Full HD Mega-pixel Rugged PTZ Camera

Before attempting to connect or operate this product,
please read this instruction carefully and save this manual for future use.

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.

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.**

■ **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

Outdoor Heavy-duty PTZ Camera

Heavy-duty aluminum die-cast body allows WTK Series is ideal for traffic control, harbor and airport surveillance, oil fields & refineries, the military & police, sport stadiums, town & city centers, bus & rail stations and other high security outdoor installations.

Unobstructed 360° rotation and 180 ° flip

Heavy-duty long life slip ring allows for 360° endless panning and unobstructed 180° flip.

Light Function

It's built-in 30 pcs Super IR LED(Infra-red or white).

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.

Break and clutch protected pan and tilt

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 20X, 30X Optical Zoom

The built-in 20X, 30X optical zoom lens with auto-focus is combined with a 32X digital zoom, providing a maximum of 640X, 960X 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

Guiding sticker for installation
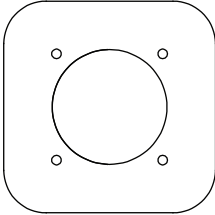
Manual
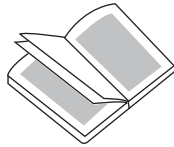
Detaching Hook
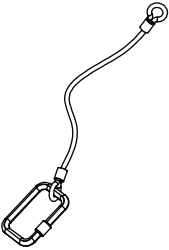
4PIN Communication Terminal
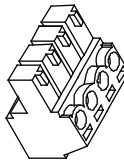
Accessories
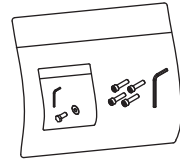
L-WRENCH(2.5mm/6mm),
M8 HEX SCREW, M8 WASHER,
M8 WRENCH SCREW

Switched-Mode Power Supply
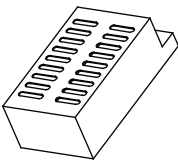
MAIN CABLE
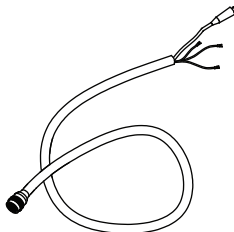
POWER CABLE
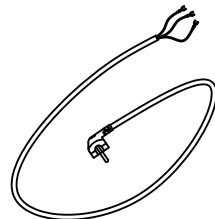
4. 2   DIP Switch Setting

Before starting up the camera, set the protocol, camera address and details with dip-switches referring to the following.
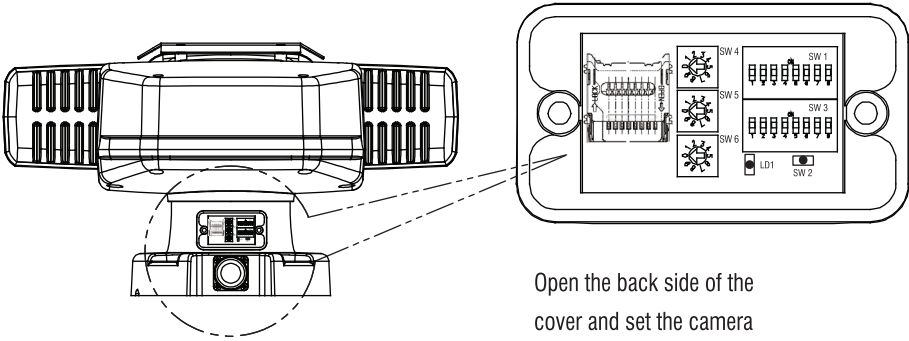
Open the back side of the
cover and set the camera

Camera ID (ADDRESS)

S/W 4   S/W 5   S/W 6
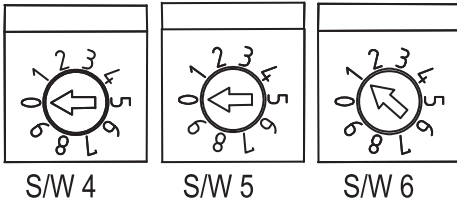
S/W 4 :   100 digit of ID
S/W 5 :   10 digit of ID
S/W 6 :   1 digit of ID

Ex) S/W 4=0, S/W 5=0, S/W 6=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.
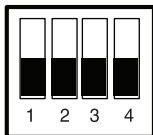
SW 3   **PROTOCOL**

1	2	3	4	PROTOCOL
0	0	0	0	EZ
0	0	0	1	PELCO D
0	0	1	0	PELCO P
0	0	1	1	WTX
0	1	0	0	SJ1000
0	1	0	1	NC
0	1	1	0	NC
0	1	1	1	NC
1	0	0	0	NC

SW 3   **BAUDRATE**

5	6	7	BAUDRATE
0	0	0	2400
0	0	1	4800
0	1	0	9600
0	1	1	19200
1	0	0	38400
1	0	1	57600
1	1	0	NC
1	1	1	NC

SW 3   NTSC/PAL

8	VIDEO OUT
0	NTSC
1	PAL

SW 1   IP SELECT
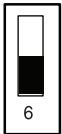
6	IP SELECT
0	IP OFF
1	IP ON

SW 1   RS485 LOOP (TERMINATION)
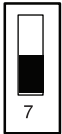
7	RS LOOP
0	OFF
1	ON

SW 1   RS MODE
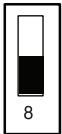
8	RS MODE
0	RS-422
1	RS-485

4. 3 Cable Connection

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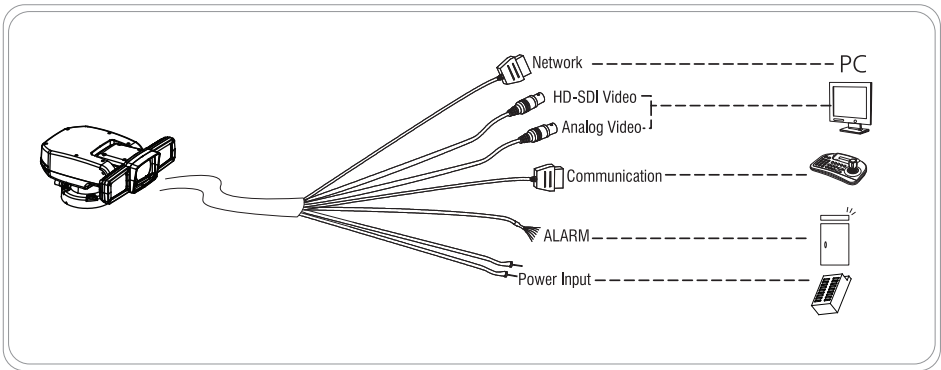
4. 3. 2   Video Output Connection
Connect the video out (BNC) to the monitor or HD SDI video input of DVR.

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 DC 24V 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 8~9 pages.

1

2

Make 12∅, 4 Holes
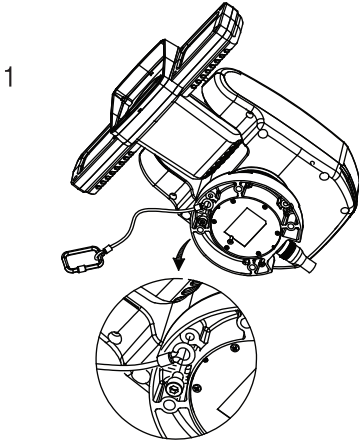
Connect the detaching hook to the camera base and base plate using the enclosed M8 bolt.
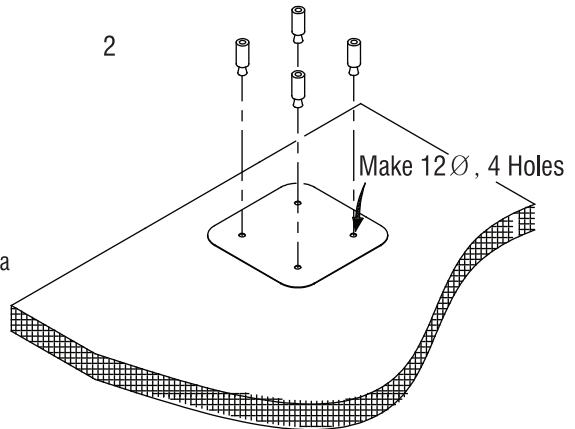
Attach the enclosed guide sticker to the proper position and make 4 holes with 12∅. And fix the anchor bolts to those holes.

3
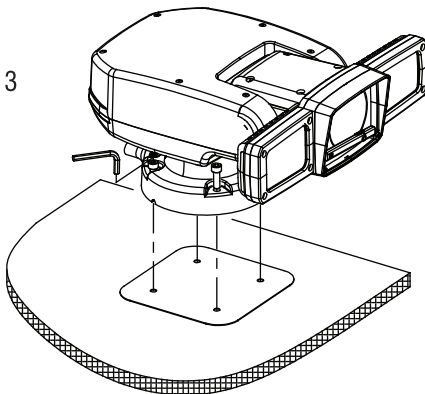
Fix the 4 M8 bolts to 4 anchor bolts using a L-wrench.

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

Keboard Controller
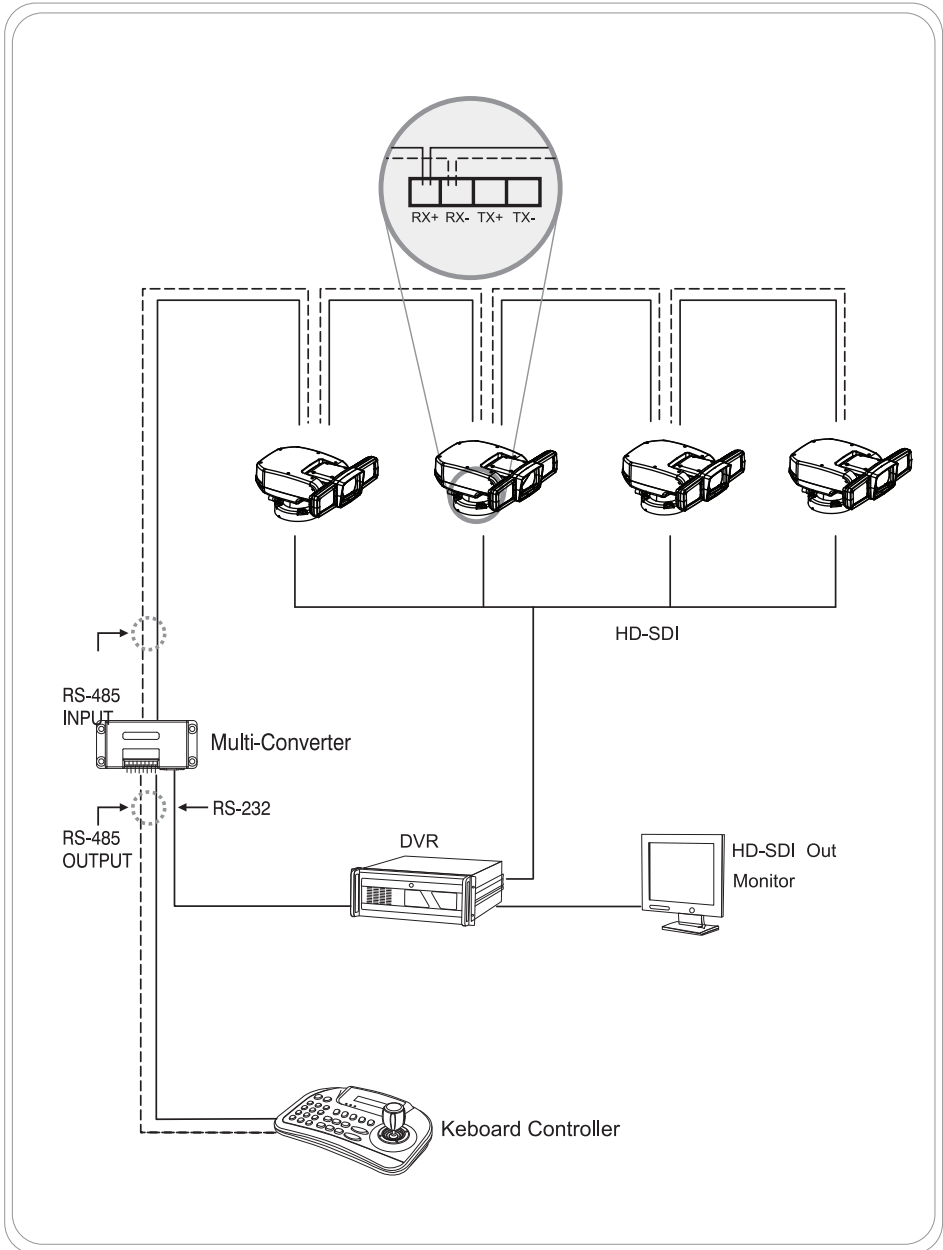
5. MAIN SETUP MENU

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   : PELCO-D
BAUDRATE   : 2400.N.1
CAMERA     : XX XXX..OK
                    VER: XX, XX
 ▷ 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 [knob]JOYSTICK   Delete : [WIDE] or [knob]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   ② Move and set the Focus Menu
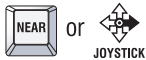
[NEAR] or [JOYSTICK]   [JOYSTICK]

```
        PRESET MENU
        _____

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

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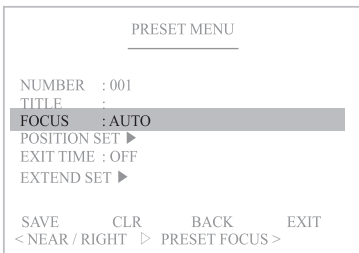
On focus menu, there are 3 modes : AUTO, MANUAL, ONESHT. It allows detailed settings for the preset.

(4) Define the Preset position

① Select the Position menu   ② Move and set the position   ③ Set & Back

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




  POSITION : 000. 0  000. 0

  <EXIT  ▷  FOCUS  NEAR  >
```

(5) EXIT TIME
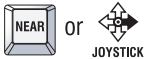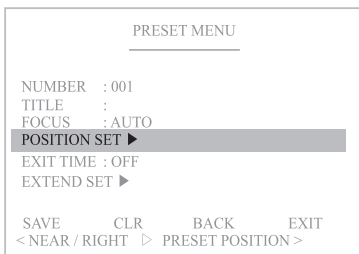
```
            PRESET MENU
         ─────────────

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

  EXTEND SET ▶


  SAVE       CLR       BACK       EXIT
  < NEAR / RIGHT   ▷  EXIT TIME >
```
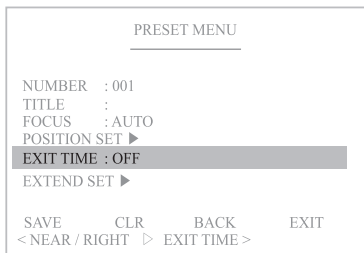
Setting the dwell time to exit Preset mode after completing Preset working.
(OFF / 5SEC / 10SEC / 20SEC / 30SEC / 1MIN / 5MIN / 10MIN / 30MIN) ※ Default : OFF

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 >
```
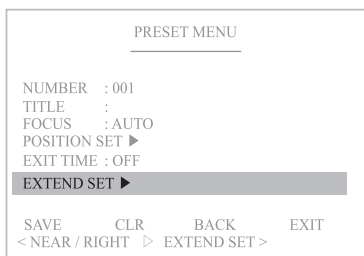
Set the addtional preset functions.

AE MODE

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

  AE MODE  :  AUTO
  SHT SPD  :  -------
  IRIS SET  :  -----
  WDR ON/OFF  :  PASS
  ICR SET  :  PASS
  ICR RT : 10SECS
  LIGHT ON/OFF  :  PASS
  WIPER ON/OFF  :  PASS

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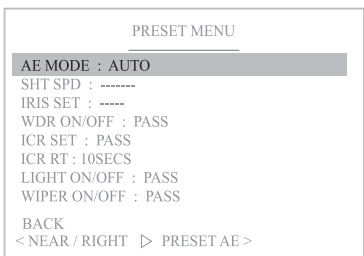
Select AUTO, SHUTTER, IRIS and PASS MODE.

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

SHUTTER SPD

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

  AE MODE  :  AUTO
  SHT SPD  :  -------
  IRIS SET  :  -----
  WDR ON/OFF  :  PASS
  ICR SET  :  PASS
  ICR RT : 10SECS
  LIGHT ON/OFF  :  PASS
  WIPER ON/OFF  :  PASS

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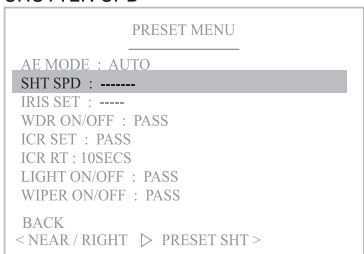
Set shutter speed in the AE MODE.

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

IRIS SETTING

```
          PRESET MENU
          ───────────
 AE MODE  :  AUTO
 SHT SPD  : -------
 IRIS SET   :  -----
 WDR ON/OFF  : PASS
 ICR SET  :  PASS
 ICR RT : 10SECS
 LIGHT ON/OFF  :  PASS
 WIPER ON/OFF  :  PASS

 BACK
 < NEAR / RIGHT   ▷  PRESET IRIS >
```
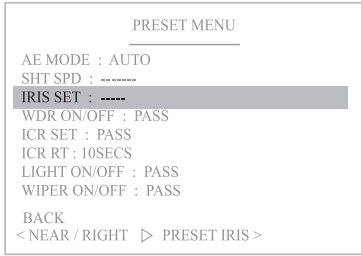
Set IRIS value in the AE MODE. (0~13)

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

WDR ON/OFF

```
          PRESET MENU
          ───────────
 AE MODE  :  AUTO
 SHT SPD  : -------
 IRIS SET  : -----
 WDR ON/OFF  :  PASS
 ICR SET  :  PASS
 ICR RT : 10SECS
 LIGHT ON/OFF  :  PASS
 WIPER ON/OFF  :  PASS

 BACK
 <NEAR / RIGHT   ▷  PRESET WDR>
```
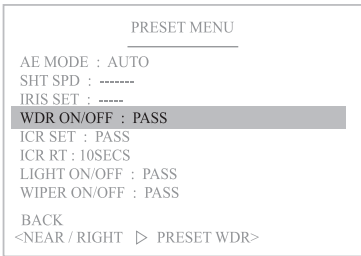
Set WDR funtion.

Select PASS, ON and OFF.

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

ICR SETTING

```
          PRESET MENU
          ───────────
 AE MODE  :  AUTO
 SHT SPD  : -------
 IRIS SET  : -----
 WDR ON/OFF  : PASS
 ICR SET  :  PASS
 ICR RT : 10SECS
 LIGHT ON/OFF  :  PASS
 WIPER ON/OFF  :  PASS

 BACK
 <NEAR / RIGHT   ▷  PRESET ICR>
```
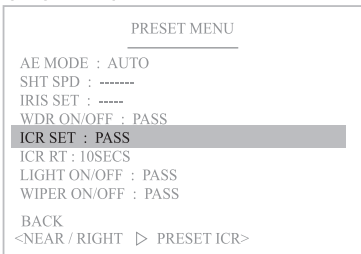
Select PASS, DAY, NIGHT and AUTO in the IR LED.

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

ICR RT SETTING

```
          PRESET MENU
          ───────────
 AE MODE  :  AUTO
 SHT SPD  : -------
 IRIS SET  : -----
 WDR ON/OFF  : PASS
 ICR SET  : PASS
 ICR RT : 10SECS
 LIGHT ON/OFF  :  PASS
 WIPER ON/OFF  :  PASS

 BACK
 <NEAR / RIGHT   ▷  PRESET ICR RT>
```
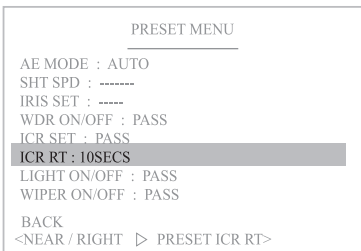
After checking an image, Set IR synchronization time.

(Factory default is 10SEC)

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

LIGHT ON/OFF

```
            PRESET MENU
         _____

 AE MODE  :  AUTO
 SHT SPD  :  -------
 IRIS SET  :  -----
 WDR ON/OFF  :  PASS
 ICR SET  :  PASS
 ICR RT : 10SECS
 LIGHT ON/OFF  :  PASS
 WIPER ON/OFF  :  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  :  AUTO
 SHT SPD  :  -------
 IRIS SET  :  -----
 WDR ON/OFF  :  PASS
 ICR SET  :  PASS
 ICR RT : 10SECS
 LIGHT ON/OFF  :  PASS
 WIPER ON/OFF  :  PASS

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

Select PASS, ON and OFF.

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]
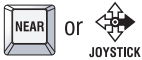
```
            TOUR MENU
        _____

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


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

```
              TOUR EDIT (01)
NO     PRESET     SPEED     DWELL
01       ◀ 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 >
```

```
            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**
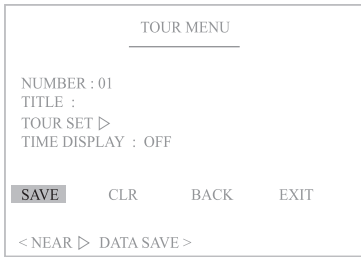
Set OFF : [NEAR]

```
                    TOUR MENU
                  _____

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


    SAVE        CLR        BACK        EXIT


   < NEAR ▷  DATA SAVE >
```
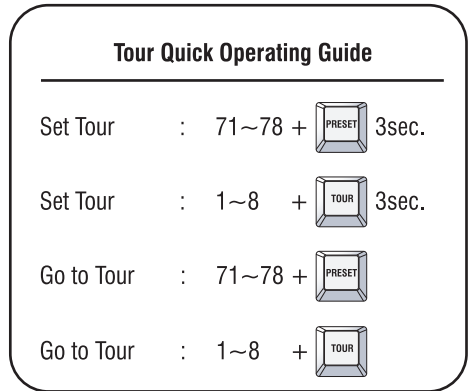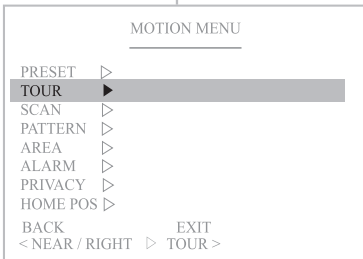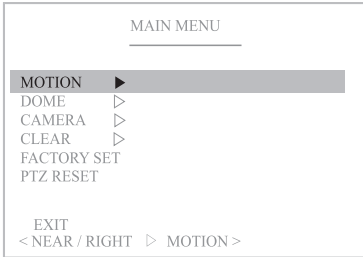
(4) "Save" above setting Pattern data to the memory.

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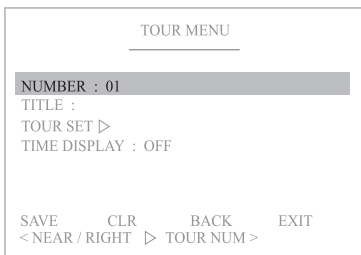
(7) "EXIT" means it goes out of MENU.

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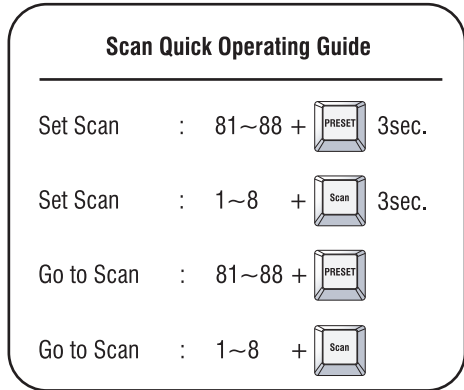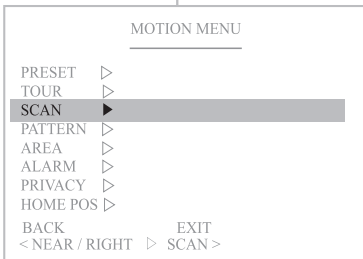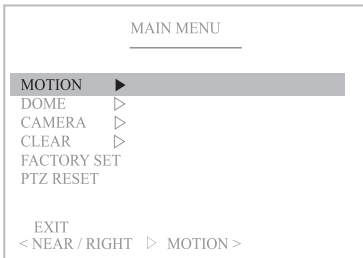
The Scan function means that the camera keeps panning between two programmed pan positions. It is also adjusts the moving speed(1~63 step). Maximum 8 Scan functions are toured in order.

(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 >
```
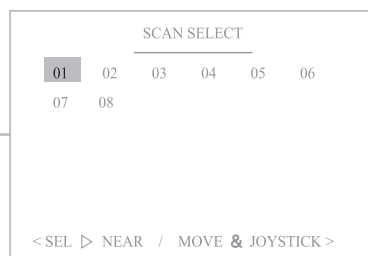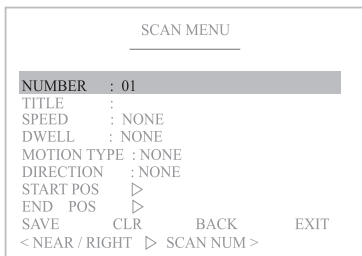
(2) Set the Scan TITLE

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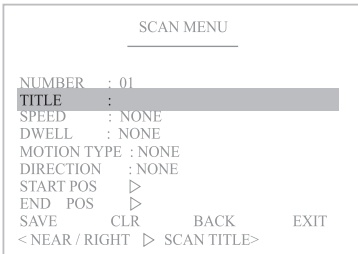
After the TITLE is set, push NEAR button to go out.

(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>
```
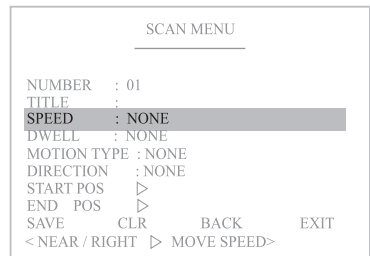
(4) Set the Dwell Time

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>
```
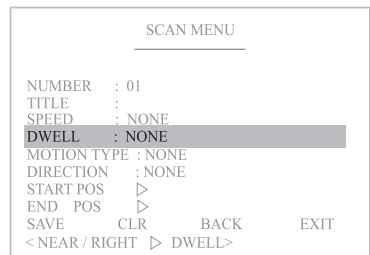
(5) Set the Motion Type

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 : [JOYSTICK]   or   [NEAR]   Set ON : [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>
```
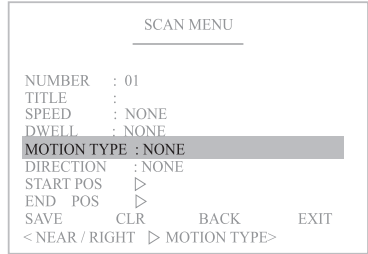
(6) Set the Direction

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 : [JOYSTICK]   or   [NEAR]   Set ON : [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>
```
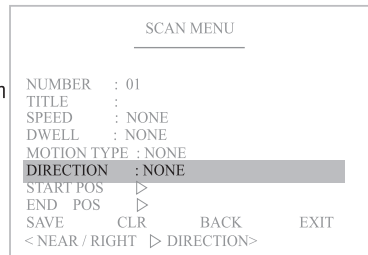
(7) Define the Start position

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 >
```
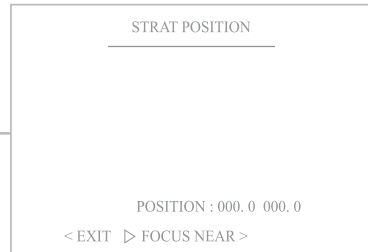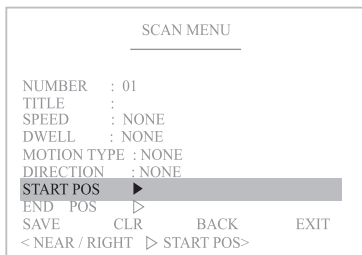
(8) Define the End position

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

NEAR or JOYSTICK   JOYSTICK   NEAR

```
         SCAN MENU                                         END POSITION


NUMBER      : 01
TITLE       :
SPEED       : NONE
DWELL       : NONE
MOTION TYPE : NONE
DIRECTION   : NONE
START POS        ▶
END   POS        ▶                                   POSITION : 000. 0  000. 0
SAVE       CLR      BACK       EXIT
< NEAR / RIGHT   ▷ END POS>                       < EXIT   ▷ FOCUS NEAR >
```
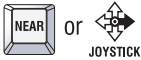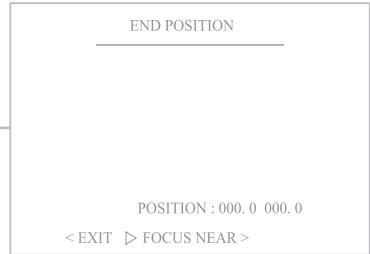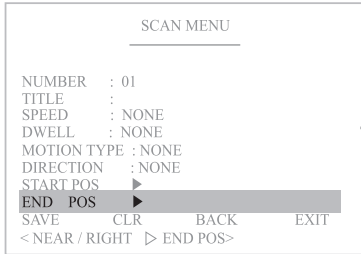
- When Motion type is PAN, Pan is available.
- When Motion type is TILT, TILT is available.

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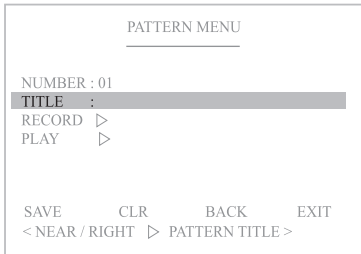
After the TITLE set, push NEAR button to go out.

(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
```
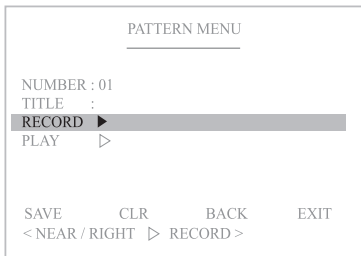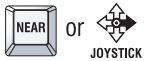
(4) Play back the recorded Pattern data

```
        PATTERN MENU
        _____

 NUMBER : 01
 TITLE    :
 RECORD  ▷
 PLAY     ▶


  SAVE      CLR      BACK      EXIT
 < NEAR / RIGHT   ▷  PLAY >
```
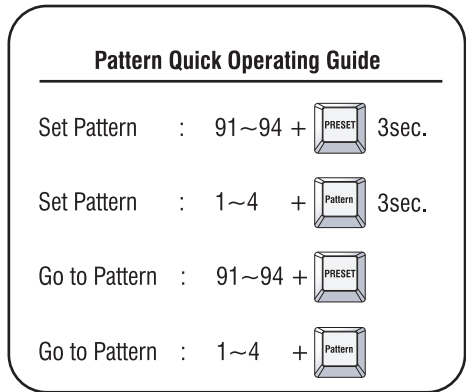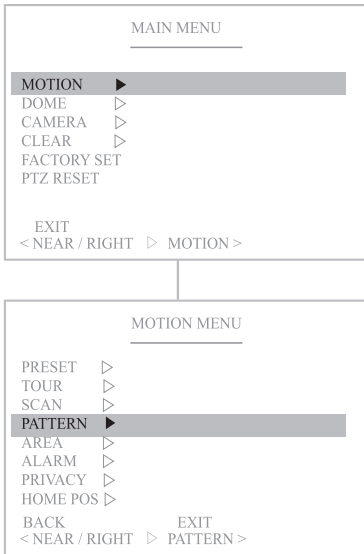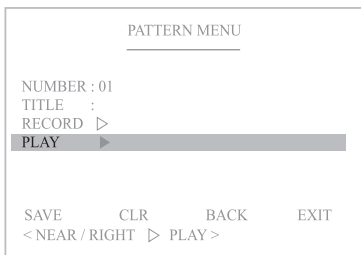
(5) "Save" above setting Pattern data to the memory.

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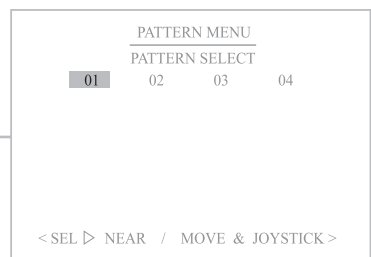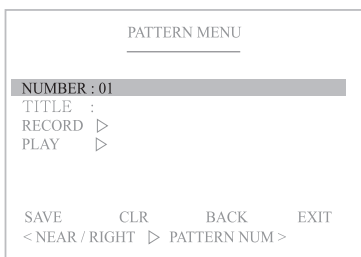
(8) "EXIT" means it goes out of MENU.

PATTERN MENU

NUMBER : 01
TITLE   :
RECORD   ▷
PLAY   ▷

SAVE   CLR   BACK   EXIT
< NEAR ▷ DATA SAVE >

5. 2. 5　Area
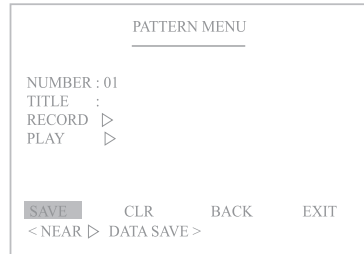
MAIN MENU	MOTION MENU
MOTION ▶	PRESET ▷
DOME ▷	TOUR ▷
CAMERA ▷	SCAN ▷
CLEAR ▷	PATTERN ▷
FACTORY SET	**AREA ▶**
PTZ RESET	ALARM ▷
	PRIVACY ▷
	HOME POS ▷
EXIT	BACK EXIT
< NEAR / RIGHT　▷　MOTION >	< NEAR / RIGHT　▷　AREA >
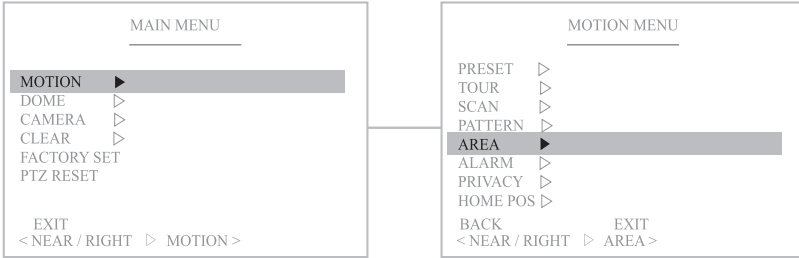
The Area function means that it displays the Area name between two programmed pan positions.
Maximun 16 Area functions are toured in order.

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

Move :　[JOYSTICK]　　Select :　[NEAR]

AREA MENU		AREA SELECT				
		01	02	03	04	05
NUMBER : 01		06	07	08	09	10
TITLE :		11	12	13	14	15
DIRECTION : NONE		16				
S PAN POS. ▷						
E PAN POS. ▷						
SAVE CLR BACK EXIT						
< NEAR / RIGHT　▷　AREA NO >		<SEL & MEAR / MOVE & JOYSTICK>				

(2) Set the Area TITLE
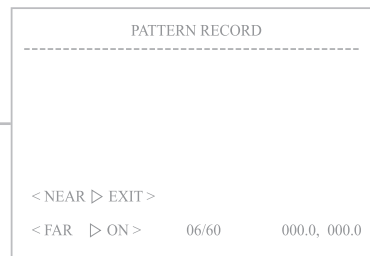
Move :　[JOYSTICK]　Select :　[TELE] or ↻　Delete :　[WIDE] or ↻

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.

(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 >
```
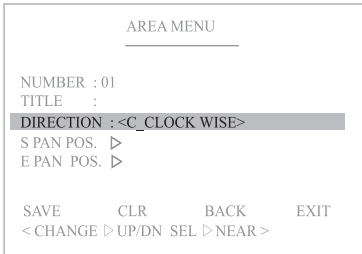
(4) Define the Start pan position

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 >
```
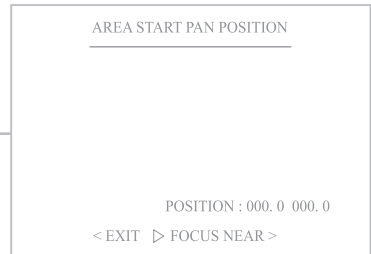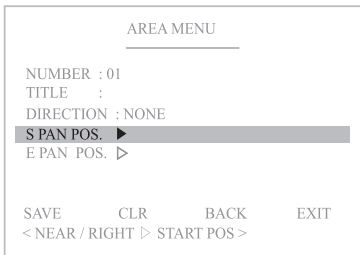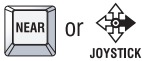
(5) Define the END pan position

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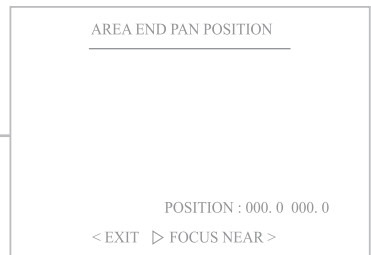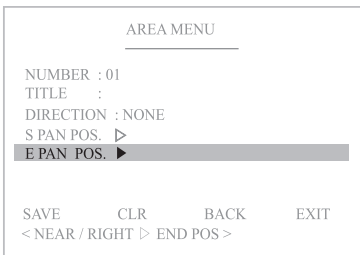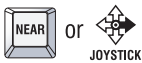
(6) "Save" above setting Area data to the memory.

(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
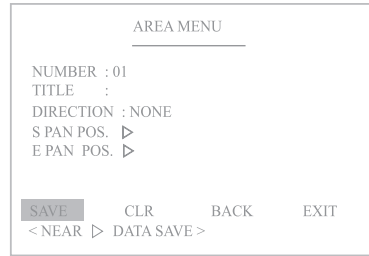
```
              MAIN MENU                                    MOTION MENU
         _____                               _____

  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   ▷  ALRAM >
```
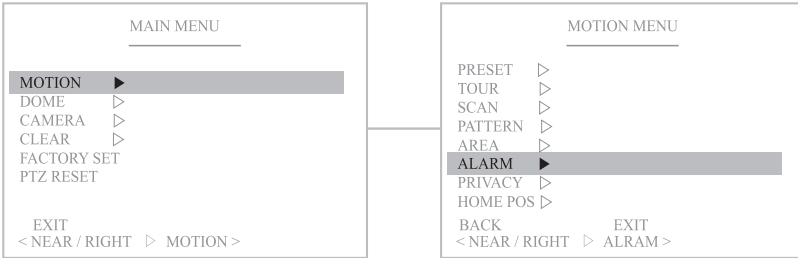
The Alarm function means that the camera moves to the programmed Preset position by the Alarm trigger.
1 Alarm functions are toured in order.

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

   Move :   [JOYSTICK]   Select :   [NEAR]

```
             ALARM MENU                                  ALARM SELECT
         _____                               _____

  NUMBER  : 01                                     01
  TITLE    :
  PRESET NUM : NONE



  SAVE       CLR       BACK       EXIT           < SEL ▷ NEAR  /  MOVE ▷ JOYSTICK >
  < NEAR / RIGHT  &  NUMBER >                    < 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                                 ALARM  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
  PRESET NUM : NONE
                                                  L M  N O P Q R S T U V W
                                                  X Y  Z  . / , + - = < >  ◯
  SAVE       CLR       BACK       EXIT           < STORE   ▷ TELE    MOVE  ▷  JOYSTICK >
  < NEAR / RIGHT  &  ALARM  TITLE >              < DELETE ▷ WIDE    BACK   ▷   NEAR    >
```
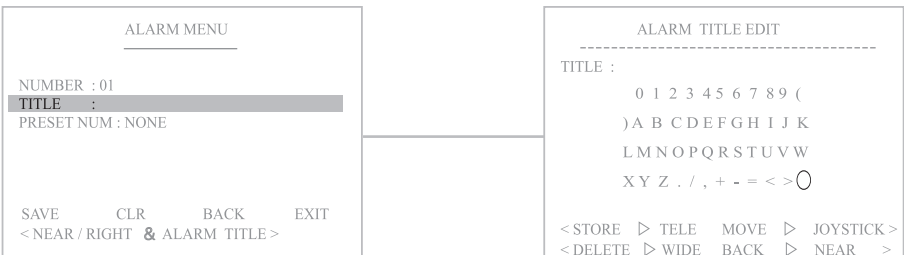
After the TITLE is set, push the NEAR button to exit.

(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.

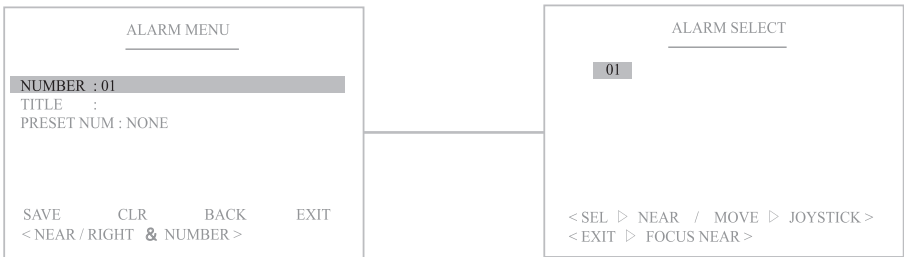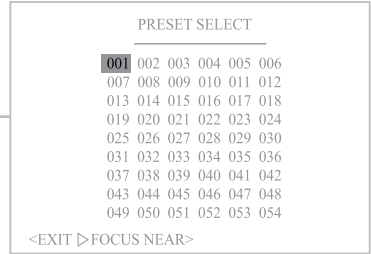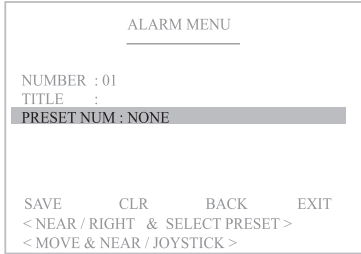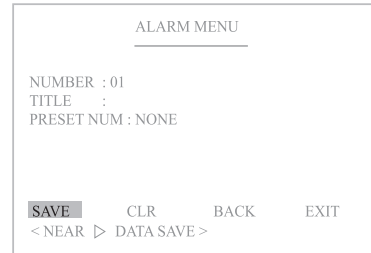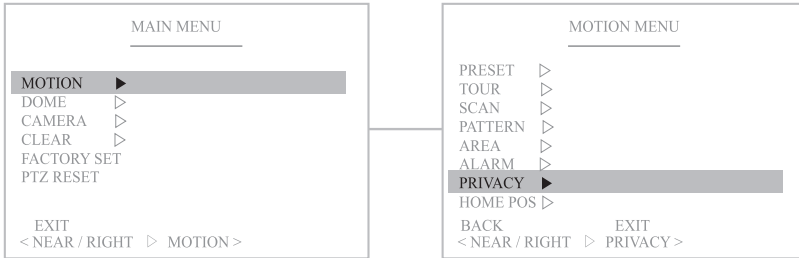(7) "EXIT" means it goes out of MENU

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

 NUMBER  : 01
 TITLE      :
 PRESET NUM : NONE



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

5. 2. 7   Privacy Zone Masking

```
               MAIN MENU                                    MOTION 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 >
```

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
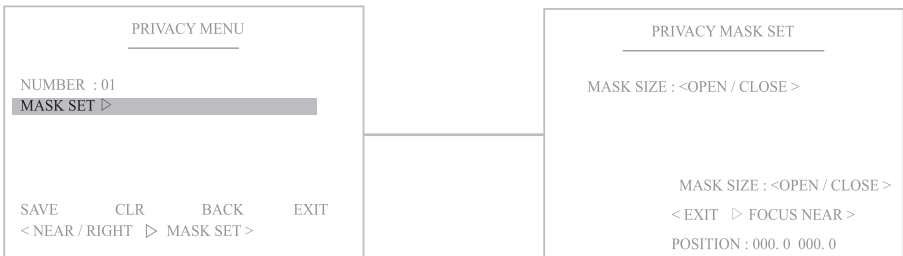   PR01 : Defined Alarm number / 01 : Undefined Alarm number

Move : [JOYSTICK]   Select : [NEAR]

```
              PRIVACY MENU                               PRIVACY SELECT
        _____                             _____

                                                01      02      03      04      05
    NUMBER  : 01
    MASK SET ▷                                  06      07      08




    SAVE       CLR        BACK       EXIT        < SEL ▷  NEAR   /   MOVE ▷  JOYSTICK >
    < NEAR / RIGHT   ▷  PRIVACY NUM >            <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                              PRIVACY MASK SET
        _____                             _____

                                                MASK SIZE : <OPEN / CLOSE >
    NUMBER  : 01
    MASK SET ▷


                                                    MASK SIZE : <OPEN / CLOSE >

    SAVE       CLR        BACK       EXIT            < EXIT   ▷ FOCUS NEAR >
    < NEAR / RIGHT   ▷  MASK SET >                   POSITION : 000. 0  000. 0
```
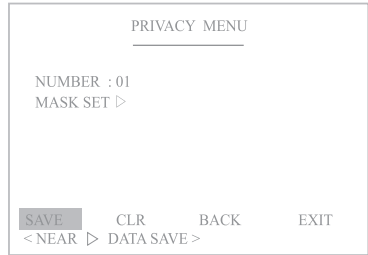
After the Privacy Zone is set, push the NEAR button to go out.

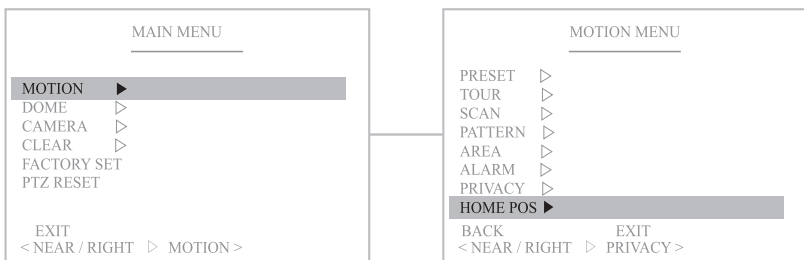(3) "Save" above settings of Privacy Zone data to the memory.

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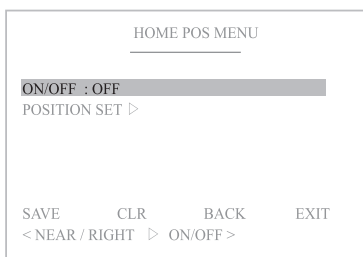
(6) "EXIT" means it goes out of MENU.

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
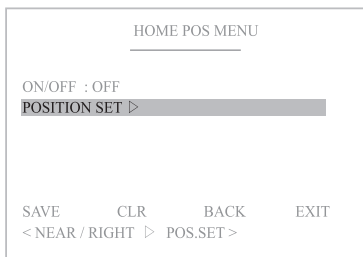
  Move :   JOYSTICK   Select :   NEAR

```
                HOME POS MENU


  ON/OFF  : OFF
  POSITION SET ▷




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

(2) Home Position SET

Quick Operating Guide
Go to Home Position : 255+SET

  Move :   JOYSTICK   Select :   NEAR

```
            HOME POS MENU                                  HOME POSITION


  ON/OFF  : OFF
  POSITION SET ▷




  SAVE        CLR        BACK        EXIT              < EXIT   ▷ FOCUS NEAR >
  < NEAR / RIGHT   ▷   POS.SET >
                                                      POSITION : 000. 0  359. 8
```

5. 3　Dome Setting

```
                    MAIN MENU
                   _____

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


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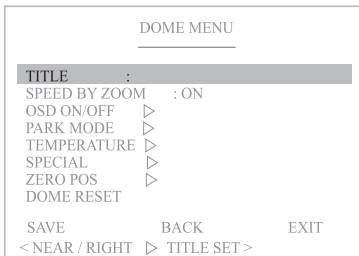
Pan, Tilt, Zoom motion is adjustable in the "Dome Setting" Menu.

5. 3. 1　Set the Dome camera title

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

It's available to set the desired camera title.

```
                DOME MENU                               TITLE SET
               _____                    -------------------------------------
                                           TITLE :
   TITLE          :
   SPEED BY ZOOM     : ON                        0 1 2 3 4 5 6 7 8 9 (
   OSD ON/OFF     ▷                              ) A B C D E F G H I J K
   PARK MODE      ▷
   TEMPERATURE    ▷                             L M N O P Q R S T U V W
   SPECIAL        ▷                             X Y Z . / , + - = < >
   ZERO POS       ▷
   DOME RESET
                                           < STORE  ▷ TELE   MOVE  ▷  JOY >
    SAVE          BACK          EXIT       < DEL ▷ WIDE        BACK   ▷  NEAR    >
   < NEAR / RIGHT   ▷  TITLE SET >
```

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

5. 3. 2　Speed by Zoom ON/OFF Set

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

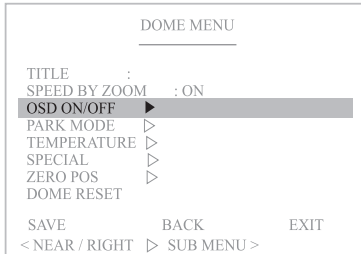Select : [JOYSTICK] or [NEAR]   Set ON : [JOYSTICK]

Set OFF : [NEAR]

```
                DOME MENU
               _____

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

    SAVE          BACK          EXIT
   < NEAR / RIGHT   ▷  FUCTION >
```
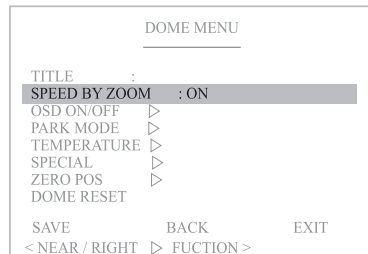
5. 3. 3 OSD ON/OFF Set

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

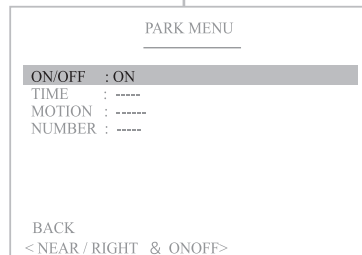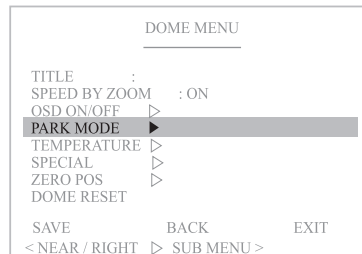Select : [JOYSTICK] or [NEAR]   Set ON : [JOYSTICK]   Set OFF : [NEAR]

```
              DOME MENU
              _____

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

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

```
                DISPLAY ON/OFF MENU
                _____

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

          < ON ▷ TETLE    MOVE ▷ JOY >
          <OFF ▷ WIDE    BACK  ▷NEAR>
```
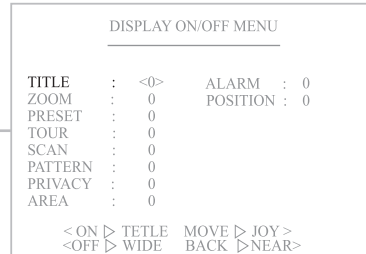
5. 3. 4   PARK MODE

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

[JOYSTICK] or [NEAR]

- 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          :
  SPEED BY ZOOM      : ON
  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. 5 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.
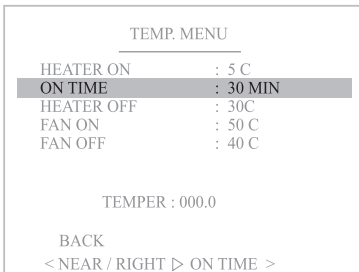
```
              DOME MENU
              _____

TITLE            :
SPEED BY ZOOM        : ON
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  >
```
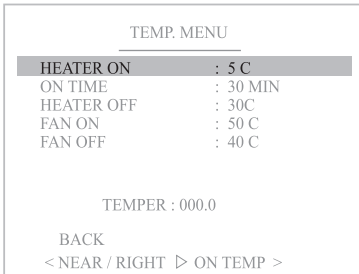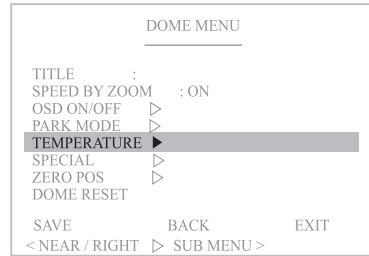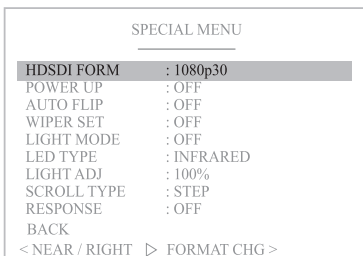
(1) HEATER ON

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

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

Set OFF :   [NEAR]

```
              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  >
```
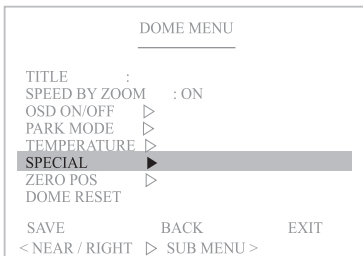
(2) ON TIME

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   >
```
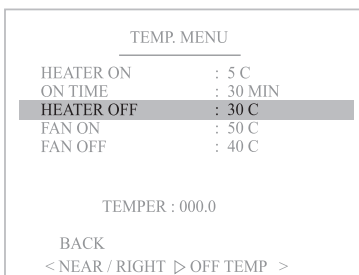
(3) HEATER OFF
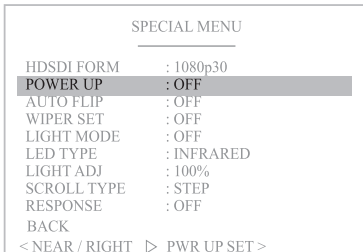
Set the temerature of heater OFF. (0~70℃)

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. 6 Special

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

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

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

```
           SPECIAL MENU
           ─────────────

 HDSDI FORM        : 1080p30
 POWER UP          : OFF
 AUTO FLIP         : OFF
 WIPER SET         : OFF
 LIGHT MODE        : OFF
 LED TYPE          : INFRARED
 LIGHT ADJ         : 100%
 SCROLL TYPE       : STEP
 RESPONSE          : OFF
 BACK
< NEAR / RIGHT   ▷  FORMAT CHG >
```

(1) HD SDI FORMAT

PAL : 1080p25 / 720P50 / 1080i50 / 1080i59
NTSC : 1080p30 / 720P60 / 1080i60 / 1080i59

※ HD SDI FORMAT can be variable according to product specification

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

Set OFF : [NEAR]

```
           SPECIAL MENU
           ─────────────

 HDSDI FORM        : 1080p30
 POWER UP          : OFF
 AUTO FLIP         : OFF
 WIPER SET         : OFF
 LIGHT MODE        : OFF
 LED TYPE          : INFRARED
 LIGHT ADJ         : 100%
 SCROLL TYPE       : STEP
 RESPONSE          : OFF
 BACK
< NEAR / RIGHT   ▷  PWR UP SET >
```

(2) 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]

(3) AUTO FLIP

```
           SPECIAL MENU
           ─────────────

 HDSDI FORM        : 1080p30
 POWER UP          : OFF
 AUTO FLIP         : OFF
 WIPER SET         : OFF
 LIGHT MODE        : OFF
 LED TYPE          : INFRARED
 LIGHT ADJ         : 100%
 SCROLL TYPE       : STEP
 RESPONSE          : OFF
 BACK
< NEAR / RIGHT   ▷  AUTOFLIP >
```

```
           SPECIAL MENU
           ─────────────

 HDSDI FORM        : 1080p30
 POWER UP          : OFF
 AUTO FLIP         : < UP FLIP >
 WIPER SET         : OFF
 LIGHT MODE        : OFF
 LED TYPE          : INFRARED
 LIGHT ADJ         : 100%
 SCROLL TYPE       : STEP
 RESPONSE          : OFF
 BACK
< CHANGE ▷UP/DN   SEL▷NEAR >
```
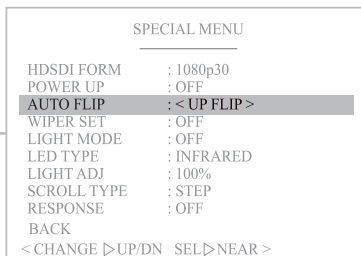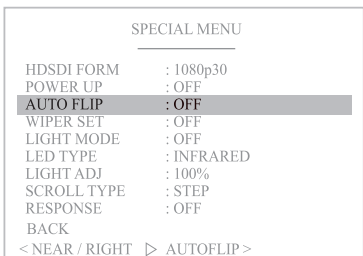
OFF : AUTO FLIP OFF
※ Factory default is OFF.

UP FLIP
* TILT UP FLIP.

```
        SPECIAL MENU                          SPECIAL MENU
    ─────────────                         ─────────────
 HDSDI FORM      : 1080p30             HDSDI FORM      : 1080p30
 POWER UP        : OFF                 POWER UP        : OFF
 AUTO FLIP       : < DN FLIP >         AUTO FLIP       : < U&D FLIP >
 WIPER SET       : OFF                 WIPER SET       : OFF
 LIGHT MODE      : OFF                 LIGHT MODE      : OFF
 LED TYPE        : INFRARED            LED TYPE        : INFRARED
 LIGHT ADJ       : 100%                LIGHT ADJ       : 100%
 SCROLL TYPE     : STEP                SCROLL TYPE     : STEP
 RESPONSE        : OFF                 RESPONSE        : OFF
 BACK                                  BACK
 < CHANGE ▷UP/DN  SEL▷NEAR >          < CHANGE ▷UP/DN  SEL▷NEAR >
```

DN FLIP   UP_DN FLIP
* TILT DOWN FLIP   * TILT UP and DOWN FLIP

```
        SPECIAL MENU
    ─────────────
 HDSDI FORM      : 1080p30
 POWER UP        : OFF
 AUTO FLIP       : OFF
 WIPER SET       : OFF
 LIGHT MODE      : OFF
 LED TYPE        : INFRARED
 LIGHT ADJ       : 100%
 SCROLL TYPE     : STEP
 RESPONSE        : OFF
 BACK
 < NEAR / RIGHT   ▷ ONOFF >
```

(4) WIPER SET

Select ON/OFF to use the wiper function.
※ factory default is OFF.

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

Set OFF : [NEAR]

```
        SPECIAL MENU
    ─────────────
 HDSDI FORM      : 1080p30
 POWER UP        : OFF
 AUTO FLIP       : OFF
 WIPER SET       : OFF
 LIGHT MODE      : OFF
 LED TYPE        : INFRARED
 LIGHT ADJ       : 100%
 SCROLL TYPE     : STEP
 RESPONSE        : OFF
 BACK
 < NEAR / RIGHT   ▷ TYPE >
```

(5) LIGHT MODE

Manually select IR ON/OFF IR operation.

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

Set OFF : [NEAR]

```
        SPECIAL MENU
    ─────────────
 HDSDI FORM      : 1080p30
 POWER UP        : OFF
 AUTO FLIP       : OFF
 WIPER SET       : OFF
 LIGHT MODE      : OFF
 LED TYPE        : INFRARED
 LIGHT ADJ       : 100%
 SCROLL TYPE     : STEP
 RESPONSE        : OFF
 BACK
 < NEAR / RIGHT   ▷ ONOFF >
```

(6) LED TYPE

Set the LED.

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

Set OFF : [NEAR]

```
           SPECIAL MENU
         ─────────────
  HDSDI FORM      : 1080p30
  POWER UP        : OFF
  AUTO FLIP       : OFF
  WIPER SET       : OFF
  LIGHT MODE      : OFF
  LED TYPE        : INFRARED
  LIGHT ADJ       : 100%
  SCROLL TYPE     : STEP
  RESPONSE        : OFF
  BACK
 < NEAR / RIGHT  ▷ ADJUST >
```

(7) LIGHT ADJ

Set the IR brightness.

Select : JOYSTICK   or   NEAR   Set ON : JOYSTICK

Set OFF :   NEAR

```
           SPECIAL MENU
         ─────────────
  HDSDI FORM      : 1080p30
  POWER UP        : OFF
  AUTO FLIP       : OFF
  WIPER SET       : OFF
  LIGHT MODE      : OFF
  LED TYPE        : INFRARED
  LIGHT ADJ       : 100%
  SCROLL TYPE     : STEP
  RESPONSE        : OFF
  BACK
 < NEAR / RIGHT  ▷ TYPE >
```

(8) 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
         ─────────────
  HDSDI FORM      : 1080p30
  POWER UP        : OFF
  AUTO FLIP       : OFF
  WIPER SET       : OFF
  LIGHT MODE      : OFF
  LED TYPE        : INFRARED
  LIGHT ADJ       : 100%
  SCROLL TYPE     : STEP
  RESPONSE        : OFF
  BACK
 < NEAR / RIGHT  ▷ ON/OFF >
```

(9) RESPONSE TXD

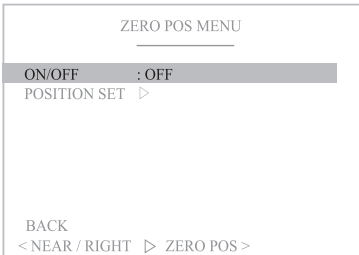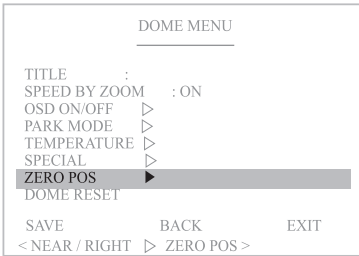Tx communication line to transfer the unique value of protocal response.
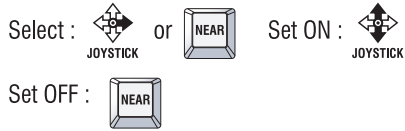(Use this function when the protocol is pelco-D 5.0 EZ.)
※ Factory default is OFF.

Select : JOYSTICK   or   NEAR   Set ON : JOYSTICK

Set OFF :   NEAR

5. 3. 7 ZERO POS

```
                DOME MENU
              _____

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

  SAVE           BACK          EXIT
 < 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]

```
            ZERO POS MENU
            _____

 ON/OFF          : OFF
 POSITION SET   ▷




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

5. 3. 8 DOME RESET

```
                DOME MENU
              _____

 TITLE           :
 SPEED BY ZOOM       : ON
 OSD ON/OFF       ▷
 PARK MODE        ▷
 TEMPERATURE      ▷
 SPECIAL          ▷
 ZERO POS         ▷
 DOME RESET     YES / NO

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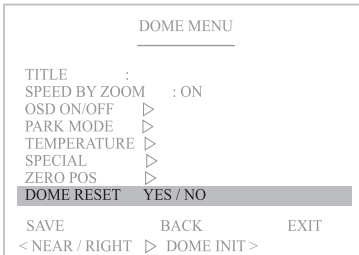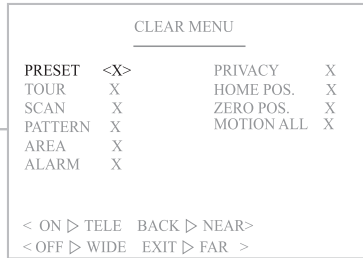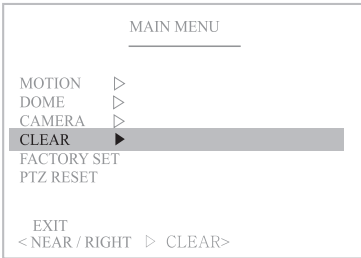
DOME MENU initialization function.

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>
```
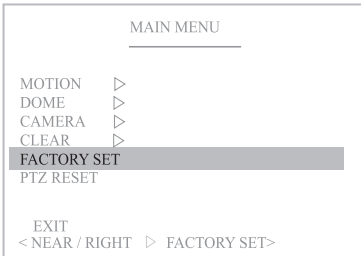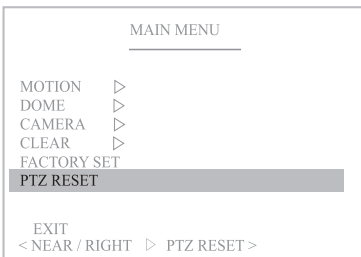
Clear the DOME, CAMERA and MOTION setting value.

⚠️ 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

Auto = 240 + set preset
Day = 241 + set preset
Night = 242 + set preset
Wiper On / Off Toggle = 244 + set preset
Heater On / Off Toggle = 245 + set preset
Auto Scan = 99 + set preset
PTZ Menu Open = 95 + set preset(go preset)
Fan On / Off Toggle = 250 + set preset
Camera Factory Set = 253 + set preset
Camera Rens Init = 254 + set preset
PTZ Information = 255 + set preset

6. SPECIFICATIONS

6. 1   Mechanical Specifications

6. 1. 1   MECHANICAL

Pan	:	360° Continuous Pan, 0.1° to 90°/sec.
Pan Preset Speed	:	Max.150°/sec, ± 0.1° Accuracy
Tilt	:	90° to 270° tilt angle
Tilt Preset Speed	:	Max.150°/sec, ± 0.1° Accuracy
Weight	:	Approx. 12 Kg/ Packing 15 Kg

6. 1. 2   ENVIRONMENTAL

Construction	:	Die-casing Aluminum & "O" Ring sealed
	:	All internal parts are corrosion protected epoxy powder coating
Ingress Protection	:	IP66 Outdoor Application
Color	:	Black
Operating Temp	:	-20°C to 50°C (In continuous operation with Fan & Heater)
Storage Temp	:	-30°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	:	DC24V ~ DC32V
		Power adaptor included
Consumption	:	Operating(3A), Max(4.0A, IR light on, Heater on)
Fan & Heater	:	10W / 3.4W

* Design and specifications are subject to change without notice.

6. 2 LED Specification

	Infra Red LED	White LED
Light Distance	200 m(Manual focusing)	
LED	Super IR LED 30 EA (OSRAM 870n) with Lens 12˚	Super White LED 30EA (OSRAM 870n) with Lens 12˚

7. DIMENSIONS(mm)