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. PRECAUTIONS

1. 1   Important Safety Instruction

• Read these instructions.

• Pay attention on all the warnings.

• Follow all instructions.

• Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

• Do not dissemble or insert foreign objects.

• Do not install near any heat sources such as radiation, beat registers, stoves, or other apparatus. (Including amplifiers) that produce heat.

• Do not aim the camera at the sun or any other strong light source.

• Do not install the camera in intermittent lighting environments.

• Only use attachments/accessories specified by the manufacturer.

• Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

• Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

• Installation should be done only by qualified personnel and conform to all local codes.

• Installation should be done in a place strong enough to hold it.

• Use only installation methods and materials capable of supporting four times the maximum specified load.

• It is designed for indoor use only and it must not be installed where exposed to rain and moisture without additional outdoor housing and bracket.

• To prevent damage from water leakage when installing a mount outdoors on a roof or wall, apply sealant around the bolt holes between the mount and mounting surface.

• These instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other that contained in the operating instructions unless you are qualified to do so.

• Only use replacement parts recommended by manufacturer.ad these instructions.

2. GETTING STARTED

2. 1 Unpacking

The following parts are supplied with the outdoor speed PTZ dome system.
<Figure 1. package Components>

Body   Mount   Screw   Screw   Wiper(Spare)
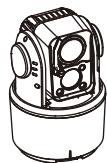
SCREW (M4*8 SUS)   SCREW (SET ANCHOR 1/4")
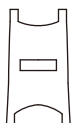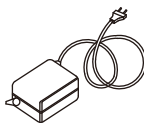
Mount joint   Manual   Power adaptor(Option)

MANUAL

<Wall type>   **<Ceiling type>**
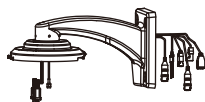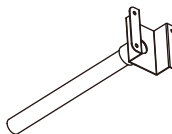
Wall bracket   Wall bracket   Ceiling bracket   Mount+Socket+Cable   TAPE SEAL
                    Plate rubber

2. 2 Part name

FRONT   BACK   SIDE

Safety Loop ①

Commnucation ②
Setting

IP Reset ③

④ Micro SD Card

⑤ Upgrade Port

⑥ ID Setting
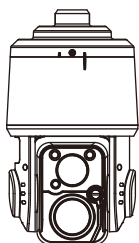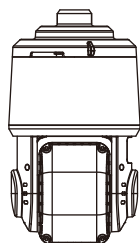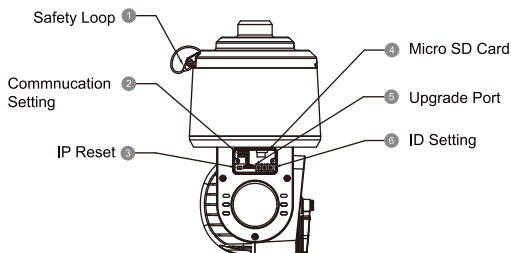
*DIP S/W setting refers page 5.

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2. 3   DIP Switch Setting

Before start up the dome camera, set the protocol and camera address and termination
set with dip-switches and click-switches as shown in the below diagram.

1.Set the camera address (ID)

Open the top cover of the product to set camera address.

Address switch

* ID setting is 1~255 available
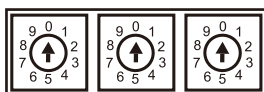
S1
(x1)
S3
(x10)
S4
(x100)

S1 : 1-digit number of address
S3 : 10-digit number of address
S4 : 100-digit number of address
Ex) S4 = 1
     S3 = 2
     S1 = 8
    The ID number is 128.

2. Protocol, Baudrate, Camera setting

ON   DIP

1 2 3 4 5 6 7 8 9 10
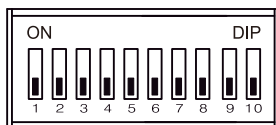
SW2

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	8	NTSC/PAL	9	RS LOOP	10	SDI
OFF	RS-422	OFF	NTSC	OFF	OFF	OFF	HD-SDI
ON	RS-485	ON	PAL	ON	ON	ON	EX-SDI

ON DIP

1   2
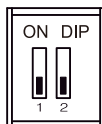
SW3

1	IP SELECT	2	UCC
OFF	IP OFF	OFF	OFF
ON	IP ON	ON	ON

3.Set the termination On/Off

ON : Terminated
OFF : Not terminated

The device which is connected at the end of the line must have the
cable communication terminated. Without proper termination,
there is potential for control signal errors.
The product have the cable communication terminated by setting
the appropriate dip switch.

2. 4   Cable connection

2. 4. 1   Power/Data communication cable connection


```
SPK:LGR
MIC:PK
RY1-COM:WT
RY1-NO:GRY
RY2-COM:VI
RY2-NO:BL
GND:GR
AL1:YE
AL2:OR
AL3:RD
AL4:BR
GND:BK
```

MAIN CABLE

SDI CABLE

CVBS

AC1 24V

RX+
RX-
TX+
TX-
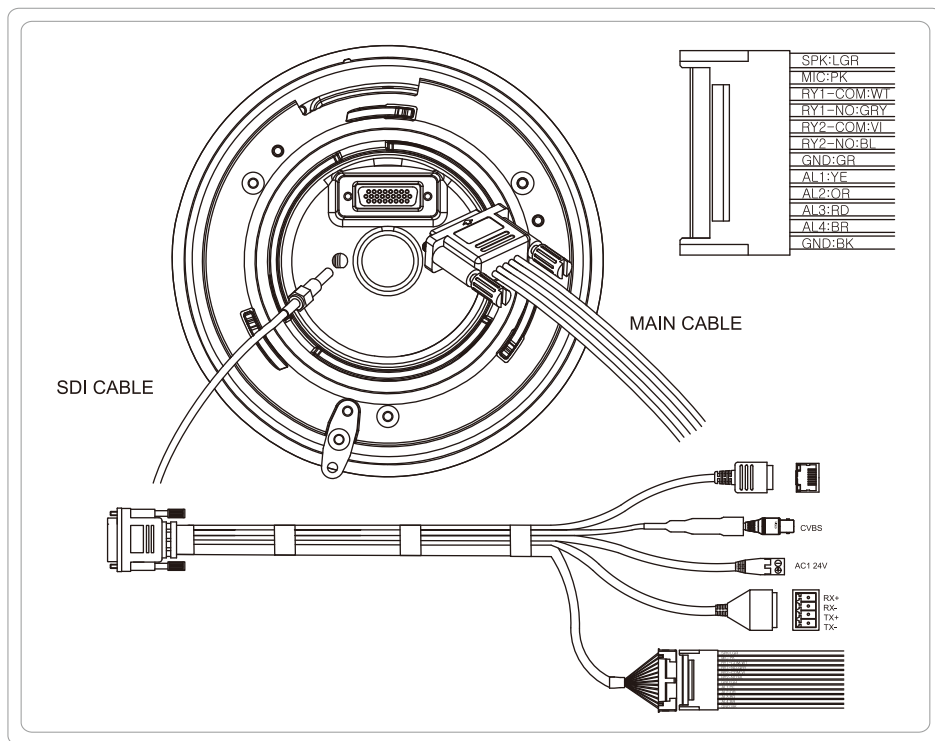
2. 4. 2   RS-485/RS-422 Connection

RS-422/485 connection
The PTZ 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. Connect marked TRx+, TRx- 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 PTZ Camera series. And also connect the Tx+, Tx- to Rx+, Rx- of the control device respectively. Total length of the cable for communication should not exceed 1.2Km.

2. 4. 3   SDI Output connection

Connect the SDI out (BNC) connector to the monitor or video input of DVR. Video cable and RS-485/422 communication cable are not provided in this product's package.

⚠ **Caution** ⚠

Do not connect the AC24V power terminal to the communication terminal.
- Power Terminal: 2PIN
- Com Terminal: 4PIN

3. Installtion

- The following steps of installation and connection work should 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 the dome system with Dip switch on the back side of the mechanism part, and assemble the mechanism and housing according to the below instruction

3. 1 Installtion

<Wall Mount Type>
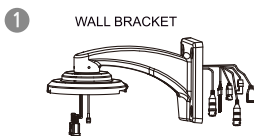
1 WALL BRACKET

Install calbes into the bracket first.

2 WALL BRACKET   WALL BRACKET RUBBER
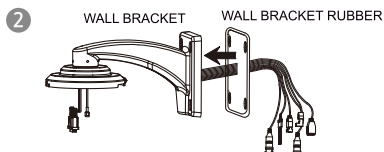
Attach the provided wall bracket rubber to a wall bracket as shown in the below picture.

3
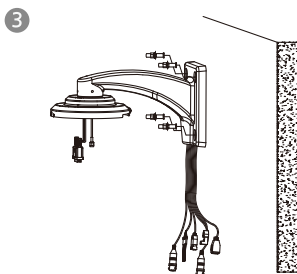
Install the bracket to the wall using anchor bolt.
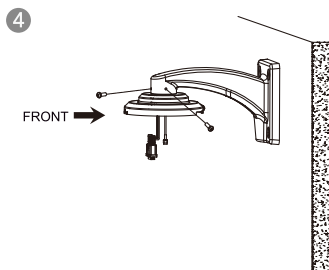
4

FRONT

After connecting the cable, set the mount in the proper position and fix the 2 screws (M4*8)

<Ceiling Mount Type>

1 PIPE SOCKET   CEILING PIPE

INSERT

MOUNT ADAPTOR
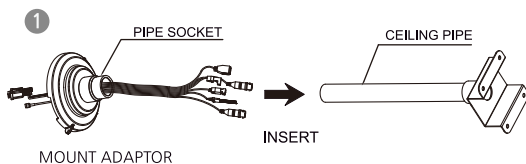
When install the ceiling bracket, screw the ceiling pipe to the pipe socket as figure.
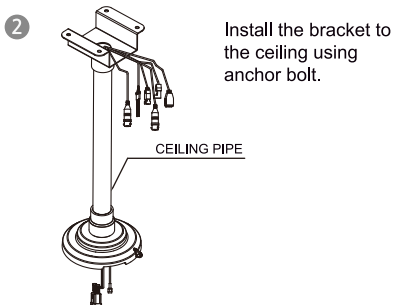
2 Install the bracket to the ceiling using anchor bolt.
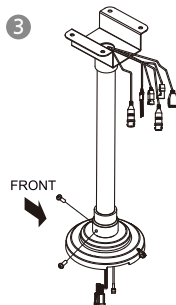
CEILING PIPE

3 After connecting the cable, set the mount in the proper position and fix the 2 screws (M4*8)

FRONT

OPEN

CLOSE
(Turn the body to clockwise)

SAFTY LOOP
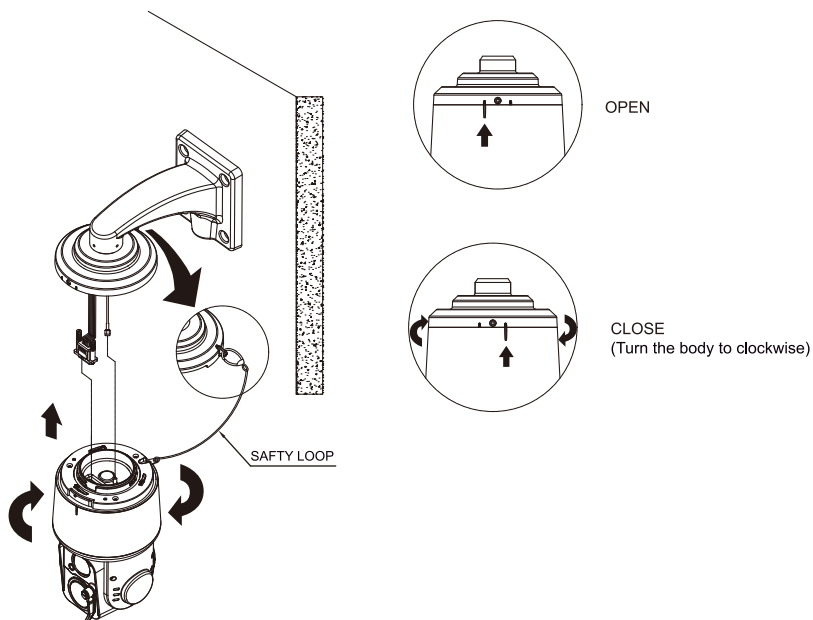
1. Connect the safety loop on the body and mount back side.

2. Connect MAIN cable and SDI cable onto the main body as figure.
   (Caution! Fix the main body tightly.)

3. Align the arrow mark in the body and mount.

4. Fix the body by turn it to clockwise.

FIXTURE SCREW

Fix the Fixture screw tightly.
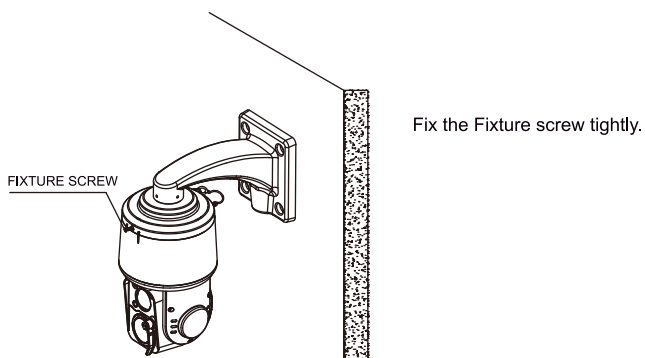
4. MAIN SETUP MENU

4. 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
IP INFO      : IP PROTOCOL
               2400 (CU)
RS INFO      : PELCO D
               2400, N, 1/422
CAMERA       : XX XXX..OK
               VER: XX, XX
 ▷ PAN INIT    . . . .      OK
 ▷ TILT INIT   . . . .      OK
 ▷ NORMAL SETTING WAIT . .
```
                  IP

```
              INITIALIZE
PTZ ID       : 001
VERSION      : X. XX
D-OUTPUT     : 1080p30/NTSC
UCC INFO     : UCC PROT. (9600)

RS INFO      : PELCO D
               2400, N, 1/422
CAMERA       : XX XXX..OK
               VER: XX, XX
 ▷ PAN INIT    . . . .      OK
 ▷ TILT INIT   . . . .      OK
 ▷ NORMAL SETTING WAIT . .
```
                  UCC

4. 2 Motion Setting

4. 2. 1 Preset

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

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


   EXIT
 < NEAR / RIGHT   ▷  MOTION >
```

```
            MOTION MENU
         ─────────────
 PRESET         ▶
 TOUR           ▷
 GROUP          ▷
 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
 MOVE SPEED  : DISABLE


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

```
            PRESET MENU
          ─────────────
        PRESET SELECT : 001

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

 <EXIT ▷FOCUS NEAR>
```

(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
   MOVE SPEED   : DISABLE


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

```
            PRESET TITLE EDIT ( 01 )
   ----------------------------------------
   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
   MOVE SPEED   : DISABLE


    SAVE       CLR       BACK       EXIT
   < NEAR / RIGHT   ▷   PRESET FOCUS >
```
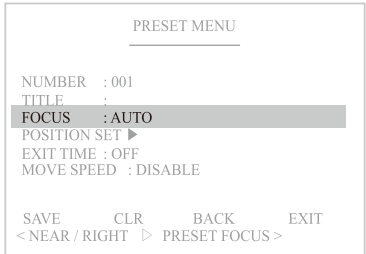
On focus menu, there are 3 modes
: AUTO, MANUAL, ONESHT.
* Focus will be adjusted once after preset moving.

(4) Define the Preset position

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

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

```
            PRESET MENU
            _____

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


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

```
            PRESET POSITION
            _____






      <EXIT  ▷  FOCUS  NEAR  >

      SET POSITION P : 000 T : 000 Z : x01
```
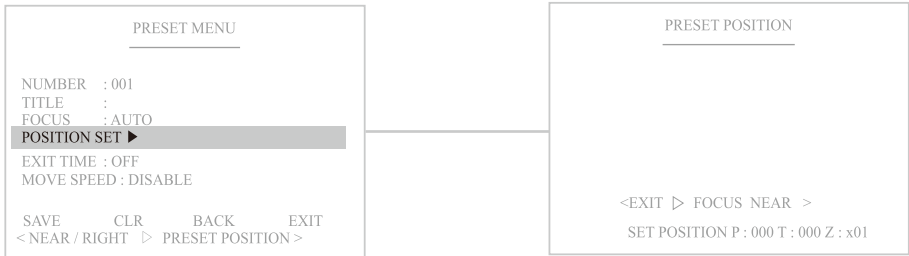
(5) EXIT TIME

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

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


  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]

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

  NUMBER    : 001
  TITLE     :
  FOCUS
  POSITION SET ▶
  EXIT TIME : OFF
  MOVE SPEED : 64


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

(6) MOVE SPEED
: Set the move speed(1～64)

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

  NUMBER    : 001
  TITLE     :
  FOCUS
  POSITION SET ▶
  EXIT TIME : OFF
  MOVE SPEED : DISABLE


  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.

4. 2. 2 Tour

```
          MAIN MENU                              MOTION MENU
        _____                            _____

                                         PRESET      ▷
  MOTION      ▶                           TOUR        ▶
  DOME        ▷                           GROUP       ▷
  CAMERA      ▷                           SCAN        ▷
  CLEAR       ▷                           PATTERN     ▷
  FACTORY SET                             AREA        ▷
  PTZ RESET                               ALARM       ▷
                                          PRIVACY     ▷
                                          HOME POS ▷
   EXIT                                    BACK                EXIT
 < NEAR / RIGHT   ▷  MOTION >           < NEAR / RIGHT   ▷  TOUR >
```
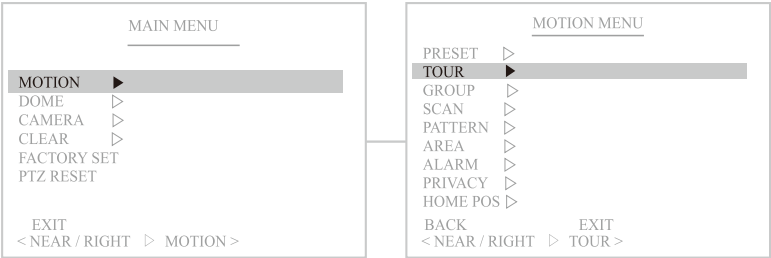
The Tour function consists of several presets run by turn. It is also adjusts the moving speed (1~64 step) and dwell time (1~99secs). Maximum of 8 Tour functions are toured in order.

(※ 1 Tour can be set for 15 presets.)

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

   Move :   [JOYSTICK]   Select : [NEAR]

```
          TOUR MENU                              TOUR MENU
        _____                            _____
                                             TOUR SELECT : 01
 NUMBER  :  01
 TITLE  :                                     01   02    03    04    05    06
 TOUR SET ▷
 TIME DISPLAY : OFF                           07    08



   SAVE      CLR      BACK      EXIT
 < NEAR / RIGHT   ▷  TOUR NUM >             < 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                          TOUR TITLE EDIT ( 01 )
        _____                        ---------------------------------------
                                        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
 TOUR SET ▷                                      L M N O P Q R S T U V W
 TIME DISPLAY : OFF                              X Y  Z  .  /  ,  +  -  =  <  >  ○

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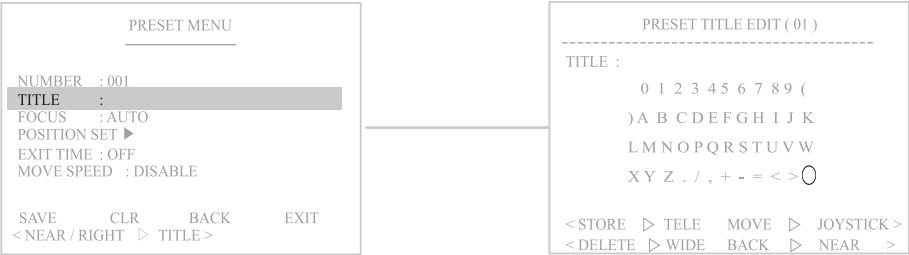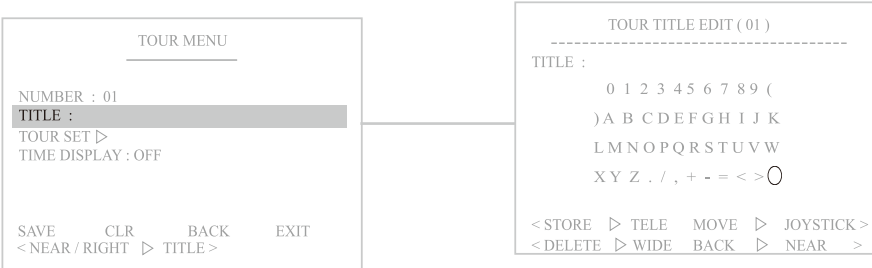
After the TITLE is set, push the NEAR button to exit.

(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 : 001

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

  <EXIT  ▷ FOCUS NEAR >
```

(4) Time Display

```
         TOUR MENU
     ─────────────────────

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



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

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

Select : [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 >
```

(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.

4. 2. 3 Group

```
          MAIN MENU                        MOTION MENU
        _____                   PRESET      ▷
                                      TOUR        ▷
 MOTION        ▶                      GROUP         ▶
 DOME        ▷                        SCAN        ▷
 CAMERA      ▷                        PATTERN     ▷
 CLEAR       ▷                        AREA        ▷
 FACTORY SET                          ALARM       ▷
 PTZ RESET                            PRIVACY     ▷
                                      HOME POS ▷
   EXIT                               BACK              EXIT
 < NEAR / RIGHT  ▷  MOTION >          < NEAR / RIGHT  ▷  GROUP >
```
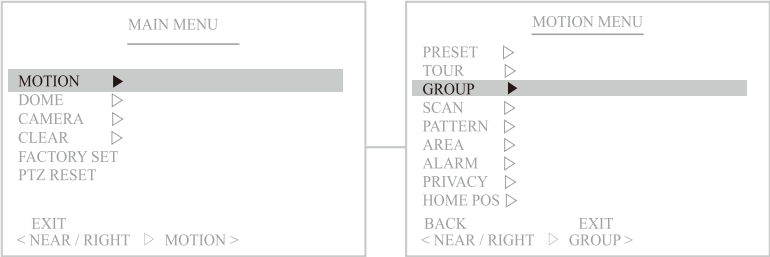
GROUP : You can make Max. 6 groups and call the saved tour by turn.

(1) Select the Group number
    G01 : Defined Group number / 01 : Undefined Group number
    Set from 1to 6 groups.

Move :   [JOYSTICK]   Select :   [NEAR]

```
        GROUP MENU                          GROUP MENU
       _____                         _____
                                       GROUP SELECT : 01
 NUMBER  :  01
 TITLE  :                               G01    02     03     04     05     06
 GROUP SET ▷



   SAVE      CLR      BACK      EXIT
 < NEAR / RIGHT  ▷  GROUP NUM >        < SEL  ▷  NEAR   /   MOVE  ▷  JOYSTICK >
```

(2) Set the Group 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 Group.

```
        GROUP MENU                      GROUP TITLE EDIT
       _____              ------------------------------------
                               TITLE  :
 NUMBER  :  01
 TITLE  :                            0  1  2  3  4 5  6  7 8 9 (
 GROUP SET ▷                        ) 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  .  /  ,  +  -  =  <  >  ( )
   SAVE      CLR      BACK      EXIT   < STORE   ▷ TELE    MOVE  ▷   JOYSTICK >
 < NEAR / RIGHT  ▷  TITLE >           < DELETE  ▷ WIDE    BACK  ▷   NEAR      >
```
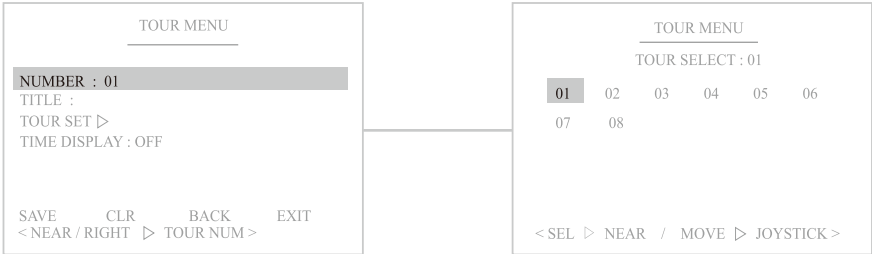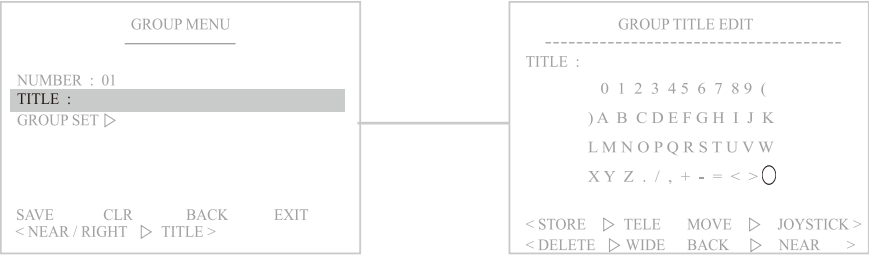
After the TITLE is set, push the NEAR button to exit.

(3) GROUP SET

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

 NEAR or JOYSTICK   JOYSTICK   NEAR

GROUP MENU
_____

NUMBER : 01
TITLE :
GROUP SET ▶

SAVE   CLR   BACK   EXIT
< NEAR / RIGHT   ▷ GROUP SET >

GROUP EDIT (01)
_____

NO	TOUR
01	<001>
02	002
03	XXX
04	XXX
05	XXX
06	XXX

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

- GROUP EDIT : Set the tour from 1 to 6 of group.

GROUP MENU
_____

NUMBER : 01
TITLE :
GROUP SET ▷

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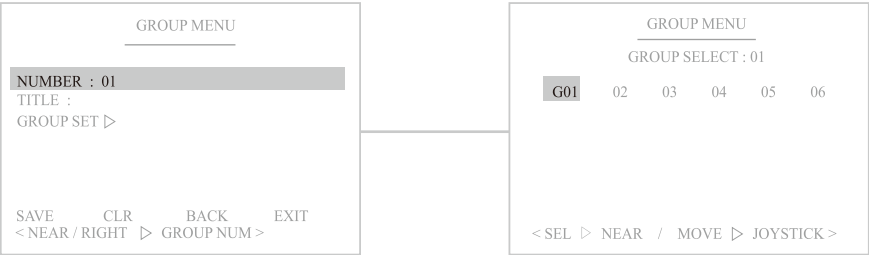
(7) "EXIT" means it goes out of MENU.

4. 2. 4   Scan

```
              MAIN MENU                           MOTION MENU
        _____                        _____

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

The Scan function means that the camera keeps panning between two programmed pan positions.
It is also adjusts the moving speed(1~64 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]
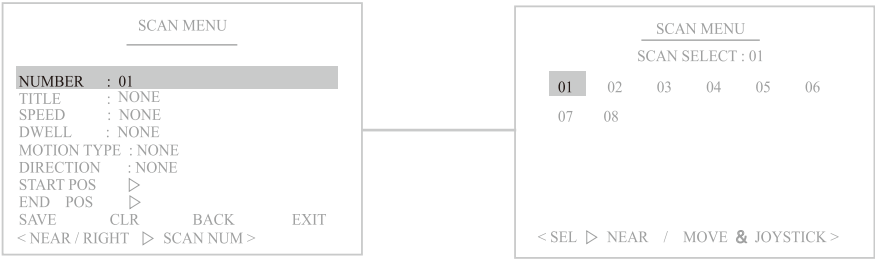
```
            SCAN MENU                              SCAN MENU
        _____                            SCAN SELECT : 01

 NUMBER     :  01                       01    02     03     04     05     06
 TITLE         :  NONE
 SPEED        :  NONE                   07    08
 DWELL        :  NONE
 MOTION TYPE  : NONE
 DIRECTION     : NONE
 START POS       ▷
 END   POS       ▷
 SAVE       CLR      BACK      EXIT     < SEL  ▷  NEAR   /   MOVE  &  JOYSTICK >
 < NEAR / RIGHT   ▷  SCAN NUM >
```

(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                              SCAN  TITLE EDIT ( 01 )
        _____                      ----------------------------------
                                        TITLE :
 NUMBER     :  01
 TITLE         :                              0  1  2  3  4 5  6  7  8 9 (
 SPEED        :  NONE
 DWELL        :  NONE                         ) A  B  C D E F G H  I  J  K
 MOTION TYPE  : NONE
 DIRECTION     : NONE                         L M N O P Q R S T U V W
 START POS       ▷
 END   POS       ▷                            X Y  Z  . / , + - = < >
 SAVE       CLR      BACK      EXIT
 < NEAR / RIGHT   ▷  TITLE >            < STORE   ▷  TELE     MOVE   ▷   JOYSTICK >
                                        < DELETE  ▷  WIDE    BACK    ▷   NEAR      >
```
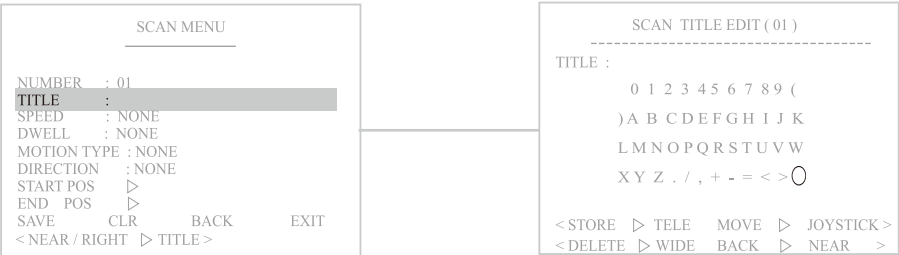
After the TITLE is set, push NEAR button to go out.

(3) Set the Scan speed

Increase : [TELE] or [JOYSTICK ↻]

Decrease : [WIDE] or [JOYSTICK ↺]

It adjusts the moving speed from 1~64 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>
```
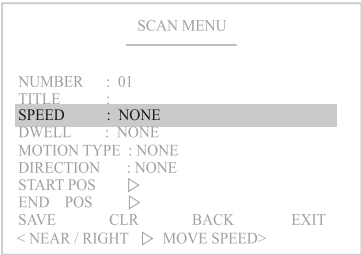
(4) Set the Dwell Time

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>
```
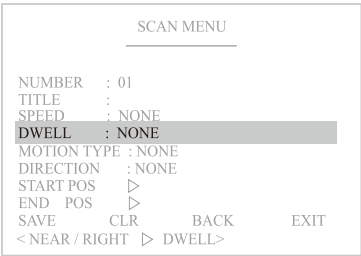
(5) Set the Motion Type

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>
```
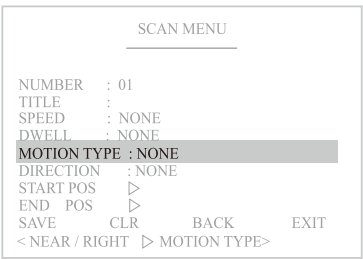
(6) Set the Direction

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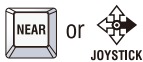
[NEAR] or [JOYSTICK]   [JOYSTICK]   [NEAR]

```
                  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
                _____




< EXIT   ▷ FOCUS NEAR >
  SET POSITION P : 000 T : 000 Z : x01
```

(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 >
```

```
              SCAN END POSITION
              _____




< EXIT   ▷ FOCUS NEAR >
  SET POSITION P : 000 T : 000 Z : x01
```

- 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 >

4. 2. 5 Pattern

```
                MAIN MENU                              MOTION MENU
              _____                          _____

   MOTION      ▶                           PRESET    ▷
   DOME        ▷                           TOUR      ▷
   CAMERA      ▷                           GROUP     ▷
   CLEAR       ▷                           SCAN      ▷
   FACTORY SET                             PATTERN   ▶
   PTZ RESET                               AREA      ▷
                                           ALARM     ▷
                                           PRIVACY   ▷
                                           HOME POS  ▷
     EXIT                                 BACK              EXIT
   < NEAR / RIGHT   ▷   MOTION >          < NEAR / RIGHT   ▷   PATTERN >
```
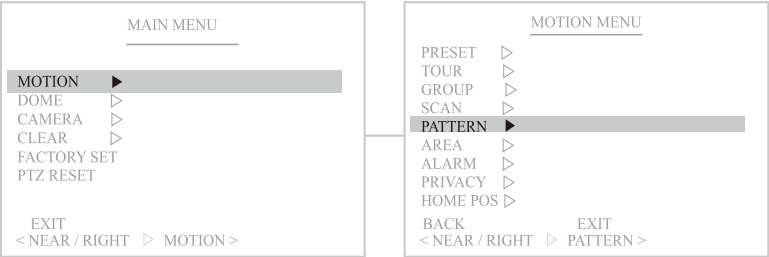
The Pattern function memorizes User's random moving path and zoom ratio. Total recording time limit is 65secs and maximum 4 Pattern functions are toured in order.

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

   Move :   [JOYSTICK]   Select :   [NEAR]

```
              PATTERN MENU                             PATTERN MENU
            _____                            _____
                                                   PATTERN SELECT:01
    NUMBER : 01                                    01       02       03       04
    TITLE    :
    RECORD   ▷
    PLAY     ▷


    SAVE       CLR       BACK       EXIT
   < NEAR / RIGHT   ▷   NUMBER >              < SEL ▷ NEAR   /   MOVE  &  JOYSTICK >
                                              < EXIT ▷ FOCUS NEAR >
```
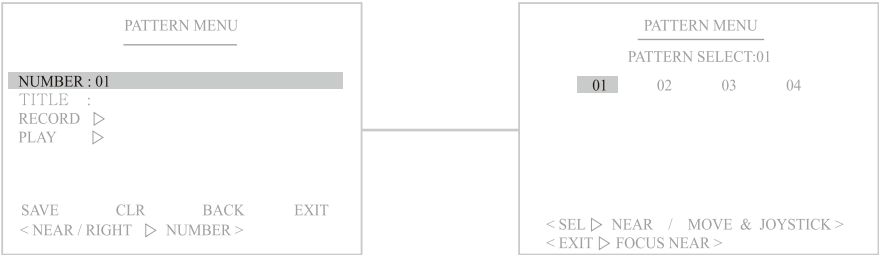
(2) Set the Pattern TITLE
   Move :   [JOYSTICK]   Select :   [TELE] or [JOYSTICK]   Delete :   [WIDE] or [JOYSTICK]

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

```
              PATTERN MENU                          PATTERN TITLE EDIT ( 01 )
            _____                        -------------------------------------
                                                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
    RECORD   ▷                                        L M N O P Q R S T U V W
    PLAY     ▷                                        X Y  Z . / , + - = < > ○

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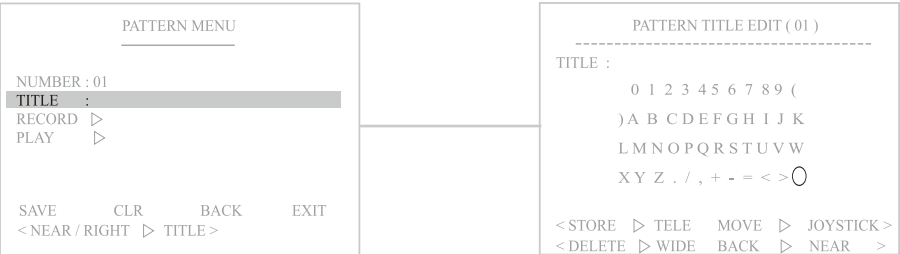
After the TITLE set, push NEAR button to go out.

(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  >
    SET POSITION P : 000 T : 000 Z : x01
```

(4) Play back the recorded Pattern data

```
          PATTERN MENU
          _____

 NUMBER : 01
 TITLE    :
 RECORD   ▷
 PLAY     ▶


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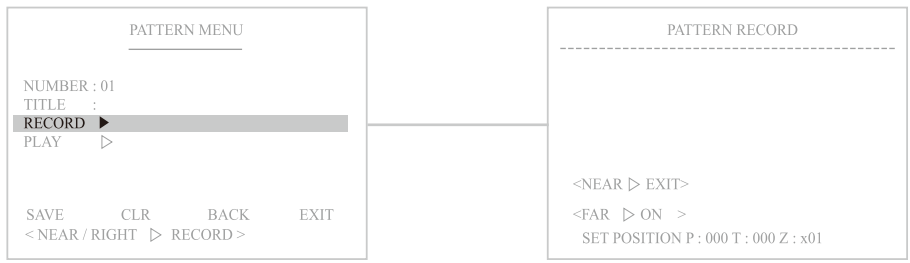
(5) "Save" above setting Pattern data to the memory.

(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 >
```

4. 2. 6 Area

```
        MAIN MENU                          MOTION MENU
      _____                        _____

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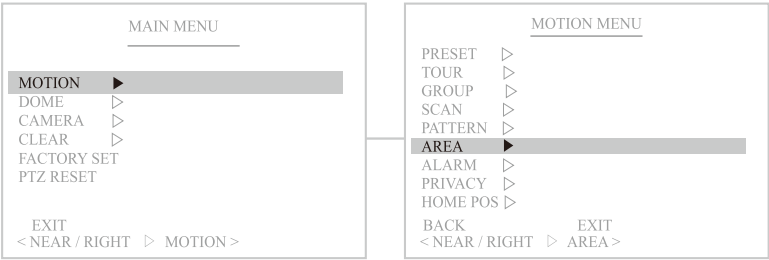
The Area function means that it displays the Area name between two programmed pan positions.
Maximun 16 Area functions are toured in order.

(1) Select the Area number

AR 01 : Defined Area number / 01 : Undefined Area number

Move :   JOYSTICK   Select : [NEAR]

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

                                     16
  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
 TITLE      :                              0  1  2  3  4 5 6  7  8 9 (
 DIRECTION  : NONE                        ) A  B  C D E F G H  I  J  K
 S PAN POS.  ▷
 E PAN  POS.  ▷                           L M N O P Q R S T U V W
                                          X Y  Z  .  /  ,  +  -  =  <  >
  SAVE       CLR       BACK      EXIT
 < NEAR / RIGHT   ▷  TITLE >         < STORE   ▷  TELE     MOVE   ▷   JOYSTICK >
                                     < DELETE  ▷ WIDE    BACK   ▷   NEAR    >
```
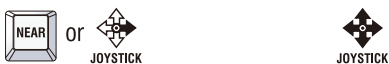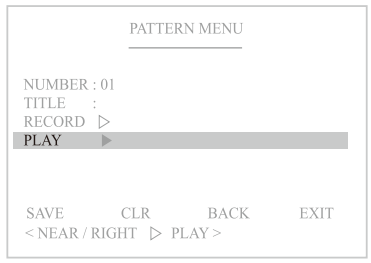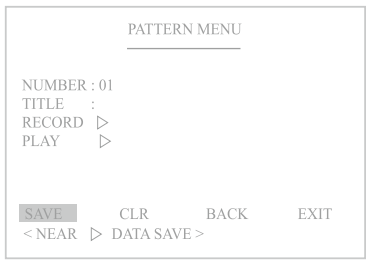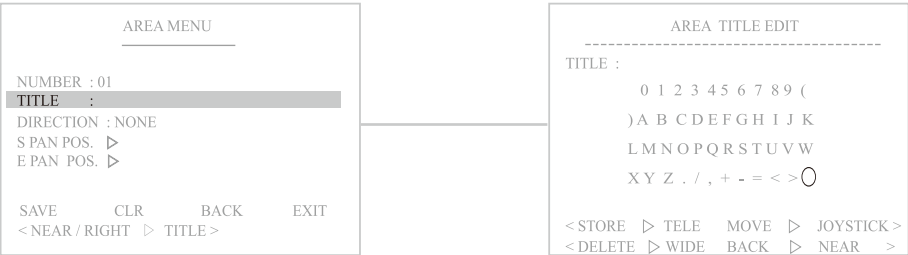
After the TITLE set, push NEAR button to go out.

(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
 < NEAR / RIGHT   ▷   DIRECTION >
```
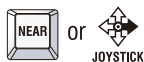
(4) Define the Start pan position
① Select the "Start Pan Pos" menu   ② Move and set the position   ③ Set & Back

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

```
                    AREA MENU
                 _____

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


 SAVE          CLR          BACK          EXIT
 < MOVE & NEAR / START POS >
```

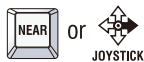```
           AREA START PAN POSITION
          _____

 < EXIT   ▷ FOCUS NEAR >

  SET POSITION P : 000 T : 000 Z : x01
```

(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
 < MOVE & NEAR / END POS >
```

```
           AREA STOP PAN POSITION
          _____





 < EXIT   ▷ FOCUS NEAR >

  SET POSITION P : 000 T : 000 Z : x01
```

(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 >
```
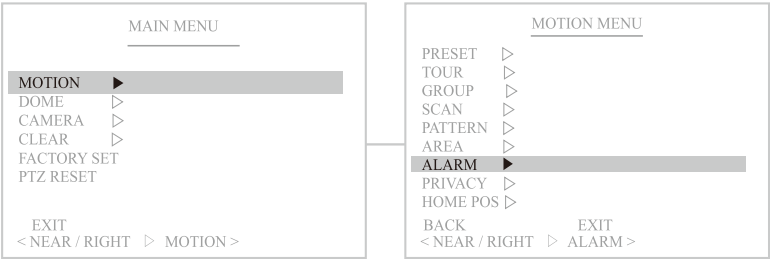
4. 2. 7　Alarm

```
            MAIN MENU                              MOTION MENU
         ─────────────                          ─────────────
                                        PRESET    ▷
 MOTION      ▶                          TOUR      ▷
 DOME        ▷                          GROUP     ▷
 CAMERA      ▷                          SCAN      ▷
 CLEAR       ▷                          PATTERN   ▷
 FACTORY SET                            AREA      ▷
 PTZ RESET                              ALARM     ▶
                                        PRIVACY   ▷
                                        HOME POS  ▷
   EXIT                                  BACK              EXIT
 < NEAR / RIGHT   ▷  MOTION >           < NEAR / RIGHT   ▷  ALARM >
```
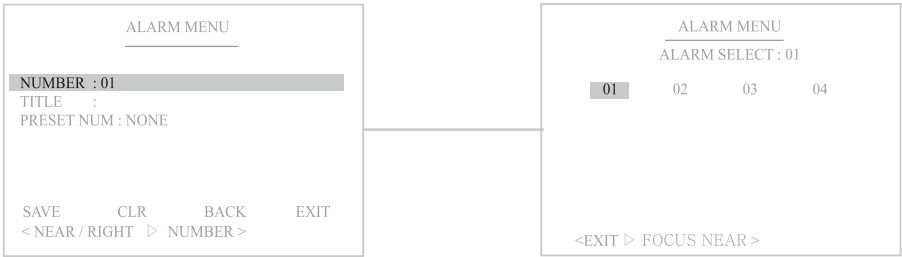
The Alarm function means that the camera moves to the programmed Preset position by the Alarm trigger. Maximum 4 Alarm functions are toured in order.

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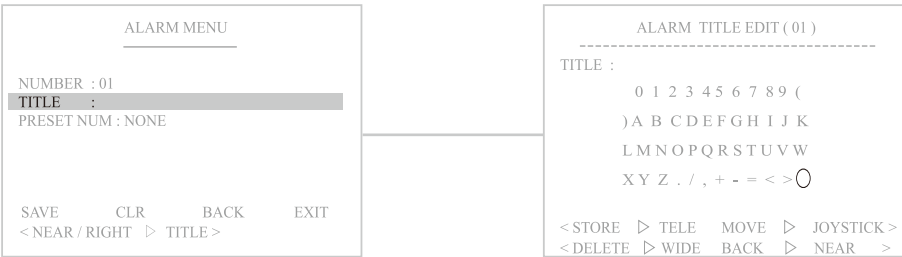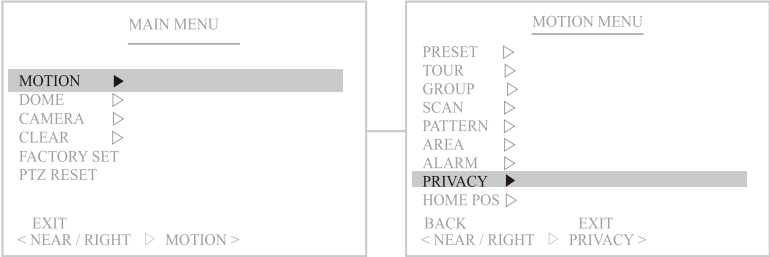　　 E01 : Defined Alarm number / 01 : Undefined Alarm number

　　 Move : [JOYSTICK]　　 Select : [NEAR]

```
            ALARM MENU                              ALARM MENU
         ─────────────                           ─────────────
                                               ALARM SELECT : 01
 NUMBER  : 01
 TITLE      :                                   01      02      03      04
 PRESET NUM : NONE



  SAVE       CLR       BACK       EXIT
 < 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 ( 01 )
         ─────────────                    --------------------------------------
                                          TITLE  :
 NUMBER  : 01
 TITLE      :                                 0  1  2  3  4 5  6  7 8  9 (
 PRESET NUM : NONE
                                              ) A  B  C D E F G H  I  J  K
                                              L M N O P Q R S T U V W
  SAVE       CLR       BACK       EXIT        X Y  Z  .  /  ,  +  -  =  <  >
 < NEAR / RIGHT   ▷  TITLE >
                                          < 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   ▷ JOYSTICK >
```

```
            ALARM MENU
          PRESET SELECT : 001

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

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

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

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

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

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

```
            ALARM MENU
          _____

  NUMBER  : 01
  TITLE     :
  PRESET NUM : NONE



   SAVE          CLR          BACK          EXIT
  < NEAR   ▷  DATA SAVE >
```
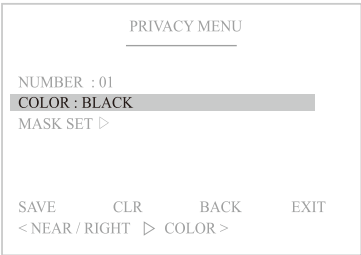
4. 2. 8 Privacy Zone Masking

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

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

    EXIT
  < NEAR / RIGHT   ▷  MOTION >
```

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

  PRESET      ▷
  TOUR        ▷
  GROUP       ▷
  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
   R01 : Defined Alarm number / 01 : Undefined Alarm number

   Move :   [JOYSTICK]   Select :   [NEAR]

```
                PRIVACY MENU
              ──────────

  NUMBER  : 01
  COLOR : XXXX
  MASK SET ▷



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

```
                PRIVACY MENU
              ──────────
            PRIVACY SELECT : 01
    01      02      03      04      05
    06      07      08




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

(2) Color Setting
   Select BLACK/WHITE

```
                PRIVACY MENU
              ──────────

  NUMBER  : 01
  COLOR : BLACK
  MASK SET ▷



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

You can change the color of the privacy mask.
Choose the color you want from the menu.
※ Default color: WHITE

(3) Mask set

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

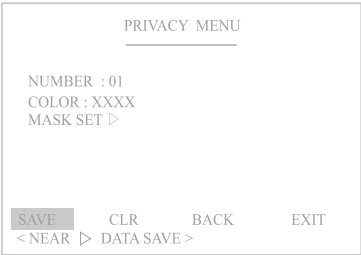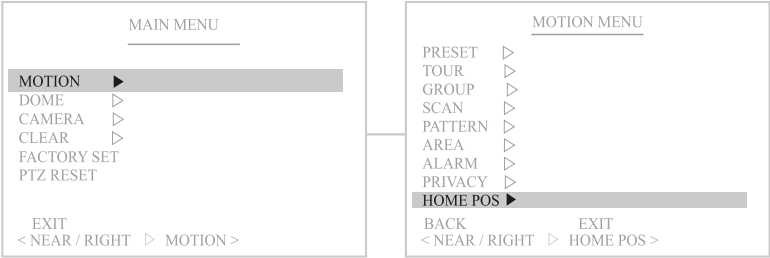It's available to set the desired position and size of the blocking territories freely.

```
            PRIVACY MENU
            _____

NUMBER  : 01
COLOR : XXXX
MASK SET ▷



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

```
            PRIVACY MASK SET
            _____




< EXIT   ▷ FOCUS NEAR >
             MASK SIZE : <OPEN / CLOSE >
SET POSITION P : 000 T : 000 Z : x01
```

After the Privacy Zone is set, push the NEAR button to go out.

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

(5) "CLR" means above setting of Privacy Zone 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.

```
            PRIVACY  MENU
            _____

NUMBER  : 01
COLOR : XXXX
MASK SET ▷



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

4. 2. 9 Home Position

```
              MAIN MENU                              MOTION MENU

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

Home Postion : Move to selected home position.(255+PRESET)

(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]

```
              HOME POS MENU                           HOME POSITION


  ON/OFF  : OFF
  POSITION SET ▷



  SAVE        CLR        BACK        EXIT        < EXIT   ▷ FOCUS NEAR >
  < NEAR / RIGHT  ▷  POSITION SET >             SET POSITION P : 000 T : 000 Z : x01
```

4. 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.

4. 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


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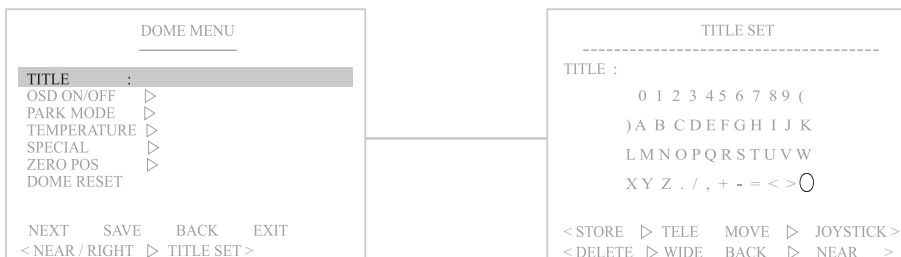
After the TITLE is set, push NEAR button to exit.

4. 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


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

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

   ID            0        PATTERN     0
   TITLE         0        PRIVACY     0
   PRESET        0        AREA        0
   TOUR          0        ALARM       0
   GROUP         0        POSITION    0
   SCAN          0        ACTION      0



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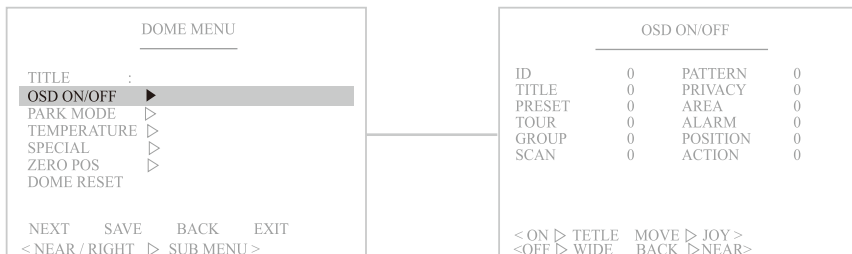
4. 3. 3 PARK MODE

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 / GROUP / SCAN / PATTERN / HOMEPOS
- NUMBER
  PRESET : 1~255
  TOUR : 1~8
  GROUP : 1~6
  SCAN : 1~8
  PATTERN : 1~4

```
                   DOME MENU
                  _____

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


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

```
                   PARK MENU
                  _____

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



   BACK
  < NEAR / RIGHT   &  ONOFF>
```

4. 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


     NEXT      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


          CURRENT TEMPER  : 024.9

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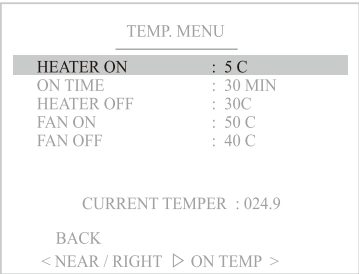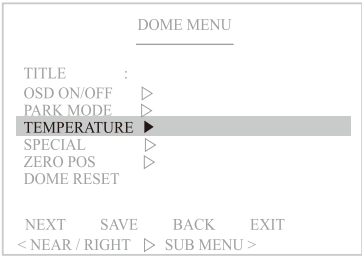
(1) HEATER ON

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           : 30 C
   FAN ON               : 50 C
   FAN OFF              : 40 C


          CURRENT TEMPER  : 024.9

       BACK
     < NEAR / RIGHT ▷ ON TIME  >
```
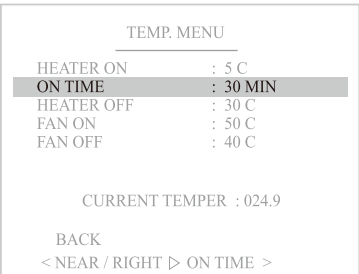
(2) ON TIME

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


          CURRENT TEMPER  : 024.9

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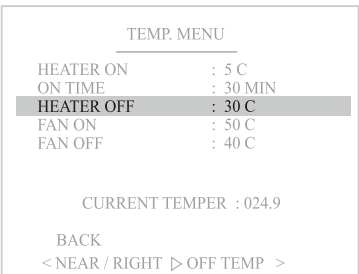
(3) HEATER OFF

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


     CURRENT TEMPER  : 024.9

   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


     CURRENT TEMPER  : 024.9

   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]

4. 3. 5 Special

```
                    DOME MENU
                 _____

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


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

```
                 SPECIAL MENU
                 _____

  SDI FORMAT         : 1080p30
  SPD BY ZOOM        : ON
  POWER UP           : OFF
  FLIP TYPE          : OFF
  SCROLL TYPE        : STEP
  RESPONSE           : OFF
  P-FREEZE           : OFF


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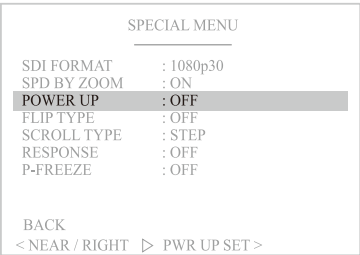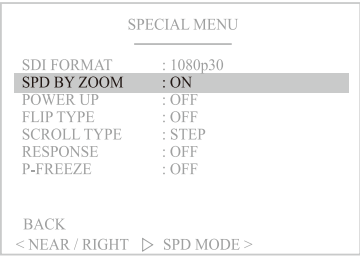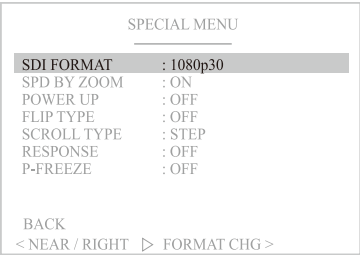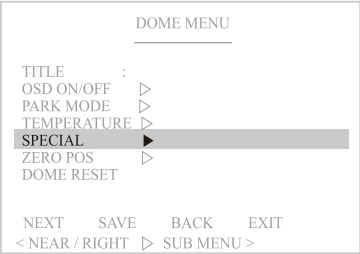
(1) SDI FORMAT

- 1080p/30(25)fps / 1080p/60(50)fps /
  720p/30(25)fps / 720p/60(50)fps

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

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

Set OFF : [NEAR]

```
                 SPECIAL MENU
                 _____

  SDI FORMAT         : 1080p30
  SPD BY ZOOM        : ON
  POWER UP           : OFF
  FLIP TYPE          : OFF
  SCROLL TYPE        : STEP
  RESPONSE           : OFF
  P-FREEZE           : OFF


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

(2) Speed by Zoom

Adjust PAN/Tilt Speed by Zoom ration.
(Available to check with max zoom rate.)

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

Set OFF : [NEAR]

```
                 SPECIAL MENU
                 _____

  SDI FORMAT         : 1080p30
  SPD BY ZOOM        : ON
  POWER UP           : OFF
  FLIP TYPE          : OFF
  SCROLL TYPE        : STEP
  RESPONSE           : OFF
  P-FREEZE           : OFF


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

(3) POWER UP

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

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

Set OFF : [NEAR]

```
              SPECIAL MENU
             ————————

 SDI FORMAT        : 1080p30
 SPD BY ZOOM       : ON
 POWER UP          : OFF
 FLIP TYPE         : OFF
 SCROLL TYPE       : STEP
 RESPONSE          : OFF
 P-FREEZE          : OFF


 BACK
< NEAR / RIGHT   ▷  TYPE >
```
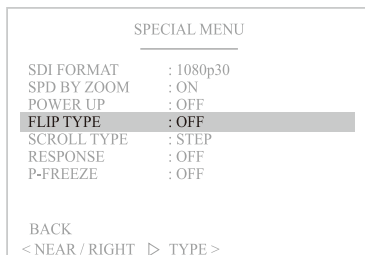
(4) FLIP TYPE

- OFF: TILT movement ranges from 0 ~90°
- FILP : When TILT move to 90°, PAN 180° automatically reversed moved
- DFLIP : TILT movement ranges from 0 ~ 180° (Reversal of Image with 90° degree angle.)

Select : or   Set ON :

Set OFF :

```
              SPECIAL MENU
             ————————

 SDI FORMAT        : 1080p30
 SPD BY ZOOM       : ON
 POWER UP          : OFF
 FLIP TYPE         : OFF
 SCROLL TYPE       : STEP
 RESPONSE          : OFF
 P-FREEZE          : OFF


 BACK
< NEAR / RIGHT   ▷  TYPE >
```
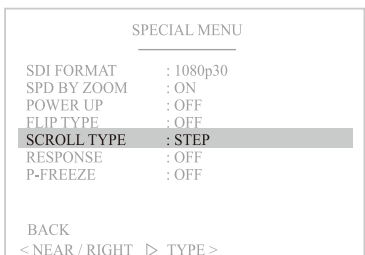
(5) SCROLL TYPE

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

Select : or   Set ON :

Set OFF :

```
              SPECIAL MENU
             ————————

 SDI FORMAT        : 1080p30
 SPD BY ZOOM       : ON
 POWER UP          : OFF
 FLIP TYPE         : OFF
 SCROLL TYPE       : STEP
 RESPONSE          : OFF
 P-FREEZE          : OFF


 BACK
< NEAR / RIGHT   ▷  ON/OFF >
```
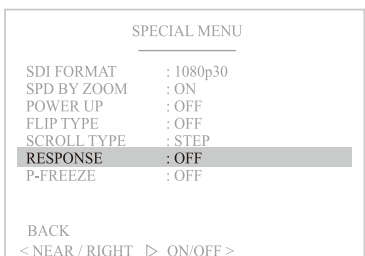
(6) RESPONSE TXD

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

Select : or   Set ON :

Set OFF :

```
              SPECIAL MENU
             ————————

 SDI FORMAT        : 1080p30
 SPD BY ZOOM       : ON
 POWER UP          : OFF
 FLIP TYPE         : OFF
 SCROLL TYPE       : STEP
 RESPONSE          : OFF
 P-FREEZE          : OFF


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

(7) P-FREEZE

The screen is stopped while the camera is operating presetfuntion.

Select : or   Set ON :

Set OFF :

4. 3. 6 ZERO POS

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

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


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

```
                ZERO POS MENU
                  ──────────

  ON/OFF           : OFF
  POSITION SET   ▷




  BACK
 < NEAR / RIGHT   ▷  ZERO POS >
```
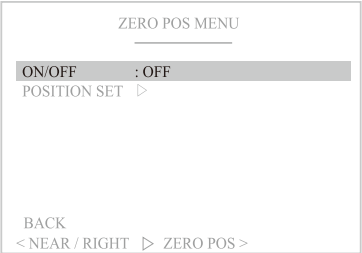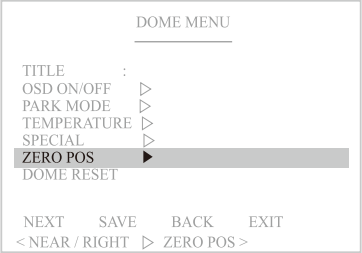
When select ON, the zero position is changeable.
POSITION change 000.0 / 000.0 value.

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

Set OFF : [NEAR]

4. 3. 7 DOME RESET

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

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


  NEXT     SAVE     BACK     EXIT
 < NEAR / RIGHT   ▷  DOME INIT >
```

DOME MENU initialization function.

```
        DOME MENU                              DOME MENU
      ─────────                              ─────────
 TITLE         :                    EXTERNAL IR SET    ▶
 SPEED BY ZOOM    : ON              WIPER SETTING      ▷
 OSD ON/OFF    ▷                    INIT. SETTING      ▷
 PARK MODE     ▷
 TEMPERATURE  ▷
 SPECIAL       ▷
 ZERO POS      ▷
 DOME RESET
 NEXT     SAVE     BACK     EXIT      NEXT    SAVE    BACK    EXIT
 < NEAR / RIGHT  ▷ TITLE >           < NEAR / RIGHT  ▷ SUB MENU >
```

4. 3. 8 EXTERNAL IR SET

```
        DOME MENU
      ─────────
 EXTERNAL IR SET    ▶
 WIPER SETTING       ▷
 INIT. SETTING       ▷




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

Set the IR function.

```
        DOME MENU
      ─────────
 IR SYNC MODE      : ALS SYNC
 IR ILLUMINATE     : HIGHEST
 ICR CHG LUX       : 2 LUX
 IR CONT. TYPE     : AUTO
 IR OFFSET         : 0



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

(1) IR SYNC MODE

ALS SYNC : Synchronized in visible light.
ALL ON : IR always on.
ALL OFF : IR always off.
ICR SYNC : Operate External IR connected Camera ICR
※ Factory default is ALS SYNC .

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

Set OFF : [NEAR]

```
        DOME MENU
      ─────────
 IR SYNC MODE      : ALS SYNC
 IR ILLUMINATE     : HIGHEST
 ICR CHG LUX       : 2 LUX
 IR CONT. TYPE     : AUTO
 IR OFFSET         : 0



 BACK
 < NEAR / RIGHT  ▷ ILLUMINATE >
```
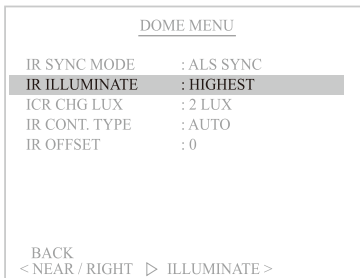
(2) IR ILLUMINATE

HIGHEST : Output the Max.IR light
HIGH : Output the hight level of IR light
LOWEST : Out put the Min. IR light
LOW : Output the low level of IR light
※ Factory default is HIGHEST.

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

Set OFF : [NEAR]

```
                    DOME MENU

   IR SYNC MODE        : ALS SYNC
   IR ILLUMINATE       : HIGHEST
   ICR CHG LUX         : 2 LUX
   IR CONT. TYPE       : AUTO
   IR OFFSET           : 0



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

(3) ICR CHG LUX

Set the Day / Night ICR illumination. (0.5 ~ 20)
※ Factory default is 2 LUX.

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

Set OFF : [NEAR]

```
                    DOME MENU

   IR SYNC MODE        : ALS SYNC
   IR ILLUMINATE       : HIGHEST
   ICR CHG LUX         : 2 LUX
   IR CONT. TYPE       : AUTO
   IR OFFSET           : 0



    BACK
  < NEAR / RIGHT   ▷  IR CONT. TYPE>
```

(4) IR CONT. TYPE

Select AUTO or USER mode in IR Zoom function.
※ factory default is AUTO.

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

Set OFF : [NEAR]

```
                    DOME MENU

   IR SYNC MODE        : ALS SYNC
   IR ILLUMINATE       : HIGHEST
   ICR CHG LUX         : 2 LUX
   IR CONT. TYPE       : AUTO
   IR OFFSET           : 0



    BACK
  < NEAR / RIGHT   ▷  IR OFFSET>
```

(5) IR OFFSET

Set the IR sensitivity. (-4~4)
※ Factory default is 0

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

Set OFF : [NEAR]

4. 3. 9   WIPER SETTING

```
                    DOME MENU

   EXTERNAL IR SET     ▷
   WIPER SETTING       ▶
   INIT. SETTING       ▷




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

Set the wiper function.

```
            WIPER SETTING

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




  BACK
  < NEAR / RIGHT   ▷   MODE >
```

(1) WIPER MODE

Select ON MODE / OFF MODE / TIME SET to use the wiper function.
(Default : OFF MODE)
TIME SET : Wiper operates once at regular interval which is set
in this menu.

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

Set OFF : [NEAR]

```
            WIPER SETTING

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




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

(2) WIPER POS.

Set wiper position function.(RIGHT, BOTTOM)

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

Set OFF : [NEAR]

```
            WIPER SETTING

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




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

(3) WIPER INTERVAL TIME

10SEC / 20SEC / 30SEC / 1MIN / 2MIN / 4MIN / 6MIN / 8MIN /
10MIN / 20MIN / 30MIN / 1HOUR / 2HOUR / 4HOUR
The wiper will be operated on as the time set on the interval.
* The wiper will be operated during the time set on the Wiper On Time.

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

Set OFF : [NEAR]

```
            WIPER SETTING

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




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

(4) WIPER ON TIME

1MIN / 10MIN / 30MIN / 1HOUR / 2HOUR / 4HOUR / 6HOUR /
8HOUR / ALWAYS
The wiper will be operated during the time set on the Wiper On Time.
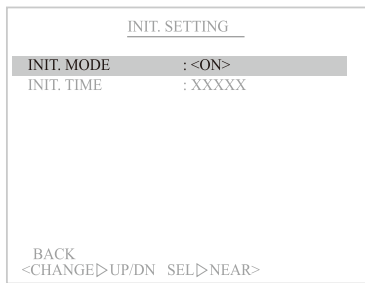
Select : [JOYSTICK] or [NEAR]   Set ON : [JOYSTICK]

Set OFF : [NEAR]

4. 3. 10   INIT. SETTING

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

  EXTERNAL IR SET      ▷
  WIPER SETTING        ▷
  INIT. SETTING        ▶



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

This function performs re-energization of the product and the initialization operation continuously after the specified time has elapsed.
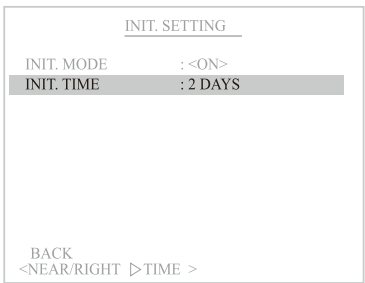
```
             INIT. SETTING
             ─────────────

  INIT. MODE          : <ON>
  INIT. TIME          : XXXXX




   BACK
  <CHANGE▷UP/DN   SEL▷NEAR>
```

INIT. MODE : OFF, ON

(1) INIT. Setting

Set whether to use the initialization operation function when the specified time has elapsed.
※ Factory default value is OFF

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

Set OFF : [NEAR]

```
             INIT. SETTING
             ─────────────

  INIT. MODE          : <ON>
  INIT. TIME          : 2 DAYS




   BACK
  <NEAR/RIGHT  ▷TIME  >
```

(2) INIT. TIME

Set the cycle to perform the initial operation.
After the product is turned off, initialization is performed at each startup time.
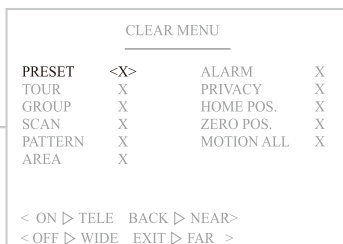12 hours / 1 day / 2 days / 3 days / 5 days
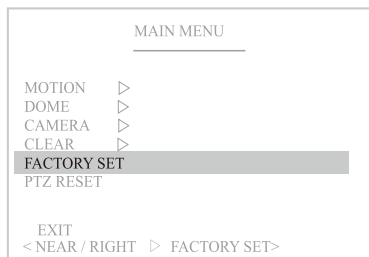It can be selected when INIT.MODE is ON.

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

Set OFF : [NEAR]

4. 4   Clear Setting

Clears the PTZ position and function value.   Select : JOYSTICK or NEAR   Set ON : JOYSTICK   Set OFF : NEAR

```
              MAIN MENU
              _____

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


     EXIT
 < NEAR / RIGHT   ▷  CLEAR>
```

```
              CLEAR MENU
              _____

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



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

4. 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.

4. 6   PTZ Reset

```
              MAIN MENU
              _____

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


     EXIT
 < NEAR / RIGHT   ▷  PTZ RESET >
```
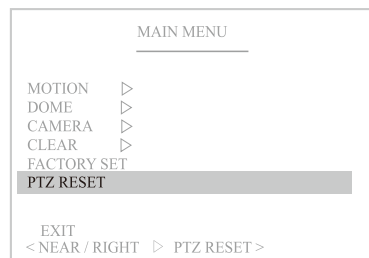
It is a reset function.

4. 7   Other Quick Opercating Guide

ICR AUTO (ON) = 240 + F1 Long Preset
ICR DAY (ON) = 241 + F1 Long Preset
ICR NIGHT (ON) = 242 + F1 Long Preset
WIPER (ON / OFF) = 244 + F1 Long Preset
HEATER (ON / OFF) = 245 + F1 Long Preset
IR ZOOM (AUTO / MANUAL) = 248 + F1 Long Preset
LIGHT (ON / OFF) = 252 + F1 Long Preset
INFO (ON / OFF) = 255 + F1 Long Preset

```
* The keyboard shortcut of IR ZOOM
  (DOME SUB MENU ->
  1) IR CONT. TYPE->MANUAL
  2) ICR NIGHT->ON )

   Select :  TELE   WIDE
```

5. SPECIFICATION

5. 1   Mechanism Specification

5. 1. 1   MECHANICAL

- Pan   : 360° Continuous Pan, 0.1º to 120º/sec.
- Pan Preset Speed   : 360°/sec, ± 0.1° Accuracy
- Tilt   : -8°(352°) to 188° movement, 0.1°~80°/sec (proportional to zoom)
- Tilt Preset Speed   : 250°/sec, ± 0.05° Accuracy
- Weight   : 4.18Kg
- Dimensions Set   : 180 (Ø) x 322(mm)

5. 1. 2   ENVIRONMENTAL

- Construction   : Aluminum
- Ingress Protection   : IP66 (Outdoor Housing)
- Operating Temp   : Outdoor -40°C to 60°C (-40° F to 140° F)/ with 5W Heater
- Humidity   : 0% to 90% (non-condensing)
- Fan operate   : 50°C on , 40°C off
- Heater operate   : 5°C on , 30°C off

5. 1. 3   FUNCTIONS

- Preset   : 255 points, less than 0.1° accuracy
- Tour   : 8 programmable
- Pattern   : 4 patterns for 60 second.
- Group   : 6 group(Max.6 Tours are programmable in each Group)
- Scan   : 8 (programmable speed and diagonal scan)
- Privacy Zone   : 8 block with title (Mask)
- ID Address   : Up to 255 selectable ID (Rotary switch)
- Data Communication Control : RS-485/RS-422/UCC(Only PELCO D / Baud 9600)
- Protocol   : Multiple Protocol(PELCO D/P, WTX, EZP)
- Baud rate   : 2400, 4800, 9600, 19200, 38400, 57600, 115200 bps selectable
- Alarm   : 4 alarm
- Display   : 16 Area title
- Auto Flip   : OFF / AUTO / DIGITAL

5. 1. 4   ELECTRICAL
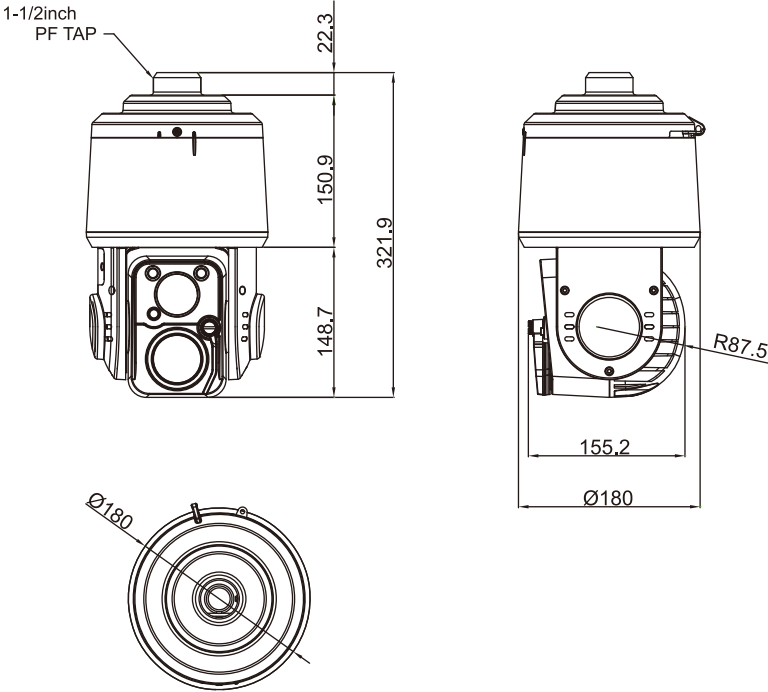
- Power   : AC21~26V 60Hz / 50Hz(Power adaptor not included)
- Power Consumption   : 2A Operation / MAX 3A
- Camera Power Consumption : 18.0W
- Heater Power Consumption : 5W
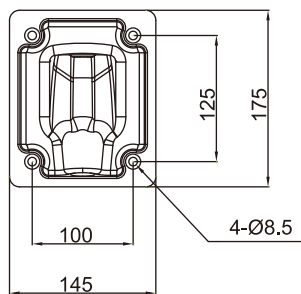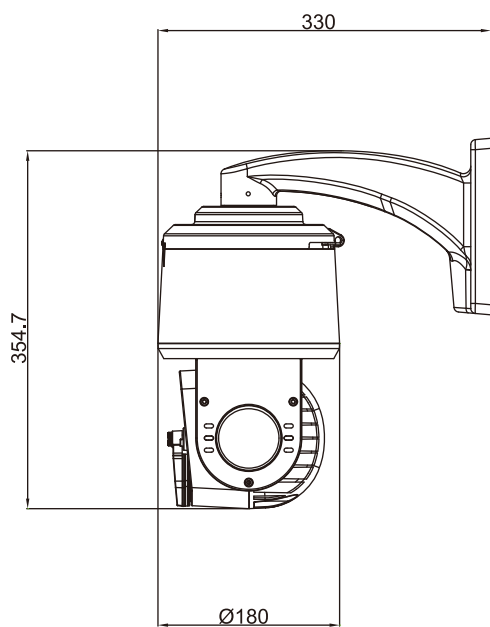- RS-422, 485   : Dip Switch setting

5. 1. 5   USER CONNECTIONS
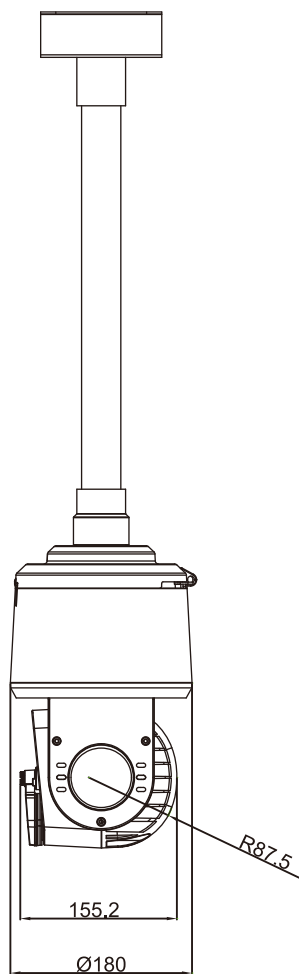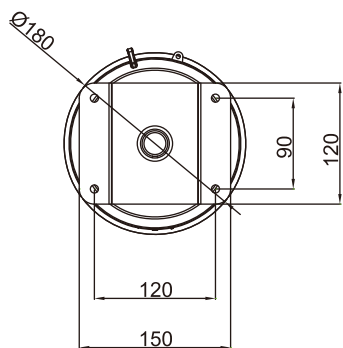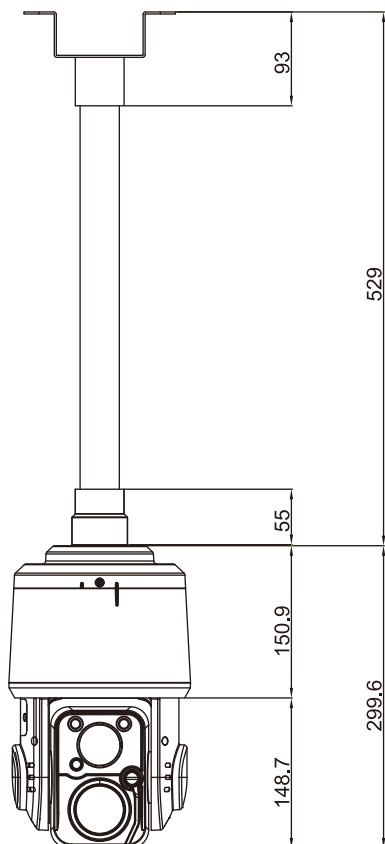
- Data communication connection : RS-422, 485   + / - Optional Control Data
- SDI connection   : BNC
- Alarm Inputs   : 4 Programmable
- Relay   : 2 Dry Contact Output Rating: 2A @30VAC

6. DIMENSION

6. 1   DIMENSION

1-1/2inch PF TAP

22.3
150.9
148.7
321.9

Ø180

R87.5
155.2
Ø180

330

354.7

Ø180

125

175

100

145

4-Ø8.5

93

529

55

150.9

299.6

148.7

R87.5

155.2

Ø180

Ø180

Ø180

90

120

120

150

7. CONFIGURATION

7. 1   Connecting to Keyboard with DVR

RS-485
INPUT

WMC-100 (Multi-Converter)

RS-232

RS-485
OUTPUT

DVR

Monitor

TX ⊖

TX ⊕

⊕

RX ⊕   ⊖

RX ⊖

Adapter
(DC 12V / 500mA)

Junction Box

Main Keyboard

Junction Box

Slave Keyboard