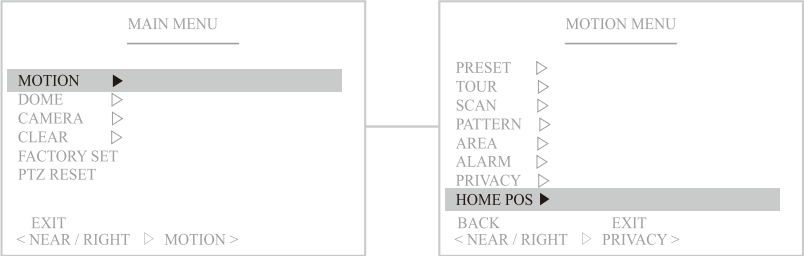
After the Privacy Zone is set, push the NEAR button to go out.

(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
MASK SET ▷

SAVE   CLR   BACK   EXIT
< NEAR ▷ DATA SAVE >

5. 2. 8   Home Position

```
            MAIN MENU                                  MOTION MENU
         ─────────────                              ─────────────

  MOTION        ▶                          PRESET      ▷
  DOME          ▷                          TOUR        ▷
  CAMERA        ▷                          SCAN        ▷
  CLEAR         ▷                          PATTERN     ▷
  FACTORY SET                              AREA        ▷
  PTZ RESET                                ALARM       ▷
                                           PRIVACY     ▷
                                           HOME POS ▶
   EXIT                                    BACK            EXIT
 < NEAR / RIGHT   ▷  MOTION >            < NEAR / RIGHT   ▷  PRIVACY >
```

Home Postion specify the main image display area.

(1) Home Position ON/OFF setting

Move :   [JOYSTICK]   Select :   [NEAR]

```
            HOME POS MENU
         ─────────────

  ON/OFF  : OFF
  POSITION SET ▷




  SAVE         CLR        BACK        EXIT
  < NEAR / RIGHT   ▷   ON/OFF >
```

(2) Home Position SET

Move :   [JOYSTICK]   Select :   [NEAR]
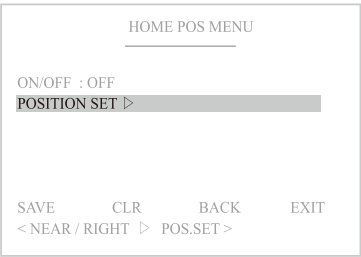
Quick Operating Guide
Go to Home Position : 255 + SET

```
            HOME POS MENU                              HOME POSITION
         ─────────────                              ─────────────────

  ON/OFF  : OFF
  POSITION SET ▷




  SAVE         CLR        BACK        EXIT
  < NEAR / RIGHT   ▷   POS.SET >                    < EXIT   ▷ FOCUS NEAR >

                                                    POSITION : 000. 0  359. 8
```

5. 3　Dome Setting

```
                    MAIN MENU
                    ──────────

  MOTION      ▷
  DOME        ▶
  CAMERA      ▷
  CLEAR       ▷
  FACTORY SET
  PTZ RESET


    EXIT
  < NEAR / RIGHT   ▷  DOME >
```
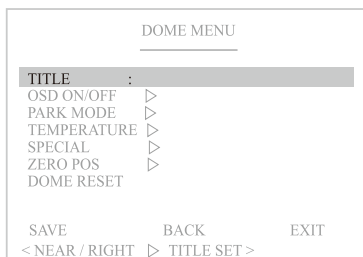
Pan, Tilt, Zoom motion is adjustable in the "Dome Setting" Menu.

5. 3. 1　Set the Dome camera title

Move : [JOYSTICK]   Select : [TELE] or [JOYSTICK]   Delete : [WIDE] or [JOYSTICK]
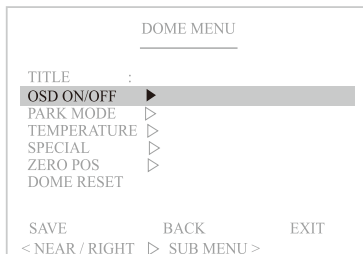
It's available to set the desired camera title.

```
                DOME MENU
                ──────────

  TITLE          :
  OSD ON/OFF      ▷
  PARK MODE       ▷
  TEMPERATURE     ▷
  SPECIAL         ▷
  ZERO POS        ▷
  DOME RESET


   SAVE          BACK          EXIT
  < NEAR / RIGHT  ▷  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  .  / ,  + - = < > @

  < STORE  ▷ TELE    MOVE  ▷   JOY >
  < DEL ▷ WIDE         BACK    ▷   NEAR     >
```

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

5. 3. 2　OSD ON/OFF Set

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

Select : [JOYSTICK] or [NEAR]   Set ON : [JOYSTICK]   Set OFF : [NEAR]

```
                DOME MENU
                ──────────

  TITLE          :
  OSD ON/OFF      ▶
  PARK MODE       ▷
  TEMPERATURE     ▷
  SPECIAL         ▷
  ZERO POS        ▷
  DOME RESET


   SAVE          BACK          EXIT
  < NEAR / RIGHT   ▷  SUB MENU >
```

```
                OSD ON/OFF
                ──────────

  TITLE      < 0 >          PRIVACY   0
  ZOOM          0           AREA      0
  PRESET        0           ALARM     0
  TOUR          0           POSITION  0
  SCAN          0
  PATTERN       0


       < ON ▷ TETLE   MOVE ▷ JOY >
       <OFF ▷ WIDE     BACK  ▷NEAR>
```

5. 3. 3   PARK MODE

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

or

- ON/OFF : Select ON/OFF
- TIME : Select 10 sec~1 HOUR
- MOTION : Set PRESET / TOUR / SCAN
          / PATTERN
- NUMBER
  PRESET : 1~255
  TOUR : 1~8
  SCAN : 1~8
  PATTERN : 1~4

```
                    DOME MENU
                 ───────────

 TITLE            :
 OSD ON/OFF          ▷
 PARK MODE        ▶
 TEMPERATURE      ▷
 SPECIAL             ▷
 ZERO POS            ▷
 DOME RESET


  SAVE              BACK            EXIT
 < NEAR / RIGHT   ▷  SUB MENU >
```

```
                    PARK MENU
                 ───────────

 ON/OFF    : ON
 TIME      : -----
 MOTION   : ------
 NUMBER  : -----




  BACK
 < NEAR / RIGHT   &  ONOFF>
```

5. 3. 4   TEMP MODE

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.

```
                    DOME MENU
                 ───────────

 TITLE            :
 OSD ON/OFF          ▷
 PARK MODE           ▷
 TEMPERATURE      ▶
 SPECIAL             ▷
 ZERO POS            ▷
 DOME RESET


  SAVE              BACK            EXIT
 < NEAR / RIGHT   ▷  SUB MENU >
```

```
                   TEMP. MENU
                 ───────────

 HEATER ON              :  5 C
 ON TIME                :  30 MIN
 HEATER OFF             :  30C
 FAN ON                 :  50 C
 FAN OFF                :  40 C


          TEMPER : 000.0

    BACK
  < NEAR / RIGHT  ▷ ON TEMP  >
```
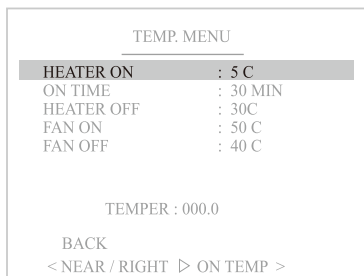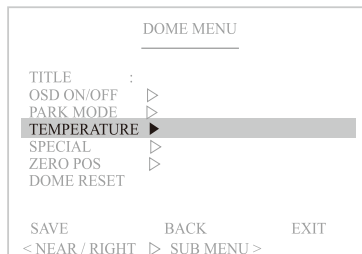
(1) HEATER ON

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

Select : or   Set ON :

Set OFF :

```
                TEMP. MENU
              ──────────
  HEATER ON          :  5 C
  ON TIME            :  30 MIN
  HEATER OFF         :  30C
  FAN ON             :  50 C
  FAN OFF            :  40 C


        TEMPER : 000.0

     BACK
   < NEAR / RIGHT ▷ ON TIME  >
```

(2) ON TIME

Set the operating time of the heater.
- By 10min. (10~60 min.)

Select : [JOYSTICK] or [NEAR]   Set ON : [JOYSTICK]

Set OFF : [NEAR]

```
                TEMP. MENU
              ──────────
  HEATER ON          :  5 C
  ON TIME            :  30 MIN
  HEATER OFF         :  30 C
  FAN ON             :  50 C
  FAN OFF            :  40 C


        TEMPER : 000.0

     BACK
   < NEAR / RIGHT ▷ OFF TEMP  >
```
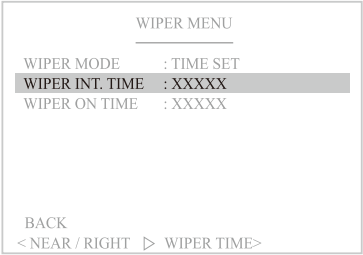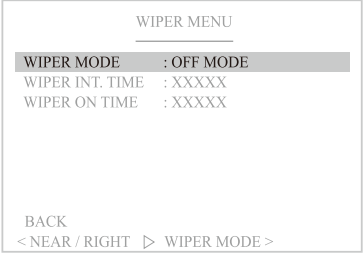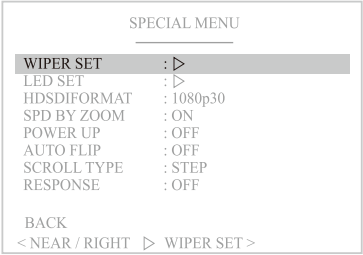
(3) HEATER OFF

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

Select : [JOYSTICK] or [NEAR]   Set ON : [JOYSTICK]

Set OFF : [NEAR]

```
                TEMP. MENU
              ──────────
  HEATER ON          :  5 C
  ON TIME            :  30 MIN
  HEATER OFF         :  30 C
  FAN ON             :  50 C
  FAN OFF            :  40 C


        TEMPER : 000.0

     BACK
   < NEAR / RIGHT ▷ FAN ON    >
```
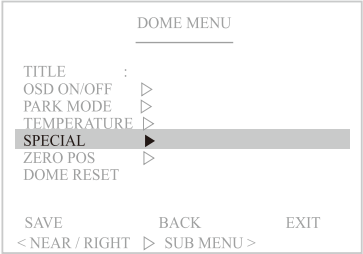
(4) FAN ON

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

Select : [JOYSTICK] or [NEAR]   Set ON : [JOYSTICK]

Set OFF : [NEAR]

```
                TEMP. MENU
              ──────────
  HEATER ON          :  5 C
  ON TIME            :  30 MIN
  HEATER OFF         :  30 C
  FAN ON             :  50 C
  FAN OFF            :  40 C


        TEMPER : 000.0

     BACK
   < NEAR / RIGHT ▷ FAN OFF  >
```

(5) FAN OFF

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

Select : [JOYSTICK] or [NEAR]   Set ON : [JOYSTICK]

Set OFF : [NEAR]

5. 3. 5   Special

```
                DOME MENU
                _____

  TITLE          :
  OSD ON/OFF      ▷
  PARK MODE       ▷
  TEMPERATURE     ▷
  SPECIAL         ▶
  ZERO POS        ▷
  DOME RESET


  SAVE            BACK            EXIT
 < NEAR / RIGHT   ▷  SUB MENU >
```

```
               SPECIAL MENU
               _____

  WIPER SET         : ▷
  LED SET           : ▷
  HDSDIFORMAT       : 1080p30
  SPD BY ZOOM       : ON
  POWER UP          : OFF
  AUTO FLIP         : OFF
  SCROLL TYPE       : STEP
  RESPONSE          : OFF


  BACK
 < NEAR / RIGHT   ▷  WIPER SET >
```

```
                WIPER MENU
                _____

  WIPER MODE        : OFF MODE
  WIPER INT. TIME   : XXXXX
  WIPER ON TIME     : XXXXX




  BACK
 < NEAR / RIGHT   ▷  WIPER MODE >
```

```
                WIPER MENU
                _____

  WIPER MODE        : TIME SET
  WIPER INT. TIME   : XXXXX
  WIPER ON TIME     : XXXXX




  BACK
 < NEAR / RIGHT   ▷  WIPER TIME>
```

(1) WIPER SET

Enter the wiper function setting menu.

Select : [JOYSTICK] or [NEAR]   Set ON : [JOYSTICK]

Set OFF : [NEAR]

- WIPER MODE

Select ON MODE / OFF MODE / TIME SET to use
the wiper function.
※ WIPER MODE Default : OFF MODE

Select : [JOYSTICK] or [NEAR]   Set ON : [JOYSTICK]

Set OFF : [NEAR]

- WIPER INTERVAL TIME

2s, 5s, 10s, 15s, 20s, 30s, 40s, 60s
The wiper will be operated on as the time set on the interval.
* When WIPER MODE is TIME SET,
  WIPER INTERVAL TIME function is available.

Select : [JOYSTICK] or [NEAR]   Set ON : [JOYSTICK]

Set OFF : [NEAR]

```
              WIPER MENU
              ————————
  WIPER MODE         : ON MODE
  WIPER INT. TIME    : XXXXX
  WIPER ON TIME      : XXXXX




  BACK
< NEAR / RIGHT    ▷  WIPER TIME>
```

- WIPER ON TIME

1m, 10m, 30m, 1h, 2h, 4h, 6h, 8h, always
The wiper will be operated during the time set on the Wiper On Time.

Select : [JOYSTICK] or [NEAR]   Set ON : [JOYSTICK]

Set OFF : [NEAR]

```
              SPECIAL MENU
              ————————
  WIPER SET          : ▷
  LED SET            : ▷
  HDSDIFORMAT        : 1080p30
  SPD BY ZOOM        : ON
  POWER UP           : OFF
  AUTO FLIP          : OFF
  SCROLL TYPE        : STEP
  RESPONSE           : OFF

  BACK
< NEAR / RIGHT    ▷  LED SET >
```

(2) LED SET

Enter the LED function setting menu.

Select : [JOYSTICK] or [NEAR]   Set ON : [JOYSTICK]

Set OFF : [NEAR]

```
              SPECIAL MENU
              ————————
  LIGHT MODE         : ON
  LED TYPE           : INFRARED
  LIGHT ADJ          : 050%




  BACK
< NEAR / RIGHT    ▷  LED MODE >
```

- LIGHT MODE

Manually select IR ON/OFF IR operation.

Select : [JOYSTICK] or [NEAR]   Set ON : [JOYSTICK]

Set OFF : [NEAR]

```
              SPECIAL MENU
              ————————
  LIGHT MODE         : ON
  LED TYPE           : INFRARED
  LIGHT ADJ          : 050%




  BACK
< NEAR / RIGHT    ▷  LED TYPE >
```
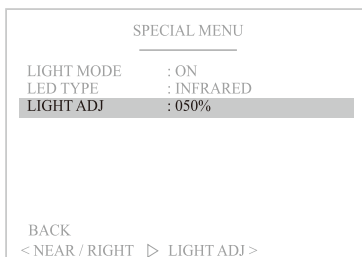
- LED TYPE

Set the LED.

Select : [JOYSTICK] or [NEAR]   Set ON : [JOYSTICK]

Set OFF : [NEAR]

```
            SPECIAL MENU
            ――――――
 LIGHT MODE        : ON
 LED TYPE          : INFRARED
 LIGHT ADJ         : 050%




 BACK
< NEAR / RIGHT  ▷  LIGHT ADJ >
```

- LIGHT ADJ

Set the IR brightness.

Select : [JOYSTICK] or [NEAR]   Set ON : [JOYSTICK]

Set OFF : [NEAR]

```
            SPECIAL MENU
            ――――――
 WIPER SET         : ▷
 LED SET           : ▷
 HDSDIFORMAT       : 1080p30
 SPD BY ZOOM       : ON
 POWER UP          : OFF
 AUTO FLIP         : OFF
 SCROLL TYPE       : STEP
 RESPONSE          : OFF

 BACK
< NEAR / RIGHT  ▷  FORMAT CHG >
```
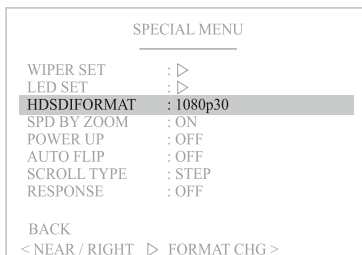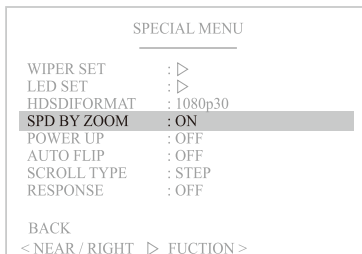
(3) HD SDI FORMAT

NTSC : 1080p30, 1080i60, 1080p60, 720p30, 720p60
PAL : 1080p25, 1080i50, 1080p50, 720p25, 720p50
※ HD SDI FORMAT can be variable according to product specification

Select : [JOYSTICK] or [NEAR]   Set ON : [JOYSTICK]

Set OFF : [NEAR]

```
            SPECIAL MENU
            ――――――
 WIPER SET         : ▷
 LED SET           : ▷
 HDSDIFORMAT       : 1080p30
 SPD BY ZOOM       : ON
 POWER UP          : OFF
 AUTO FLIP         : OFF
 SCROLL TYPE       : STEP
 RESPONSE          : OFF

 BACK
< NEAR / RIGHT  ▷  FUCTION >
```

(4) Speed by Zoom

When this function is ON, the pan/tilt speed is inversely adjusted to the zoom ratio.
(Available to check with max zoom rate.)

Select : [JOYSTICK] or [NEAR]   Set ON : [JOYSTICK]

Set OFF : [NEAR]

```
            SPECIAL MENU
            ――――――
 WIPER SET         : ▷
 LED SET           : ▷
 HDSDIFORMAT       : 1080p30
 SPD BY ZOOM       : ON
 POWER UP          : OFF
 AUTO FLIP         : OFF
 SCROLL TYPE       : STEP
 RESPONSE          : OFF

 BACK
< NEAR / RIGHT  ▷  PWR UP SET >
```

(5) POWER UP

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

Select : [JOYSTICK] or [NEAR]   Set ON : [JOYSTICK]

Set OFF : [NEAR]

(6) AUTO FLIP

```
          SPECIAL MENU
          _____

WIPER SET        : ▷
LED SET          : ▷
HDSDIFORMAT      : 1080p30
SPD BY ZOOM      : ON
POWER UP         : OFF
AUTO FLIP        : OFF
SCROLL TYPE      : STEP
RESPONSE         : OFF

BACK
< NEAR / RIGHT   ▷  AUTOFLIP >
```

```
          SPECIAL MENU
          _____

WIPER SET        : ▷
LED SET          : ▷
HDSDIFORMAT      : 1080p30
SPD BY ZOOM      : ON
POWER UP         : OFF
AUTO FLIP        : < UP FLIP >
SCROLL TYPE      : STEP
RESPONSE         : OFF

BACK
< CHANGE ▷UP/DN   SEL▷NEAR >
```

OFF : AUTO FLIP OFF
※ Factory default is OFF.

UP FLIP
* TILT UP FLIP.

```
          SPECIAL MENU
          _____

WIPER SET        : ▷
LED SET          : ▷
HDSDIFORMAT      : 1080p30
SPD BY ZOOM      : ON
POWER UP         : OFF
AUTO FLIP        : < DN FLIP >
SCROLL TYPE      : STEP
RESPONSE         : OFF

BACK
< CHANGE ▷UP/DN   SEL▷NEAR >
```

```
          SPECIAL MENU
          _____

WIPER SET        : ▷
LED SET          : ▷
HDSDIFORMAT      : 1080p30
SPD BY ZOOM      : ON
POWER UP         : OFF
AUTO FLIP        : < U&D FLIP >
SCROLL TYPE      : STEP
RESPONSE         : OFF

BACK
< CHANGE ▷UP/DN   SEL▷NEAR >
```

DN FLIP
* TILT DOWN FLIP

UP_DN FLIP
* TILT UP and DOWN FLIP

```
          SPECIAL MENU
          _____

WIPER SET        : ▷
LED SET          : ▷
HDSDIFORMAT      : 1080p30
SPD BY ZOOM      : ON
POWER UP         : OFF
AUTO FLIP        : OFF
SCROLL TYPE      : STEP
RESPONSE         : OFF

BACK
< NEAR / RIGHT   ▷  TYPE >
```

(7) SCROLL TYPE

Set the cursor progress
STEP : by 1 STEP
AUTO : Continuous scroll

Select : [JOYSTICK] or [NEAR]   Set ON : [JOYSTICK]

Set OFF : [NEAR]

```
              SPECIAL MENU
              ─────────────
  WIPER SET          : ▷
  LED SET            : ▷
  HDSDIFORMAT        : 1080p30
  SPD BY ZOOM        : ON
  POWER UP           : OFF
  AUTO FLIP          : OFF
  SCROLL TYPE        : STEP
  RESPONSE           : OFF

  BACK
  < NEAR / RIGHT   ▷  ON/OFF >
```

(8) RESPONSE TXD

Tx communication line to transfer the unique value of protocal response.
(Use this function when the protocol is pelco-D 5.0 EZ.)
※ Factory default is OFF.

Select : 🕹 JOYSTICK   or NEAR   Set ON : 🕹 JOYSTICK

Set OFF : NEAR

5. 3. 6 ZERO POS

```
              DOME MENU
              ─────────────
  TITLE         :
  OSD ON/OFF      ▷
  PARK MODE       ▷
  TEMPERATURE ▷
  SPECIAL         ▷
  ZERO POS        ▶
  DOME RESET

  SAVE           BACK           EXIT
  < NEAR / RIGHT   ▷  ZERO POS >
```

```
             ZERO POS MENU
             ─────────────
  ON/OFF          : OFF
  POSITION SET   ▷




  BACK
  < NEAR / RIGHT   ▷  ZERO POS >
```

When select ON, the zero position is changeable.
POSITION change 000.0 / 000.0 value.

Select : 🕹 JOYSTICK   or NEAR   Set ON : 🕹 JOYSTICK

Set OFF : NEAR

5. 3. 7 DOME RESET

```
              DOME MENU
              ─────────────
  TITLE         :
  OSD ON/OFF      ▷
  PARK MODE       ▷
  TEMPERATURE ▷
  SPECIAL         ▷
  ZERO POS        ▷
  DOME RESET     YES / NO

  SAVE           BACK           EXIT
  < NEAR / RIGHT   ▷  DOME INIT >
```
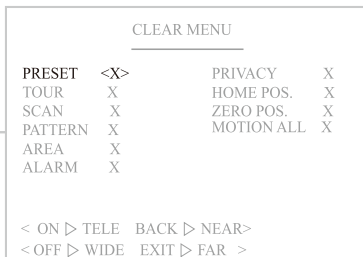
DOME MENU initialization function.

5. 4   Clear Setting

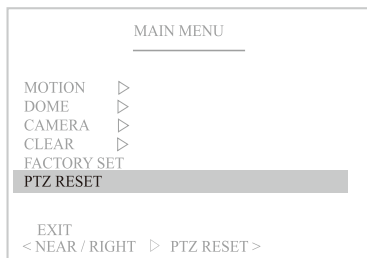Clears the PTZ position and function value.

```
                MAIN MENU
               ─────────────

MOTION        ▷
DOME          ▷
CAMERA        ▷
CLEAR         ▶
FACTORY SET
PTZ RESET


    EXIT
< NEAR / RIGHT   ▷  CLEAR>
```

```
                CLEAR MENU
               ─────────────

PRESET    <X>              PRIVACY        X
TOUR        X              HOME POS.      X
SCAN        X              ZERO POS.      X
PATTERN     X              MOTION ALL    X
AREA        X
ALARM       X


<  ON ▷ TELE    BACK ▷ NEAR>
< OFF ▷ WIDE    EXIT ▷ FAR  >
```

select :   [JOYSTICK]   or   [NEAR]   Set ON : [JOYSTICK]

Set OFF :   [NEAR]

5. 5   Factory set

```
                MAIN MENU
               ─────────────

MOTION        ▷
DOME          ▷
CAMERA        ▷
CLEAR         ▷
FACTORY SET
PTZ RESET


    EXIT
< NEAR / RIGHT   ▷  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. 6   PTZ Reset

```
                MAIN MENU
               ─────────────

MOTION        ▷
DOME          ▷
CAMERA        ▷
CLEAR         ▷
FACTORY SET
PTZ RESET


    EXIT
< NEAR / RIGHT   ▷  PTZ RESET >
```

It is a reset function.

5. 7 Other Quick Opercating Guide

PTZ Menu Open = 95 + set preset or go preset
PTZ Menu Close = 96 + set preset or go preset
Heater On / Off Toggle = 245 + set preset
Wiper On / Off Toggle = 244 + set preset
Fan On / Off Toggle = 250 + set preset
Camera Factory Set = 253 + set preset
Camera Lens Init = 254 + set preset
PTZ Information = 255 + set preset
IR LED toggle = 252 + set preset
Auto Scan = 99 + go preset
Night = 242 + set preset
Auto = 240 + set preset
Auto Flip(180°) = 90 + go preset
Day = 241 + set preset

6. SPECIFICATIONS

6. 1   Mechanical Specifications

6. 1. 1   MECHANICAL

Pan	:	360˚ Continuous Pan, 0.1˚ to 120˚/sec (proportional to zoom)
Pan Preset Speed	:	Max150˚/sec, ±0.1 Accuracy
Tilt	:	-30˚ to +90˚
Tilt Preset Speed	:	Max,120˚/sec, ±0.1 Accuracy
Weight	:	Approx 12.1kg / Packing 17.2kg

6. 1. 2   ENVIRONMENTAL

Construction	:	Die-casing Aluminum
	:	All internal parts are corrosion protected epoxy powder coating
Ingress Protection	:	IP66 Outdoor Application
Color	:	Ivory
Operating Temp	:	-40°C to 60°C
Storage Temp	:	-40°C to 60°C
Humidity	:	0% to 90%

6. 1. 3   FUNCTIONS

Preset	:	255 points, less than 0.1° accuracy
Tour	:	8 programmable
Scan	:	8 scans
Pattern	:	4 patterns
Area	:	16 area
Alarm	:	1 alarm
Privacy	:	8 privacy
Flip	:	UP / DOWN / UP&DOWN Flip
Address	:	Up to 255 selectable ID (setting with Dip-switches)
Data Communication Control	:	RS-485 / RS-422
Protocol	:	Multiple Protocol
Baud rate	:	2400, 4800, 9600, 19200, 38400, 57600 bps selectable

6. 1. 4   ELECTRICAL

|		
Power	:	DC12~24V / AC 24V
Consumption	:	MIN(35W)/ MAX(85W)

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

6. 2 LED Specification

	Infra Red LED	White LED
Light Distance	200m(Manual focusing)	
LED	Super IR LED 14EA with Lens 12° Proximity IR LED 4EA Degree 90°	Super White LED 14EA with Lens 12°

7. DIMENSIONS(mm)

240

306

Ø213

270

306

230
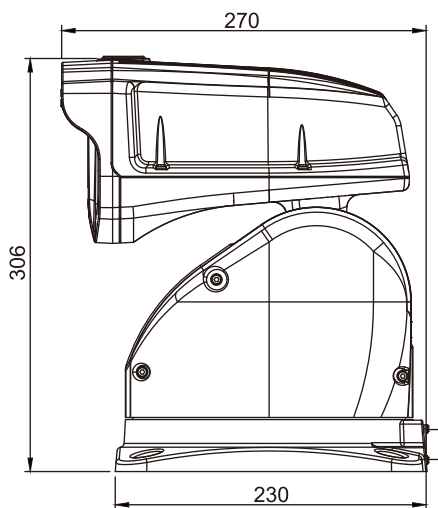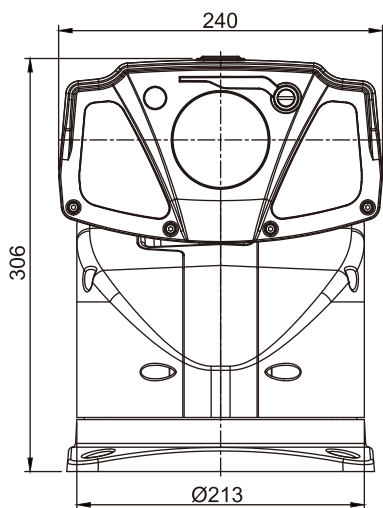
Camera OSD Manual

Before installing, operating or adjusting this product, please read this instruction booklet carefully and completely.

1. Camera Setting

Camera menu subject to change 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.

```
           MAIN MENU
     MOTION              ▷
     DOME                ▷
  ▷  CAMERA              ▷
     CLEAR               ▷
     FACTORY SET
     PTZ RESET

     EXIT
  ⟨ NEAR / RIGHT  ▷  CAMERA ⟩
```

```
            CAMERA MENU
  ▷ ZOOM MODE          ▷
    FOCUS MODE         ▷
    WHITE BAL.         ▷
    AUTO EXP.          ▷
    WDR MODE           ▷
    STABILIZER         ▷
    SPECIAL            ▷
    CAMERA RESET       ▷
  SAVE        BACK       EXIT
  ⟨ NEAR / RIGHT  ▷  ZOOM MODE ⟩
```
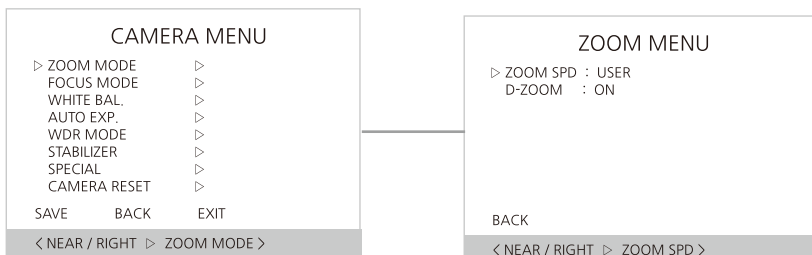
CAMERA MENU
- Functions can be set-up using the Camera menu.
  In this menu, user can set the zoom, focus, white balance, auto exposure...etc functions.

1.1 ZOOM MODE

```
           CAMERA MENU
  ▷ ZOOM MODE          ▷
    FOCUS MODE         ▷
    WHITE BAL.         ▷
    AUTO EXP.          ▷
    WDR MODE           ▷
    STABILIZER         ▷
    SPECIAL            ▷
    CAMERA RESET       ▷
  SAVE        BACK       EXIT
  ⟨ NEAR / RIGHT  ▷  ZOOM MODE ⟩
```

```
            ZOOM MENU
  ▷ ZOOM SPD : USER
    D-ZOOM   : ON




  BACK
  ⟨ NEAR / RIGHT  ▷  ZOOM SPD ⟩
```
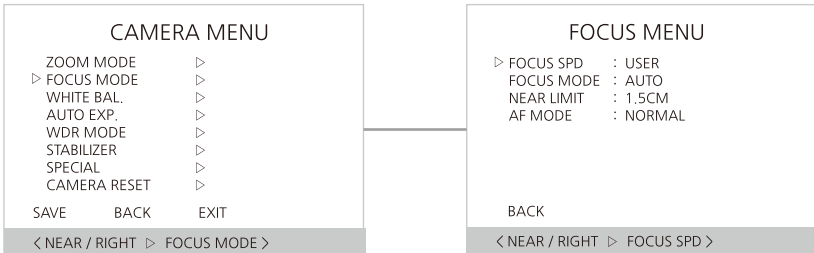
(1) ZOOM SPD
Decide using of digital zoom function and select zoom speed.
Select from 0steps to 7 steps, USER (Standard speed)

(2) D-ZOOM
Decide using of digital zoom function.(ON/ OFF)

1.2 FOCUS MODE

```
              CAMERA MENU                              FOCUS MENU
     ZOOM MODE          ▷               ▷ FOCUS SPD      :  USER
   ▷ FOCUS MODE         ▷                 FOCUS MODE     :  AUTO
     WHITE BAL.         ▷                 NEAR LIMIT     :  1.5CM
     AUTO EXP.          ▷                 AF MODE        :  NORMAL
     WDR MODE           ▷
     STABILIZER         ▷
     SPECIAL            ▷
     CAMERA RESET       ▷

   SAVE        BACK        EXIT              BACK
   ‹ NEAR / RIGHT  ▷  FOCUS MODE ›          ‹ NEAR / RIGHT  ▷  FOCUS SPD ›
```

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

(1) FOCUS SPD
Set the speed for camera focusing.

(2) 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.

(3) 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)

(4) AF MODE
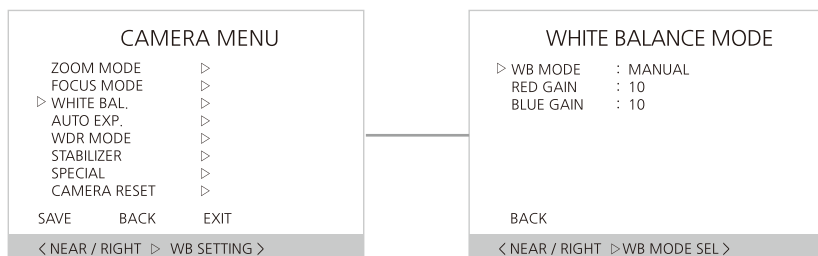Set the Auto Focus Mode. AF MODE is work in the AUTO MODE only.
NORMAL : AF is worked when the image is changed.
ZOOM : AF is worked when the zoom rate is changed.
 ※ ZOOM features may vary by model.
INTERVAL : AF and AF STOP is repetitively worked in settled time.

1.3   WHITE BALANCE

```
          CAMERA MENU
  ZOOM MODE          ▷
  FOCUS MODE         ▷
▷ WHITE BAL.         ▷
  AUTO EXP.          ▷
  WDR MODE           ▷
  STABILIZER         ▷
  SPECIAL            ▷
  CAMERA RESET       ▷

  SAVE       BACK       EXIT
┌─────────────────────────────────┐
│ ‹ NEAR / RIGHT  ▷  WB SETTING ›  │
└─────────────────────────────────┘
```

```
       WHITE BALANCE MODE
 ▷ WB MODE       :  MANUAL
   RED GAIN      :  10
   BLUE GAIN     :  10




   BACK
┌─────────────────────────────────┐
│ ‹ NEAR / RIGHT  ▷ WB MODE SEL ›  │
└─────────────────────────────────┘
```

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

(1) WB MODE
WB MODE: Set the color depend on white balacne.
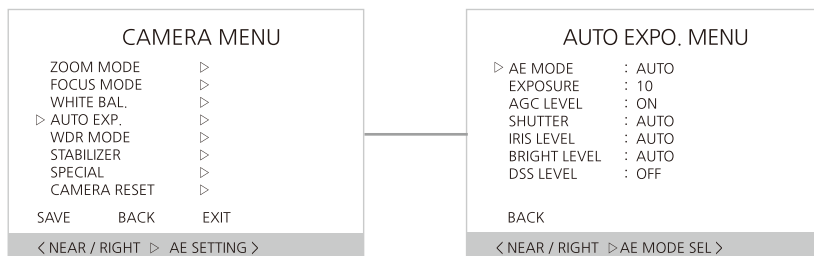Select AUTO, INDOOR, OUTDOOR, ONEPUSHAWB or MANUAL.

※ Set value depends upon the camera models.

(2) WB MANUAL MODE
Adjust color leverl (RED, BLUE : 01~ 20)
Standard level : RED -> 10 BLUE->10

1.4 AUTO EXPOSURE

```
            CAMERA MENU
    ZOOM MODE        ▷
    FOCUS MODE       ▷
    WHITE BAL.       ▷
  ▷ AUTO EXP.        ▷
    WDR MODE         ▷
    STABILIZER       ▷
    SPECIAL          ▷
    CAMERA RESET     ▷

   SAVE      BACK       EXIT
  〈 NEAR / RIGHT  ▷  AE SETTING 〉
```

```
           AUTO EXPO. MENU
  ▷ AE MODE        :  AUTO
    EXPOSURE       :  10
    AGC LEVEL      :  ON
    SHUTTER        :  AUTO
    IRIS LEVEL     :  AUTO
    BRIGHT LEVEL   :  AUTO
    DSS LEVEL      :  OFF


   BACK
  〈 NEAR / RIGHT  ▷ AE MODE SEL 〉
```

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

(1) AE MODE
Select AUTO,MANUAL,SHUTTER, IRIS or BRIGHT.

(2) EXPO MODE
Set the exposure.(00 ~20)

(3) AGC LEVEL
Auto level control funtion. select ON / OFF

(4) SHUTTER
If you set SHUTTER in the AE MODE, you can control shutter speed.
(1/8 ~ 1/60000)

(5) IRIS LEVEL
If you set IRIS in the AE MODE, you can set the IRIS level from 00 to 13

(6) BRIGHT LEVEL
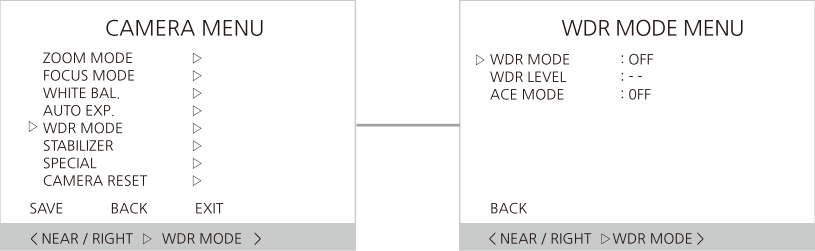To change bright level, select BRIGHT in AE MODE and set by NEAR key.Set from 00 ~ 23.

(7) DSS LEVEL
Digital Slow Shutter : Control digital slow shutter speed.
(2x ~ 32x, 64x : 60 or 50 fps mode only)

※ Set value depends upon the camera models.

1.5 WDR MODE

```
          CAMERA MENU
   ZOOM MODE          ▷
   FOCUS MODE         ▷
   WHITE BAL.         ▷
   AUTO EXP.          ▷
 ▷ WDR MODE           ▷
   STABILIZER         ▷
   SPECIAL            ▷
   CAMERA RESET       ▷

  SAVE        BACK        EXIT
  ‹ NEAR / RIGHT  ▷  WDR MODE  ›
```

```
          WDR MODE MENU
 ▷ WDR MODE          : OFF
   WDR LEVEL         : - -
   ACE MODE          : 0FF




   BACK
   ‹ NEAR / RIGHT  ▷WDR MODE ›
```

Set WDR funtion. WDR(Wide Dynamic Range)

(1) WDR MODE
Select ON/OFF in the WDR MODE function.
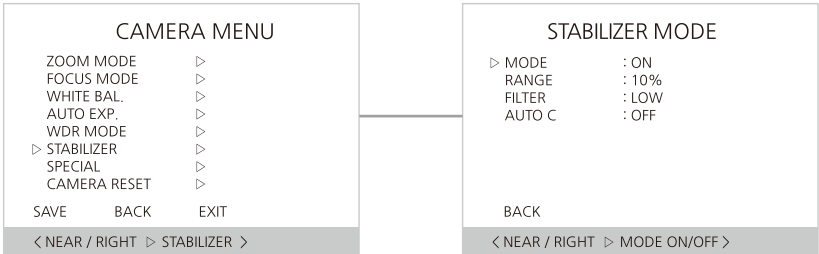* When WDR MODE is ON, the analog is not output.

(2) WDR LEVEL
Select WDR LEVEL.(00~04)

(3) ACE MODE
Select ON/OFF in the ACE MODE function.

1.6 STABILIZER

```
          CAMERA MENU                          STABILIZER MODE

     ZOOM MODE         ▷                  ▷ MODE         : ON
     FOCUS MODE        ▷                    RANGE        : 10%
     WHITE BAL.        ▷                    FILTER       : LOW
     AUTO EXP.         ▷                    AUTO C       : OFF
     WDR MODE          ▷
   ▷ STABILIZER        ▷
     SPECIAL           ▷
     CAMERA RESET      ▷

    SAVE      BACK      EXIT                  BACK

   ‹ NEAR / RIGHT  ▷ STABILIZER ›          ‹ NEAR / RIGHT  ▷ MODE ON/OFF ›
```

Select Digital Image Stabilizer mode.

(1) STABILIZER MODE
Set the Stabilizer mode.(ON/OFF)

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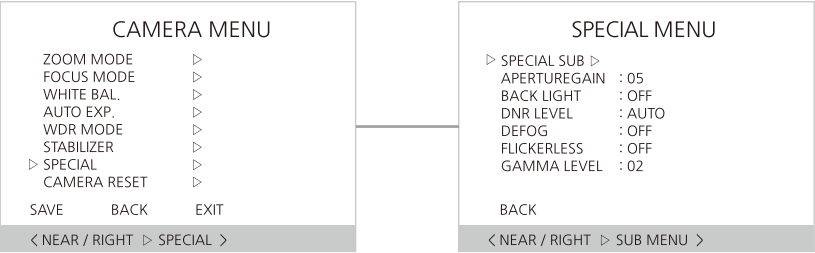Setting the image compensation range.(10%, 20%, 30%)

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

(4) AUTO C
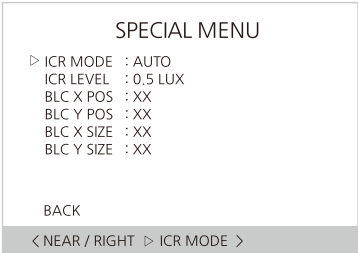Setting Auto Centering mode.(OFF, HALF, FULL)

1.7 SPECIAL

CAMERA MENU

ZOOM MODE   ▷
FOCUS MODE   ▷
WHITE BAL.   ▷
AUTO EXP.   ▷
WDR MODE   ▷
STABILIZER   ▷
▷ SPECIAL   ▷
CAMERA RESET   ▷

SAVE   BACK   EXIT

〈 NEAR / RIGHT ▷ SPECIAL 〉

SPECIAL MENU

▷ SPECIAL SUB ▷
APERTUREGAIN   : 05
BACK LIGHT   : OFF
DNR LEVEL   : AUTO
DEFOG   : OFF
FLICKERLESS   : OFF
GAMMA LEVEL   : 02

BACK

〈 NEAR / RIGHT ▷ SUB MENU 〉

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

(1) SPECIAL SUB
ICR MODE : Select AUTO, DAY and NIGHT.
ICR LEVEL : Set ICR Value.(0.5~20.0 lux)

SPECIAL MENU

▷ ICR MODE   : AUTO
ICR LEVEL   : 0.5 LUX
BLC X POS   : XX
BLC Y POS   : XX
BLC X SIZE   : XX
BLC Y SIZE   : XX

BACK

〈 NEAR / RIGHT ▷ ICR MODE 〉

* If you set ON in the BACK LIGHT, you can set the BLC. (Camera Menu->Special Menu->BACK LIGHT : ON)

BLC X POS : Set the BLC X POSION(Default : 06, Change : 0 ~ 19)
BLC Y POS : Set BLC Y POSION(Default : 05, Change : 0 ~ 18)
BLC X SIZE : Set BLC X SIZE(Default : 07, Change : 0 ~ 19)
BLC Y SIZE : Set BLC Y SIZE(Default : 06, Change : 0 ~ 19)

(2) APERTURE GAIN
APERTURE GAIN: Select aperture gain

(3) BACK LIGHT
Select ON/OFF in the BACK LIGHT function.

(4) DNR LEVEL
Select the DNR level from AUTO, LEV1, LEV2, LEV3 and OFF.

(5) DEFOG
Defogging foggy video image. Select ON/OFF.

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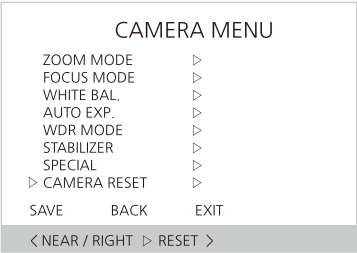is different areas(50Hz/60Hz)

(7) GAMMA LEVEL
Set Gamma level.(0~3)
※ Set value depends upon the camera models.

1.8 CAMERA RESET

```
              CAMERA MENU
   ZOOM MODE            ▷
   FOCUS MODE           ▷
   WHITE BAL.           ▷
   AUTO EXP.            ▷
   WDR MODE             ▷
   STABILIZER           ▷
   SPECIAL              ▷
 ▷ CAMERA RESET         ▷

   SAVE        BACK        EXIT
   ‹ NEAR / RIGHT  ▷ RESET  ›
```

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

```
             SPECIAL MENU
   SPECIAL SUB ▷
 ▷ APERTUREGAIN   : 05
   BACK LIGHT     : OFF
   DNR LEVEL      : AUTO
   DEFOG          : OFF
   FLICKERLESS    : OFF
   GAMMA LEVEL    : 02

   BACK
 ‹ NEAR / RIGHT  ▷ SUB MENU  ›
```

2.3 36x Camera

Image Sensor	1/1.9" Sony CMOS Sensor
Total Pixels	1,952(H) x 1,241(V) = 2.42M Pixels
Active pixels	1,937(H) x 1,097(V) = 2.12M Pixels
Scanning system	Progressive Scan
Sync. System	Internal
Resolution	Digital : 1080p/30(25)fps, 1080p/60(50)fps(Option),720p/30(25)fps, 720p/60(50)fps
	Analog : 700TVL
Min. illumination	Color(1/30s) : 0.15 lux , BW(1/30s) : 0.01 lux
	Color DSS(1/7.5s) : 0.0375 lux , BW DSS(1/7.5s) : 0.002 lux
Video Output	HD : Digital(LVDS)
	Analog SD : VBS(without WDR)
S/N Ratio	more than 50dB (AGC off)
Lens type	36x Day & Night Zoom Lens
Zoom Ratio	Optical 36x, Digital 32x Zoom
Focal Length	f = 6.0 mm ～ 216.0 mm
Aperture Ratio	F1.5 (wide) ～ F4.8 (tele)
Focus	Mode / Distance / AF Mode
Mode	Auto / One Push / Manual
Distance	0.1 / 1.5 / 3.0 / 5.0 / 10.0 m / Over
Lens Refresh	One Push / 1 ～ 10Day
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 / 1080p/60(50)fps(Option) / 720p/30(25)fps / 720p/60(50)fps

* Design and specifications are subject to change without notice.

Image Sensor	1/2" Sony CMOS Sensor
Total Pixels	1,952(H) x 1,113(V) = 2.17M Pixels
Active pixels	1,937(H) x 1,097(V) = 2.12M Pixels
Scanning system	Progressive Scan
Sync. System	Internal
Resolution	Digital : 1080p/30(25)fps, 1080p/60(50)fps(Option),720p/30(25)fps, 720p/60(50)fps
	Analog : 700TVL
Min. illumination	Color(1/30s) : 0.01 lux , BW(1/30s) : 0.002 lux
	Color DSS(1/1s) : 0.001 lux , BW DSS(1/1s) : 0.0002 lux
Video Output	HD : Digital(LVDS)
	Analog SD : VBS
S/N Ratio	more than 50dB (AGC off)
Lens type	36x Day & Night Zoom Lens
Zoom Ratio	Optical 36x, Digital 32x Zoom
Focal Length	f = 6.0 mm ~ 216.0 mm
Aperture Ratio	F1.5 (wide) ~ F4.8 (tele)
Focus	Mode / Distance / AF Mode
Mode	Auto / One Push / Manual
Distance	0.1 / 1.5 / 3.0 / 5.0 / 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) ~ 1/60,000 sec
Iris	0 ~ 20
Digital Slow Shutter (DSS)	Off / 2x / 4x / 8x / 16x / 32x (/64x : 60 or 50 fps mode only)
WDR/BLC	OFF / WDR / BLC
Day&Night	Auto / Day / Night
White Balance	Auto / One Push / Manual / Indoor / Outdoor / Auto-Ext
DNR	Auto / Off / Low / Middle / High
System	NTSC / PAL
HD Format	1080p/30(25)fps / 1080p/60(50)fps(Option) / 720p/30(25)fps / 720p/60(50)fps

* Design and specifications are subject to change without notice.

Image Sensor	1/1.8" Sony CMOS Sensor
Total Pixels	3,096(H) x 2,094(V) = 6.48M pixels
Active pixels	3,089(H) x 1,744(V) = 5.39M pixels
Scanning system	Progressive Scan
Sync. System	Internal
Resolution	Digital : 1440p 30(25)fps(Option), 1080p 30(25)fps, 720p 30(25)fps
	Analog : 700TVL
Min. illumination	Color(1/30s, 51dB) : 0.2 lux , BW(1/30s, 51dB) : 0.05lux
	Color DSS(1/1s, 51dB) : 0.02 lux , BW DSS(1/1s, 51dB) : 0.005 lux
Video Output	HD : Digital(LVDS)
	Analog : CVBS
S/N Ratio	more than 50dB (AGC off)
Lens type	36x Day & Night Zoom Lens
Zoom Ratio	Optical 36x, Digital 32x Zoom
Focal Length	f = 6.0 mm ~ 216.0 mm
Aperture Ratio	F1.5 (wide) ~ F4.8 (tele)
Focus	Mode / Distance / AF Mode
Mode	Auto / One Push / Manual
Distance	0.1 / 1.5 / 3.0 / 5.0 / 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 / 16x / 32x
WDR/BLC	OFF / WDR / BLC
Day&Night	Auto / Day / Night
White Balance	Auto / One Push / Manual / Indoor / Outdoor / Auto-Ext
DNR	Auto / Off / Low / Middle / High
System	NTSC / PAL
HD Format	1440p30(25)fps(Option) / 1080p30(25)fps / 720p30(25)fps

* Design and specifications are subject to change without notice.