10X Mini Speed Dome Camera
Instruction Manual

CONTENTS

WARNING & CAUTION

If you fail to read this information and handle the product incorrectly, death or serious injury may occur.

The unit should be installed by the trained Personnel.

Always stop using when the product emits smoke or abnormal heat.

Never install the product in area exposed to water, oil or gas.

Never install the product on a ceiling that cannot hold its weight.

Never touch the power cord with wet hands.
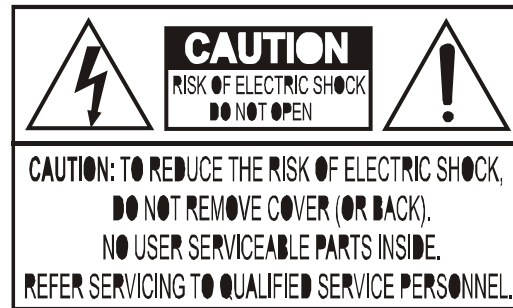
Clean only with dry cloth.

Never install the product in extreme high or low temperature.

Never drop hit strongly nor vibrate the product.

Never expose the product to direct sunlight or severe ray.

Never touch the front glass of the product.

Never install the product in areas exposed to rain or water

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.

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

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

Warning

Never move Pan/Tilt by hands. It may causes serious damage to the camera.

What's in the Box ?

1. Camera
2. Screws (Ø4x16 screw   5EA)
3. Terminal block (5pin 2EA)
4. Manual
5. Screw Cap (2 EA)

GENETAL FEATURES

100X Zoom Mini Speed Dome
10X Optical Zoom with 10X digital zoom

0.02 dome system accuracy with 1/4
micro step
With 0.1 technical accuracy, camera provides excellent sensitive and delicate controlling on preset mode by adapting 1/4 micro step and twin gear system

360° Endless Rotation
10X mini speed dome is capable of endless rotation of 360 degrees

Compensation function: preset position
The function provides absolute preset position even if the camera is moved by low-frequency vibration, wind and any impact.

Over 200 /Sec Preset Speed
The 360 full pan function moves through a maximum of 200 /sec., enabling you to quickly pinpoint the spot you want to watch. Tilt speed provides through a maximum 200 /sec on preset.

Polarity Protection of Power (DC12V)
This protection function prevents the power board from being out and trouble when power source falsely connects to the power terminals.

Filter changeable True Day/Night
Surveillance with optimum picture is possible owing to filter changeable Day/Night (ICR block filter) function and DSS. Auto IR cut filter removable function is auto controlling the operation such as color picture plus infrared cut filter during the day and black and white picture plus filter elimination at night.

Indoor / Outdoor applications
Compact and minimize dome size provides various install application to big shop, shopping center, airport, highway and so on.

Quick Operation Keys
This camera provides quick functional keys in other to be easily controlled by any other controller or DVR.

Various Surveillance Functions
Auto Scan repeats pan and tilt between two preset positions with different speed and dwell time.
8 Group Tour up to 8 Programmable Group tours available and each group is consisting up to 60 presets step with different speed and dwell time with 16 characters.
165 Preset positions up to 165 programmable preset positions are available with 16 characters
8 Patterns up to 8 programmable user-defined patters are available with 16 characters and each one is consisting 50 seconds, total 400 seconds.
8 Sectors up to 8 programmable user-defined sectors are available with 16 characters
4 Privacy Masking Zones up to 4 programmable user-defined privacy masking zones are available with 16 characters
4 Alarm input up to 4 alarms activate with preset, tours, patterns.

150 /S – Manual speed
This camera provides up to 150 /sec of manual speed and it' sadjustable from 100 /sec to 150 /sec by each 10 /sec

1/4" Sony Super HAD CCD
Equipped with Sony Super HAD CCD technology, these particular camera provide excellent sensitivity and low smear levels.

Intelligent Pan/Tilt Controlling
Intelligent Pan/Tilt function is continually decreases pan and tilt speeds in proportion to zoom.

Aluminum case and PC cover
Elegance designed aluminum body and Poly Carbonated dome cover prevent weather proofed install environment (IP66 Rated)
.

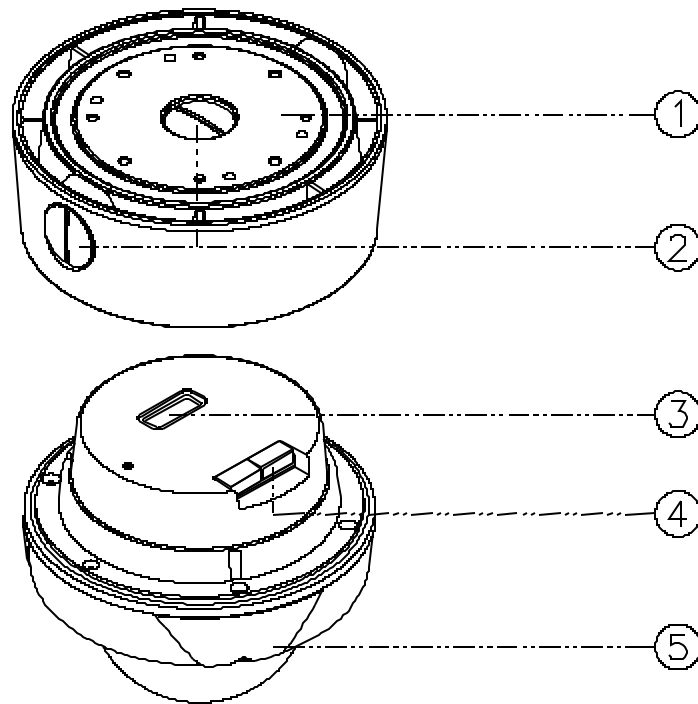### Password Protection

NAMES OF EACH PART

FIG, 1

1. Surface Mount Adaptor

2. Cap Screw (PT3/4 , 2EA)

3. Dip Switch

4. Terminal Block

5. Main body

INSTALLATION

A. CONNECTION MATHOD

A-1
1.   Loose the screws on the domes cover and remove it from the base.
     (Screws won't be removed)
2.   Loose the screws which connect mount cover and Main base and separate dome cover from the main base. (Screws won't be removed)
3.   Connect power (**DC12V 1.5 A**) to Power and GND.
4.   Connect video to Video and GND.
5.   Connect communication cable to RS-485 connectors.
6.   Connect alarm cable to GND like 1 and GND, 2 and GND, 3 and GND, 4 and GND.

     (You can use both N.O / N.C methods.)

   ● **Don't screwtoo tightly.   It can be the cause of defect.**
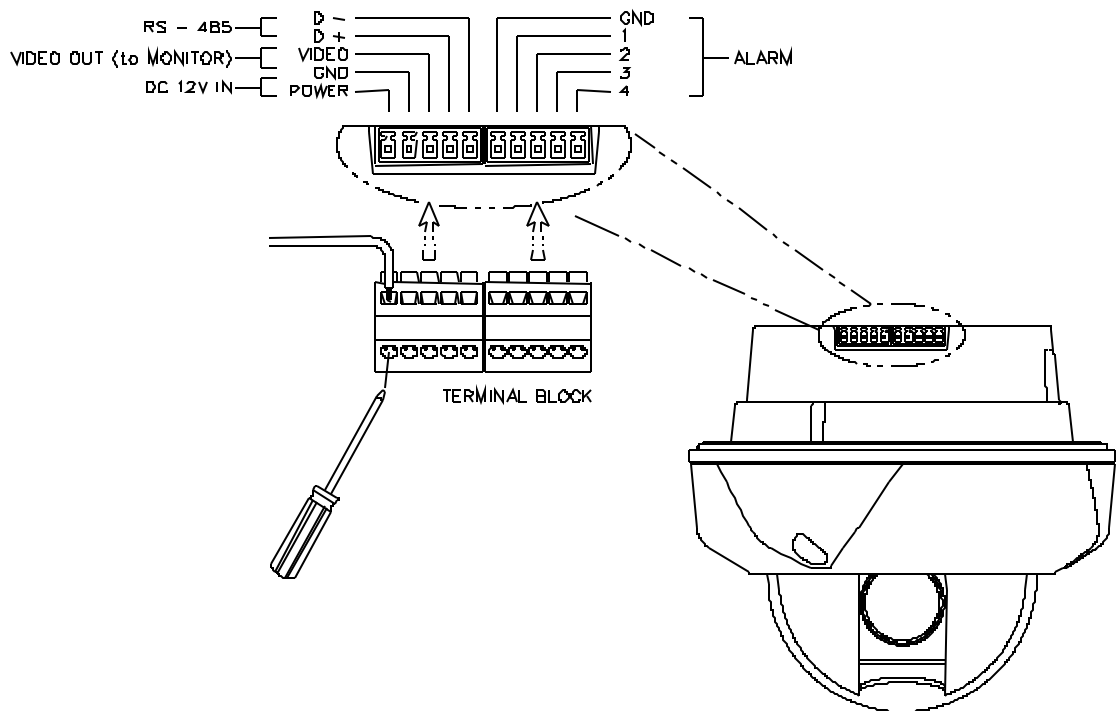
FIG.3

INSTALLATION

B. CEILING MOUNT TYPE

PT 3/4

SCREW (Ø4 0)

83.5

46

FIG.4

PT 3/4

5

12
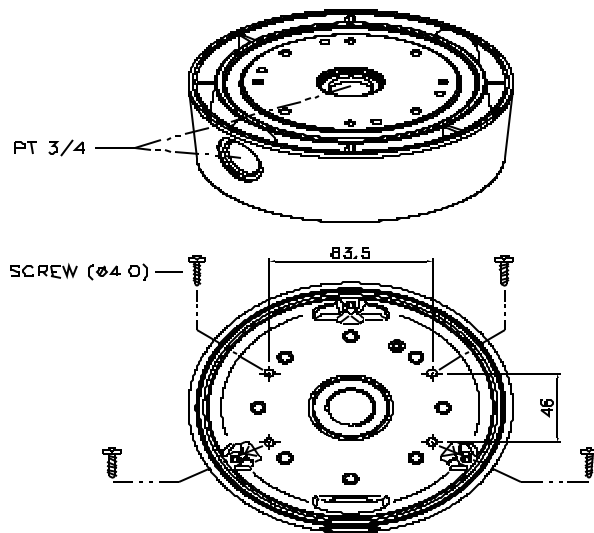
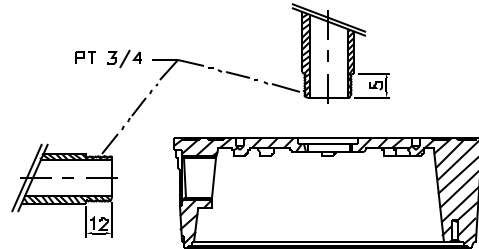FIG.5

1. Fix the surface mount adaptor with 4pcs of screws on the place where you want to install. (FIG.4)
2. When you use pipe, please note the standard size of pipe. (FIG.5)
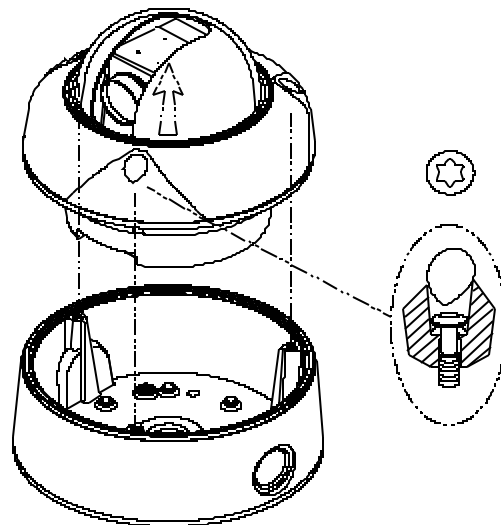3. You can re-assemble the domes.

FIG.2

QUICK OPERATING KEYS

This dome provides three protocols mainly as Pelco D, Pelco P.

These protocols are able to use with other DVR or Controller if the equipment has the above protocols.

Default setting of this dome is Pelco D / P (auto detection) with 2400 bps (baud rate).

As the merit of this product, it has lots of function keys to support the following functions.

1-64 + preset and 100~200 + preset are used for preset and 65-99 + preset used for functions.

For example, to enter OSD MENU, press the button 95 +PRESET.

\<Quick Operation Key Table 1, Pelco - D, P\>

Number	Note	Function
1 ~ 64, 100~200 +Preset	PRESET	Executing Preset 1 ~ 64
65 + Preset	PRESET STATUS	Display Preset Status
66 +Preset	AUTO SCAN	Executing Auto Scan
67 +Preset	AUTO FLIP	Selectable On/Off/Auto in Auto Flip function
71~78 +Preset	GROUP TOUR	Executing Group Tour #1 ~ #8
81~88 +Preset	PATTERN	Executing Pattern #1 ~ #8
91 + Preset	ZERO POSITION	Searching Pan / Tilt Zero Position
92 + Preset	FREEZE	Select Freeze image when camera is working
93 + Preset	BLC MODE	Selectable On/Off in BLC function
94 + Preset	D/N MODE	Selectable Day/Night Mode (Auto/Day/Night Mode)
95 + Preset	OSD MAIN MENU	To enter OSD Main Menu
96 + Preset	FOCUS ADJUST	Focus adjusting
97 +Preset	ALARM	Selectable Enable/Disable all Alarms

\<Quick Operation Keys Table 2\> Use these function keys if controller has these keys\>

Menu	Function
Tilt Up / Down	Sub menu cursor moves up / down
Pan Left / Right	Enter to the sub menu or status change or decrement
Focus Near	Using for Enter key when user select YES or NO
Focus Far	Using for function changing keys when set coordinate
Zoom Tele	Status cursor to the right
Zoom Wide	Status cursor to the left

- 65 + preset:" StatusReport" is displayed, if user wants to remove this screen, press Focus Near button.

- 92 + preset: This feature is possible to freeze the current monitoring image during tour, auto scan or pattern operation. When press 92 + preset button, the image is suddenly freeze but the camera is still working as per operation such as tour, pattern or auto scan. To return operating image, press 92 + preset button again. This feature is operating by preset number but not included in OSD main menu.

- Due to Zoom camera module, OSD Menu provides not every feature. In this case, "Not available" is displayed on the monitor.

DIAGNOSTIC

When Power on, DIAGONOSTIC is operated.

The following messages are displayed on the monitor.

```
CAMERA ID : 001

BAUD RATE : 2400 BPS



WAITING.........
```

```
PAN ORIGIN          TEST OK

TILT ORIGIN         TEST OK

TX CONNECTION       TEST OK

CAMERA COMM         TEST OK
```

A. Pan Origin Test

Zero point of Pan is founded after Panning test.

B. Tilt Origin Test

Zero point of Tilt is founded after Tilting test.

C. TX connection Test

Countdown from 60 seconds for TX Connection Test,

During 60 seconds, the camera must receive a signal from any keys of controller or DVR s.

When received the correct signal, OK is displayed after TX CONNECTION TEST.

* If " No Tested" is displayed on the monitor,

- Camera did not receive the any signal.

- Camera did receive the signal but not correct it.

- User should check protocol, baud rate and RS-485 connection.

D. Camera Comm. Test

Communication test with the camera is automatically checked.

OK should be displayed in these four tests before installation.

If all the above Tests are OK, "**NOW EEPROM CHECKING"** and "**ALL DATA INITIALIZING"** is displayed and the camera is ready to operate.
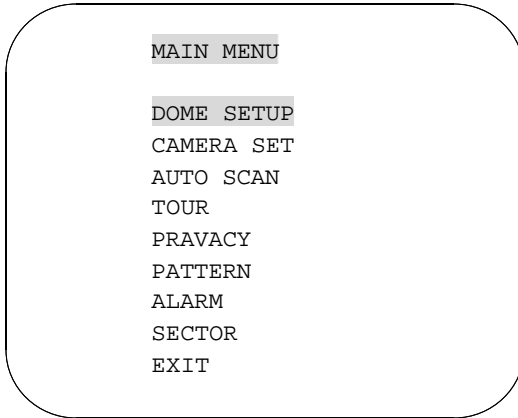
OSD MENU SETTING

A. OSD MENU TABLE

MAIN MENU
- CAMERA ID
- DOME SETUP
- CAMERA SET
- AUTO SCAN
- TOUR
- PRIVACY
- PATTERN
- ALARM
- SECTOR
- EXIT

DOME SET
- CAMERA ID : [CAM] □□□□□□
- RECOVER : OFF
- MANUAL SPEED : /$ 00
- AUTO FLIP : OFF
- SPEED ZOOM : FAST
- ALARM : DISABLE
- LANGUAGE : ENGLISH
- [NEXT PAGE]
- SAVE AND EXIT

CAMERA SET
- FLICKER : OFF/ON
- MIRROR : OFF/ON
- D ZOOM : OFF /ON
- WB MODE AWB MODE : OFF/ON
- PIC FLIP : OFF/ON
- BLC : OFF/ON
- D/N MODE : AUTO
- DSS MODE : OFF/ON
- EXIT
- PAN:XXX.X.XX.X TILT

PRESET SET
- PRESET NO : 001
- PRESET ID PRESET01 □□□□□□
- XXX.X.XX.X TILT
- SAVE
- EXIT

AUTO SCAN SET
- START ANGLE XXX.X.XX.X
- END ANGLE XXX.X.XX.X
- DIRECTION : CW
- ENDLESS : OFF /ON
- SPEED QUICK
- DWELL TIME : 03
- SAVE AND EXIT
- EXIT

TOUR SET
- TOUR NO : 01
- TOUR TITLE TOUR01 □□□□□□
- TOUR STEP : 01
- PRESET NO : 01
- DWELL TIME : 10
- SPEED : 200 /S
- SAVE AND EXIT
- EXIT

PRIVACY SET
- 01

PATTERN SET
- 01
- TITLE PATTE RNO
- 0%
- SAVE
- EXIT

ALARM SET
- ALARM NO. : OFF
- ALARM INPUT : 01
- ALARM ACT
- SAVE
- EXIT

SECTOR SET
- SECTOR : 01
- NO 01
- .X
- .X

NEXT PAGE
- [OSD DISPLAY]
- [SYSTEM STATUS]
- [INITIALIZATION]
- [PREVIOUS PAGE]

OSD DISPLAY
- CAMERA ID : OFF/ON
- PRESET ID: OFF/O N
- SECTOR ID: OFF ON
- COORDINATE:ON/OFF
- [PREVIOUS PAGE]

SYSTEM STATUS
- PROTOCOL PELCO D,P
- RATE: 2400BPS
- S/W VER.:2.00
- DED DATE:: 0 .28 .06
- CAMERA MODULE: SDM100
- [PREVIOUS PAGE]

INITIALIZATION
- [TOUR CLEAR]
- PRESET CLEAR]
- SECTOR CLEAR]
- PRIVACY CLEAR]
- PATTERN CLEAR]
- OPTIMIZED DEFAULT
- [PREVIOUS PAGE]

OSD MENU SETTING

To enter OSD Menu, press the button 95 + PRESET .

```
            MAIN MENU

        DOME SETUP
        CAMERA SET
        AUTO SCAN
        TOUR
        PRAVACY
        PATTERN
        ALARM
        SECTOR
        EXIT
```

* Use the joystick "up down" to move the position and "left right" to make selection

B. Dome Setup

In order to enter Dome setup, the joystick move to right direction when cursor on dome setup.

```
            DOME SET


    CAMERA ID       : CAM1□□□□□□□□□□□□
    RECOVER         : OFF
    MANUAL SPEED    : 100 /S
    AUTO FLIP       : OFF                    ←————  DEFAULT SETTING
    ZOOM SPEED      : FAST
    ALARM           : DISABLE
    LANGUAGE        : ENGLISH
    [NEXT PAGE]
    SAVE AND EXIT
    EXIT
```
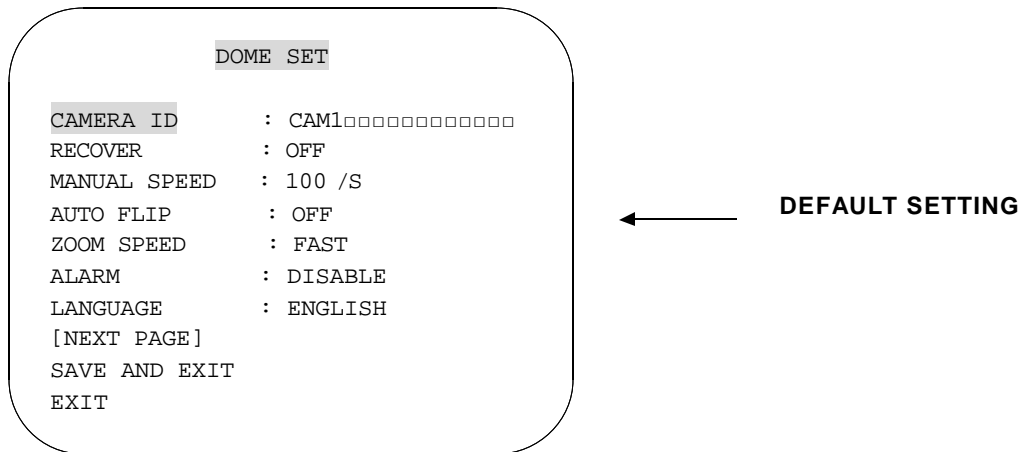
B-1.   DOME SET - CAMERA ID

To set camera ID, select up to 16 characters using Joystick to the left or right.

Press ZOOM TELE button to move to the next character from left to right direction and

ZOOM WIDE button to move to the next character from right to left direction

(Space displays when □ appears)

B-2. **DOME SET - RECOVER**

This feature allows the dome to work from the last setting before you use the dome manually
(Auto scan, group tour, preset, pattern or sectors), after the set time, even power shut down and it
turns on again.   Recover time can be programmed from 15 second to 99 seconds. The default
setting is OFF.

B-3. **DOME SET - MANUAL SPEED**

Manual Speed of Pan/Tilt is selectable from 100°/sec up to 150°/sec. The default setting is
100°/sec

B-4. **DOME SET - AUTO FLIP**

Auto Flip is available and the default setting is OFF. Move joystick "right or left" to select ON or
OFF. The default setting is OFF.   This function can be recalled by pushing 67+ preset button.

B-5. **DOME SET – ZOOM SPEED**

Zoom speeds are selectable FAST or SLOW mode. Move joystick to the right direction for
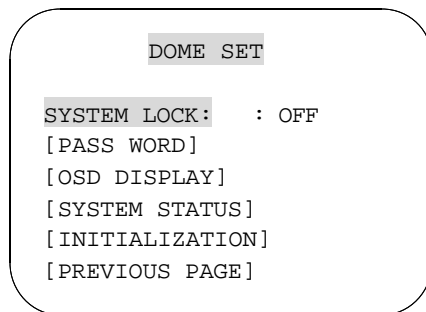selecting FAST or SLOW. The default setting is FAST.

B-6. **DOME SET – ALARM**

All alarms are available after set as ENABLE Mode. Move joystick to right or left direction for
selecting ENABLE/DISABLE. The default setting is DISABLE.   This function can be recalled by
pushing 97 + preset button.

B-7. **DOME SET - LANGUAGE**

Multiple languages are selectable here including English, Italian and Polish. Move joystick to the
right or left direction to select language. The default setting is ENGLISH.

B-8. **DOME SET – [NEXT PAGE]**

```
        DOME  SET

SYSTEM LOCK:    : OFF          ⟵          DEFAULT SETTING
[PASS WORD]
[OSD DISPLAY]
[SYSTEM STATUS]
[INITIALIZATION]
[PREVIOUS PAGE]
```

**B-8-1.** **DOME SET – [NEXT PAGE] – SYSTEM LOCK**

Password protection provides keeping memorized data. It cannot be adjusted by anybody without
password. In order to enter [PASS WORD] page, system lock status is must set as ON. Move
joystick to right or left direction to select ON. The default setting is OFF.
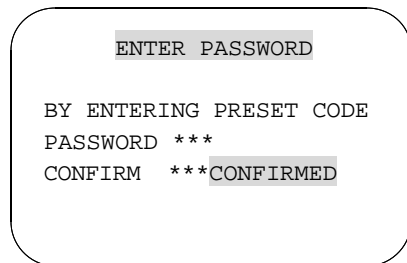
B-8-2. DOME SET – [NEXT PAGE] – [PASSWORD]

To enter this page to set a password, move joystick to the right direction. The password must be set by preset number from 001 to 255 **(Default 99)**
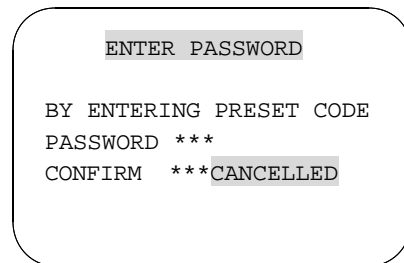
A. OSD MAIN MENU TABLE (PAGE 14) default setting is BLANK.

```
         ENTER PASSWORD

  BY ENTERING PRESET CODE
  PASSWORD ***
  CONFIRM  ***
```
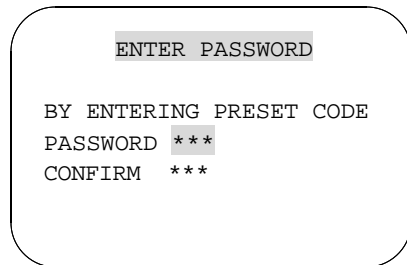
Press any number from 001~255 with preset button on password blank and again it on confirm blank. Then " CONFIRMED" is displayed on the monitor and the menu will go back to the previous page automatically.

```
         ENTER PASSWORD                    ENTER PASSWORD

  BY ENTERING PRESET CODE          BY ENTERING PRESET CODE
  PASSWORD ***                     PASSWORD ***
  CONFIRM  ***CONFIRMED            CONFIRM  ***CANCELLED
```

<CONFIRMED>   <CANCELLED>

If user press wrong preset number between PASSWORD and CONFIRM, "CANCELLED" is displayed on the monitor and the menu will return to the previous page automatically if user failed 3 times.

* After set a Password, the operator must press memorized password in order to enter OSD MAIN MENU, or to change the data which is memorized originally.

* The operator must remember the password for the operation and manufacturer provides not memorized password.

B-8-3. DOME SET – [NEXT PAGE] – [OSD DISPLAY]

OSD ID displayed after set ON in here and it can be hiding if selected OFF. Move joystick to the right or left direction in order to select OFF/ON when the cursor is located each item.

OSD MENU SETTING

```
┌─────────────────────────────┐
│        OSD DISPLAY          │
│                             │
│  CAMERA ID     : OFF        │
│  PRESET ID     : OFF        │
│  SECTOR ID     : OFF        │
│  COORDINATE    : ON         │
│  [PREVIOUS PAGE]            │
│                             │
└─────────────────────────────┘
```
◄────── **DEFAULT SETTING**
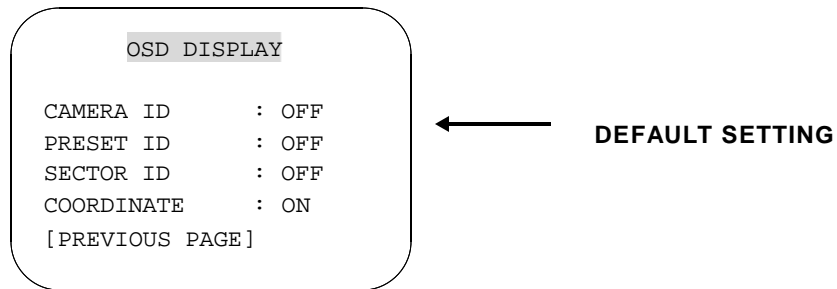
B-8-4. DOME SET – [NEXT PAGE] – [SYSTEM STATUS]

This page shows the information of this camera.

```
┌─────────────────────────────┐
│        SYSTEM STATUS        │
│                             │
│  PROTOCOL      : PELCO D, P  │
│  BAUD RATE     : 2400 BPS    │
│  FIRMWARE VER. : 1.05        │
│  UPGRADED DATE : 06.12.04    │
│  CAMERA MODULE : SDM100      │
│  [PREVIOUS PAGE]            │
│                             │
└─────────────────────────────┘
```
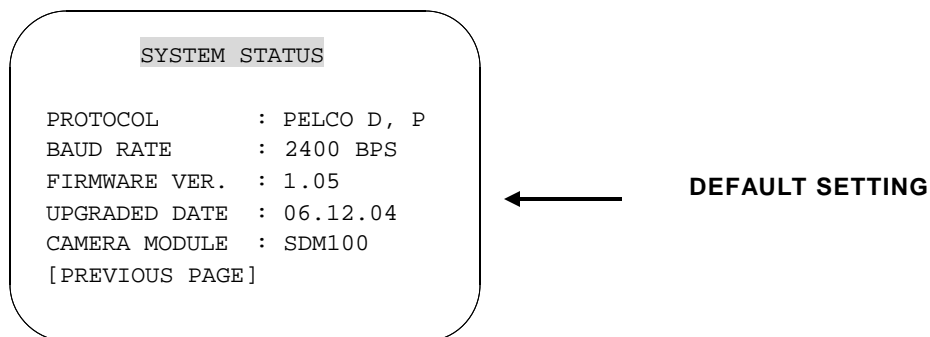◄────── **DEFAULT SETTING**

- Protocol and baud rate are shown according to the dip switch setting

(Refer to page 29, 30 and 31)

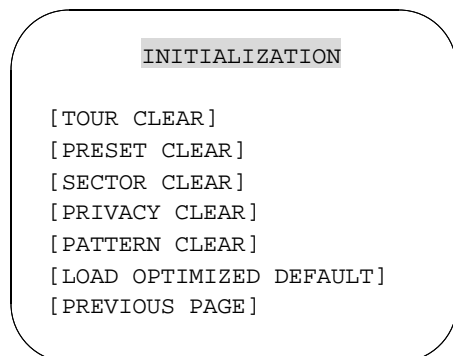- Firmware version and upgraded date will be changed if upgraded.

- Below camera modules can be set as follows.

SDM100 : SAMSUNG 10X ZOOM CAMERA MODULE.

EN300 : OPTICAL 3X MODULE (PAN FOCUS)

B-8-5. DOME SET – [NEXT PAGE] – [INITIALIZATION]

To clear all memorized data for tour, preset, sector, privacy or pattern, move joystick to the right

direction when the cursor is on [INITIALIZATION]

```
┌─────────────────────────────┐
│       INITIALIZATION        │
│                             │
│  [TOUR CLEAR]               │
│  [PRESET CLEAR]             │
│  [SECTOR CLEAR]             │
│  [PRIVACY CLEAR]            │
│  [PATTERN CLEAR]            │
│  [LOAD OPTIMIZED DEFAULT]   │
│  [PREVIOUS PAGE]            │
│                             │
└─────────────────────────────┘
```

- To clear memorize any data, move joystick to the right direction when cursor is on each item.

```
┌─────────────────────┐              ┌─────────────────────┐
│  TOUR CLEAR         │              │                     │
│                     │   ───────►   │     TOUR CLEAR      │
│  ARE YOU SURE? YES NO│              │                     │
└─────────────────────┘              └─────────────────────┘
```
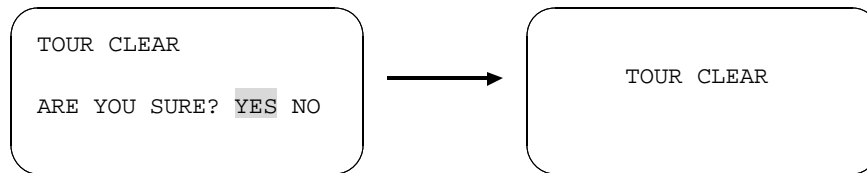
Press FOCUS NEAR button when the cursor is at YES in order to clear memorized data. Then flickered each item such as tour, preset, sector and so on is displayed on the monitor about 2~3 seconds. After this process, the menu is returned to the previous page.

* [PRESET CLEAR], [SECTOR CLEAR], [PRIVACY CLEAR], [PATTERN CLEAR] are same as [TOUR CLEAR].

```
┌─────────────────────┐              ┌─────────────────────┐
│ LOAD OPTIMIZED DEFAULT│             │                     │
│                     │   ───────►   │  ALL DATA INITIALIZING│
│ ARE YOU SURE? YES NO │              │                     │
└─────────────────────┘              └─────────────────────┘
```
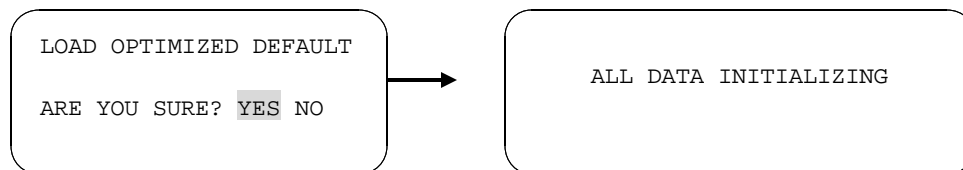
- To clear all data and wants returning to factory default, move joystick to the right direction when cursor is at [LOAD OPTIMIZED DEFAULT] to enter the above page.
- Move joystick to the right or left direction in order to select YES, press FOCUS NEAR button.
- Then " ALL DATA INITIALIZING" is displayed about 5~7 seconds and then the menu are returned to the previous page automatically.

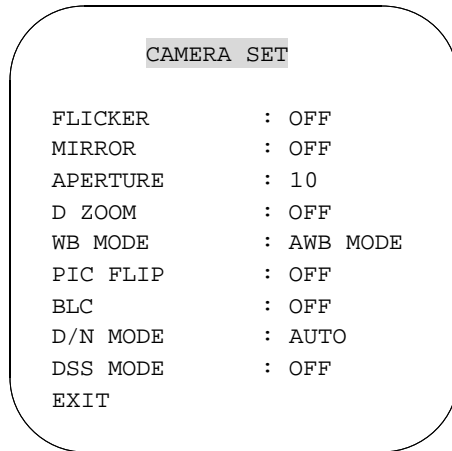## B-9. DOME SET – [NEXT PAGE] – SAVE AND EXIT

To saving the memorized data and escape this page, move joystick to the right direction when cursor is at SAVE AND EXIT.

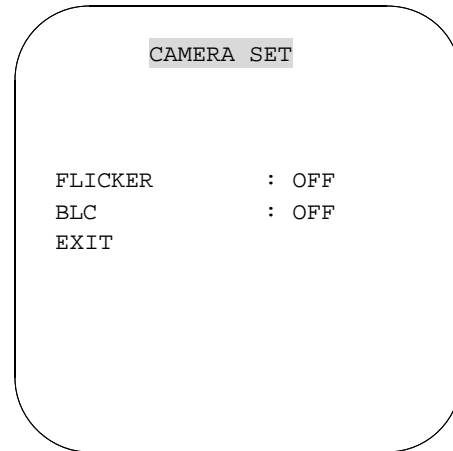## B-10. DOME SET – [NEXT PAGE] – EXIT

In order not to save any data and wants to escape this page, move joystick to the right direction when cursor is at EXIT

OSD MENU SETTING

C. CAMERA SET

```
      CAMERA SET                              CAMERA SET


  FLICKER      : OFF
  MIRROR       : OFF
  APERTURE     : 10                  FLICKER       : OFF
  D ZOOM       : OFF                 BLC           : OFF
  WB MODE      : AWB MODE            EXIT
  PIC FLIP     : OFF
  BLC          : OFF
  D/N MODE     : AUTO
  DSS MODE     : OFF
  EXIT
```

<10X >   < 3X >

C-1. CAMERA SET - FLICKERLESS

Flickerless feature is selected between 50Hz and 60Hz. The default setting is OFF (NTSC: 60Hz / PAL: 50Hz). Set flicker mode ON when power source is in discord with frequency. The default setting is OFF

C-2. CAMERA SET - MIRROR

This feature shows left and right exchanged picture image like mirror. The default setting is OFF.

C-3. CAMERA SET – APERTURE

Aperture enhances picture details by increasing gain of the caemra and sharpens the edges in the picture. The default seeting is 10. (the aperture level is from 01 ~ 15)

C-4. CAMERA SET – D ZOOM

Move joystick to the right direction in order to set as ON, if Digital Zoom is necessary at install field. The default setting is OFF.

C-5. CAMERA SET – WB MODE

White balance functions have 4 modes according to the condition of exterior lighting. The default setting is AWB and it may change the mode option accoding to the lighting conditions as below.

- AWB Mode – 3,200°K to 6, 000°K (Default)
- Indoor – up to 3,200°K
- Outdoor – up to 5,800°K
- ATW Mode - 2,000°K to 10, 000°K

C-6. CAMERA SET – PIC FLIP

Picture flip feature provides the top and down exchanged picture image horizontally. Move joystick to the right or left direction to select OFF/ON. The default setting is OFF.

C-7. CAMERA SET – BLC (Back Light Compensation)

The default setting is OFF and BLC modes can be OFF/ON.

OFF – Backlight compensation is not activated.

ON – Back light compensation is activated.

This function can be recalled by pushing 93 + preset button.

C-8. CAMERA SET – D/N MODE

ICR filter is changeable according to the lighting, AUTO – NIGHT MODE – DAY MODE.

The default setting is AUTO MODE. This function can be recalled by pushing 94 + preset button.

C-9. CAMERA SET – DSS MODE (DIGITAL SLOW SHUTTER)

If DSS turns on, digital slow shutter is working. Per second, the electronic shutter will remain open to receive some more lighting.
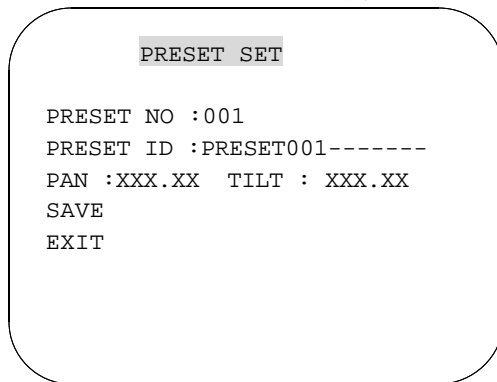
The default setting is OFF.

C-10. CAMERA SET – EXIT

To escape this page, move joystick to the right direction.

D. PRESET SET

To enter PRESET SET, move joystick to the right direction.

```
         PRESET SET

 PRESET NO :001
 PRESET ID :PRESET001-------
 PAN :XXX.XX  TILT : XXX.XX
 SAVE
 EXIT
```

←————————— **DEFAULT SETTING**

D-1.　PRESET – PRESET NO.

Up to 165 numbers of preset positions are available. Move joystick to the right or left direction to select preset no.

D-2.　PRESET – PRESET ID

To set preset ID, select up to 16 characters using Joystick to the left or right.

Press ZOOM TELE button moves to the next character from the left to the right direction and ZOOM WIDE button moves to the next character from the right to left direction

(Space displays when □ appears)

D-3.　PRESET – PAN: XXX.X TILT: XX.X

Press FOCUS FAR button in order to set preset position then, use the joystick to the position where memorized preset no. is needed. Then press FOCUS FAR button again after setting a preset location.

D-4.　PRESET – SAVE

Move joystick to the right direction when the cursor is at SAVE and then the cursor will be located on Preset ID for the continuous preset No. setting.
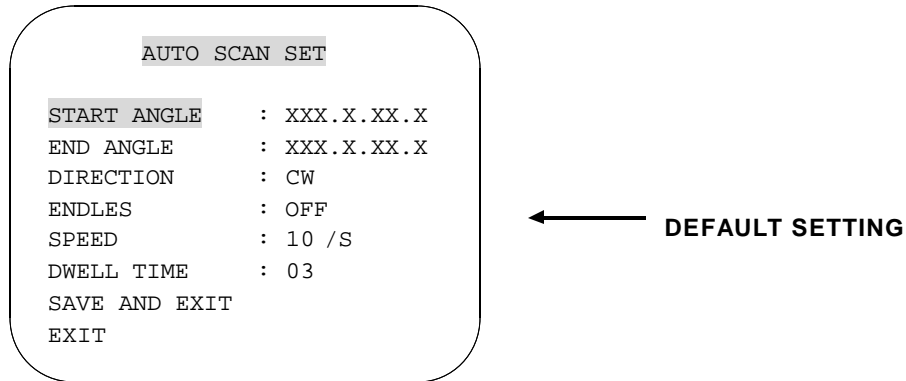
D-5.　PRESET – EXIT

To escape this page, move joystick to the right direction.

E. AUTO SCAN SET

* 66 + preset button is working as AUTO SCAN after setting.

```
        AUTO  SCAN  SET

START ANGLE     : XXX.X.XX.X
END ANGLE       : XXX.X.XX.X
DIRECTION       : CW
ENDLES          : OFF
SPEED           : 10 /S
DWELL TIME      : 03
SAVE AND EXIT
EXIT
```

←――――― **DEFAULT SETTING**

E-1. AUTO SCAN – START ANGLE

To set start angle, press FOCUS FAR button then move joystick to the starting angle which is needed memorized. To press FOCUS FAR button again is to escape.

E-2. AUTO SCAN – END ANGLE

To set end angle, press FOCUS FAR button then move joystick to the starting angle which is needed memorized. To press FOCUS FAR button again is to escape.

E-3. AUTO SCAN – DIRECTION

Auto Scan directions are available with two direction as CW or CCW by joystick to the right or left direction

CW: Clock wise direction (Default)

CCW: Count Clock Wise Direction.

E-4. AUTO SCAN – ENDLESS

Auto Scan can use endless rotation, move joystick to the right direction in order to select ON. Otherwise, the default setting is OFF.

E-5. AUTO SCAN – SPEED

User can use auto scan speed from 05°/S up to 35°/S and the default setting is 10°/S.

E-6. AUTO SCAN – DWELL TIME

To select dwell time, move joystick to the left or right direction in order to adjust dwell time. Possible to set from 01 second to 30 seconds and the default setting is 03 seconds.

E-7. AUTO SCAN – SAVE AND EXIT

To saving the memorized data and escape this page, move joystick to the right direction when cursor is at SAVE AND EXIT.
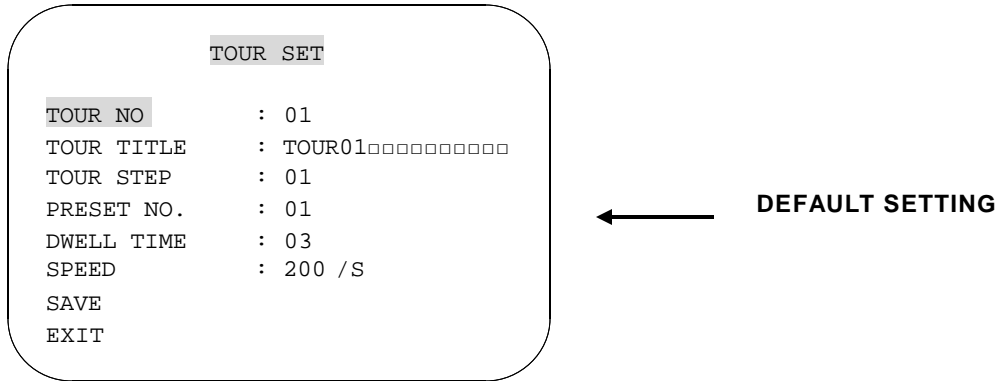
E-8. AUTO SCAN – EXIT

To escape this page, move joystick to the right direction.

F. TOUR SET

8 Programmable tours can be set and each tour is available to set up to 64 preset steps. After setting the data to the each tour group, 71~78 + preset buttons are working as group tour # 1~8

```
                TOUR SET

   TOUR NO        : 01
   TOUR TITLE     : TOUR01□□□□□□□□□□
   TOUR STEP      : 01
   PRESET NO.     : 01
   DWELL TIME     : 03
   SPEED          : 200 /S
   SAVE
   EXIT
```

← **DEFAULT SETTING**

F-1. TOUR SET – TOUR NO.

Max. 8 group tour no. set by the joystick are available.

F-2. TOUR SET – TOUR TITLE

To set tour title, select up to 16 characters using Joystick to left or right.

Press ZOOM TELE button to move the next character from the left to the right direction and ZOOM WIDE button to move the next character from the right to left direction (Space displays when □ appears) Tour title is not displayed on the monitor, but only for the reference of user.

F-3. TOUR SET – TOUR STEP

Each tour group consists of up to 60 preset steps with different dwell time and speed. It is possible to match any preset # for each tour step.

F-4. TOUR SET – PRESET NO.

The decided tour step #1 ~64, it is possible to select any preset no. up to 64. The default setting is BLK

F-5. TOUR SET – DWELL TIME

Dwell time provides up to 99 seconds from 01 second. The default setting is 03 seconds.

F-6. TOUR SET – SPEED

Each tour step can be set with different tour speed up to 200°/S and it is selectable from 10°/S. Move joystick to the right or left direction to select tour speed. The default setting is 200°/S.

F-7. TOUR SET – SAVE

To save the memorized data and escape this page, move joystick to the right direction when cursor is at SAVE
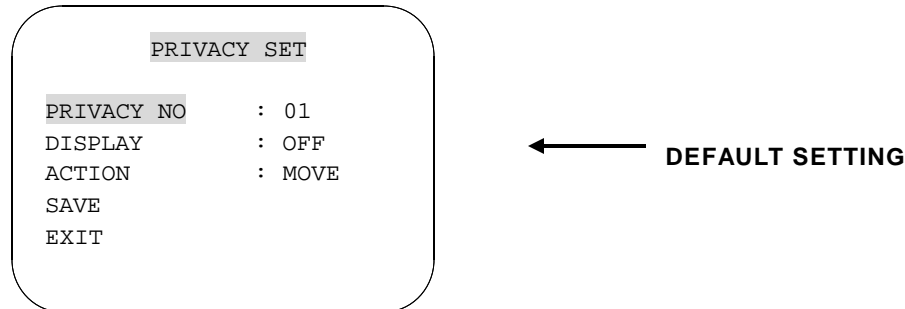
F-8. TOUR SET – EXIT

To escape this page, move joystick to the right direction

G. PRIVACY SET

4 Privacy masking zones are available to block out areas of security.

```
        PRIVACY SET

PRIVACY NO     : 01
DISPLAY        : OFF
ACTION         : MOVE
SAVE
EXIT
```

← **DEFAULT SETTING**

G-1. PRIVACY SET – PRIVACY NO.

It provides up to 4 privacy masking zones

G-2. PRIVACY SET – DISPLAY.

Move joystick to the right or left direction to set ON in order to show the selectable block in the center of the monitor. This block appears as a translucent square with blue color after set ON. The default setting is OFF.

G-3. PRIVACY SET – ACTION (MOVE / ADJUST)

To set the blocking area, press FOCUS FAR button when the MOVE MODE is appeared. Then use the joystick to the user defined area in order to set blocking area. Then press FOCUS FAR button again to escape from MOVE MODE.

To adjust size of blocking area, move joystick to the right or left direction when the cursor is on ACTION. After changed to ADJUST MODE, press FOCUS FAR button in order to adjust the size of blocking area. The size of blocking area can be adjustable by using joystick up down or left right. After adjusting size of blocking area, press FOCUS FAR button to escape ADJUST mode.

● ADJUST: You can change the masking size by using joystick to the left or right direction

● MOVE: You can move the masking area by using joystick to the left or right direction (Default)

G-4. PRIVACY SET – SAVE

After setting the privacy masking zone, to save the data, move joystick to the right direction when the cursor is on SAVE. After saving the data, the cursor moves to PRIVACY NO.2 automatically to prepare the next privacy masking zone.
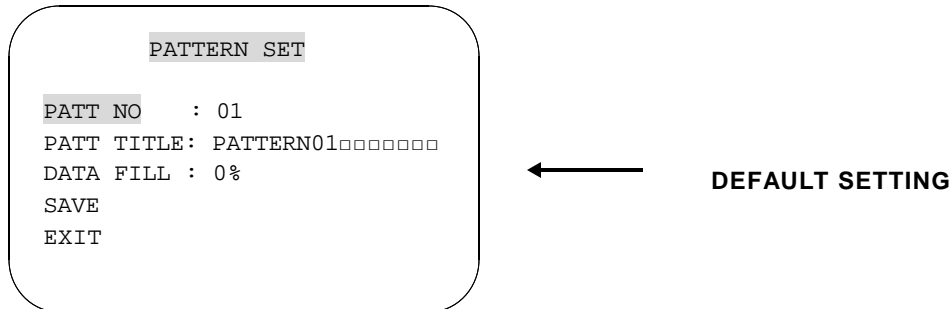
G-5. PRIVACY SET –EXIT

To escape this page, move joystick to the right direction

OSD MENU SETTING

H. PATTERN SET

8 programmable patterns are available with 16 characters of title.

After setting the data to each pattern # 1~8, 81~88+ preset buttons are working as Pattern # 1~8.

```
        PATTERN SET

 PATT NO   : 01
 PATT TITLE: PATTERN01□□□□□□□
 DATA FILL : 0%
 SAVE
 EXIT
```

← **DEFAULT SETTING**

H-1. PATTERN SET –PATT NO.

Up to 8 programmable user-defined patterns set by the joystick are available.

H-2. PATTERN SET –PATT TITLE

To set PATTERN TITLE, select up to 16 characters using Joystick to the left or right.

Press ZOOM TELE button moves to the next character from the left to the right direction and ZOOM WIDE button moves to the next character from the right to left direction (Space displays when □ appears) Pattern title is not displayed on the monitor, but only for the reference of user.

H-3. PATTERN SET –DATA FILL

To fill the programming data, press FOCUS FAR button in order to start the data fill up. Filling data is programmed according to the joystick movement. Press FOCUS FAR button again in order to escape.

H-4. PATTERN SET –SAVE

To saving the filling data, move joystick to the right direction when the cursor is on SAVE. Then the cursor moves to the PATT NO.02 in order to prepare next pattern no.
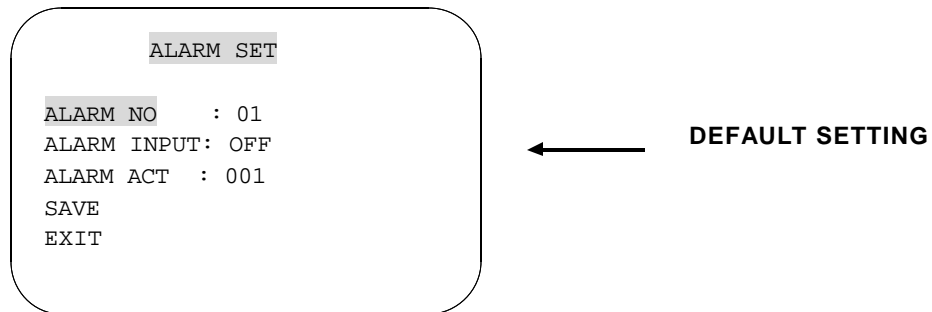
H-5. PATTERN SET –EXIT

To escape this page, move joystick to the right direction

OSD MENU SETTING

I. ALARM SET

4 Alarm inputs are available and each alarm is activating to presets, group tours or patterns.

```
        ALARM SET

ALARM NO   : 01
ALARM INPUT: OFF
ALARM ACT  : 001
SAVE
EXIT
```

← **DEFAULT SETTING**

I-1. ALARM SET – ALARM NO.

Up to 4 alarms are selectable by using joystick to the right direction when cursor is on ALARM NO.

I-2. ALARM SET – ALARM INPUT

Input alarm ways provide two different ways as NC (Normal Close) or NO (Normal Open)

The default setting is OFF

I-3. ALARM SET – ALARM ACT

Alarm activates various surveillance modes with Preset number up to 165, Group tour up to 8, Pattern up to 8. Move joystick to the right or left direction to select any preset number, group tour no. or pattern no.

I-4. ALARM SET – SAVE

After setting the alarm input ways and activation, to save the data, move joystick to the right direction when the cursor is on SAVE. After saving the data, the cursor moves to Alarm NO.2 automatically to prepare the next alarm.

I-5. ALARM SET –EXIT

To escape this page, move joystick to the right direction

* Before activating Alarm, user must set ALARM ENABLE at DOME SET – ALARM – ENABLE (Refer to page 15)
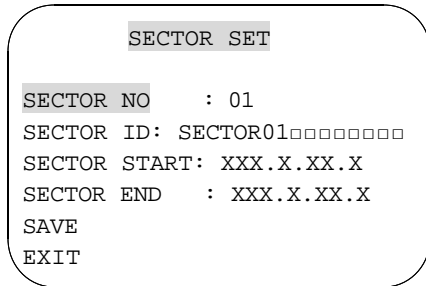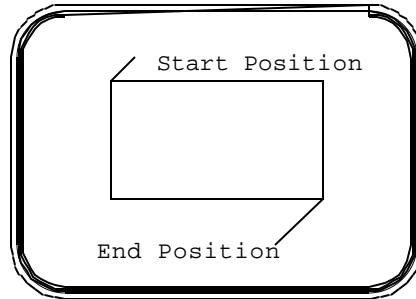
J. SECTOR SET

Up to 8 programmable sectors are available with 16 characters.

This feature is useful to memory the certain location such as parking zone or so on.

When camera goes through this area, it shows the letter you memorized.

```
        SECTOR SET

SECTOR NO   : 01
SECTOR ID: SECTOR01□□□□□□□□
SECTOR START: XXX.X.XX.X
SECTOR END  : XXX.X.XX.X
SAVE
EXIT
```

```
            Start Position



            End Position
```

DEFAULT SETTING

J-1. SECTOR SET – SECTOR NO.

Up to 8 programmable sectors set by the joystick are available.

J-2. SECTOR SET – SECTOR ID

To set SECTOR ID, select up to 16 characters by using Joystick to the left or right.

Press ZOOM TELE button to move to the next character from the left to the right direction and

ZOOM WIDE button to move to the next character from the right to left direction (Space displays

when □ appears)

J-3. SECTOR SET – SECTOR START

To set SECTOR START angle, press FOCUS FAR button then move joystick to the left or right

direction to set the position.   To press FOCUS FAR button again is to escape.

J-4. SECTOR SET – SECTOR END

To set SECTOR END angle, press FOCUS FAR button then move joystick to the left or right

direction to set the position. To press FOCUS FAR button again is to escape.

J-5. SECTOR SET – SAVE

After setting the SECTOR position, to save the data, move joystick to the right direction when the

cursor is on SAVE. After saving the data, the cursor moves to SECTOR NO.2 automatically to

prepare the next SECTOR.

J-6. SECTOR SET –EXIT

To escape this page, move joystick to the right direction

K. EXIT

To escape OSD Main Menu, move joystick to the right or left direction then this camera is
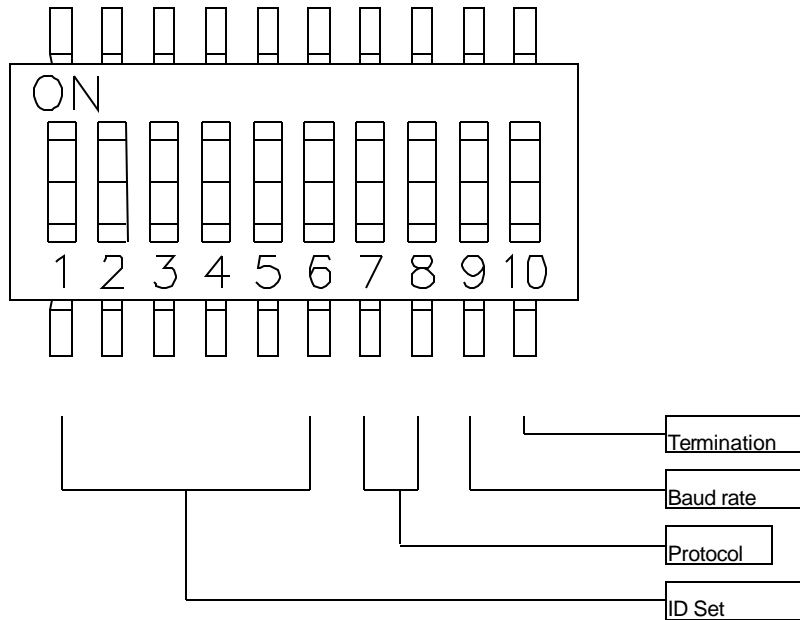
ready to operate.

A-1. DIP SW SETTING

Mini Speed Dome camera provides up to 63 cameras ID and it's an adjustable ID with 1st~6th of Dip switch.

Open the camera case to set ID using DIP SW1.

* Factory default: Camera ID = 1, PELCO-D Baud Rate: 2400bps

A-2. ID SETTING (1-ON, 0-OFF) (1➔10)

DIP SW	ID VALUE	DIP SW	ID VALUE	DIP SW	ID VALUE
100000XXXX	1	111010XXXX	23	101101XXXX	45
010000XXXX	2	000110XXXX	24	011101XXXX	46
110000XXXX	3	100110XXXX	25	111101XXXX	47
001000XXXX	4	010110XXXX	26	100011XXXX	48
101000XXXX	5	110110XXXX	27	100011XXXX	49
011000XXXX	6	001110XXXX	28	010011XXXX	50
111000XXXX	7	101110XXXX	29	110011XXXX	51
000100XXXX	8	011110XXXX	30	001011XXXX	52
100100XXXX	9	111110XXXX	31	101011XXXX	53
010100XXXX	10	000001XXXX	32	011011XXXX	54
110100XXXX	11	100001XXXX	33	111011XXXX	55
001100XXXX	12	010001XXXX	34	000111XXXX	56
101100XXXX	13	110001XXXX	35	100111XXXX	57
011100XXXX	14	001001XXXX	36	010111XXXX	58
111100XXXX	15	101001XXXX	37	110111XXXX	59
000010XXXX	16	011001XXXX	38	001111XXXX	60
100010XXXX	17	111001XXXX	39	101111XXXX	61
010010XXXX	18	000101XXXX	40	011111XXXX	62
110010XXXX	19	100101XXXX	41	111111XXXX	63
001010XXXX	20	010101XXXX	42		
101010XXXX	21	110101XXXX	43		
011010XXXX	22	001101XXXX	44		

A-3. PROTOCOL

7th~8th dip switches are used for Protocol Setting.

Factory Default: Pelco-D or Pelco-P (Auto detection)

DIP SW1- 7	DIP SW1- 8	
OFF	OFF	Pelco-D or Pelco-P

A-4. BAUD RATE SETTING

The 9th Dip Switch is used for BAUD RATE setting.

DIP SW can be changeable to 2400bps, 9600bps.
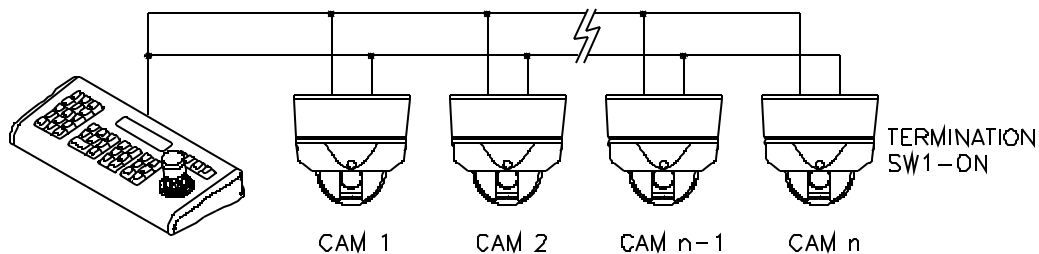
Factory Default: 2400bps.

DIP SW1 9th	BAUD RATE
OFF	2400
ON	9600

.

A-5. 485 TERMINATIONS

10th Dip Switch is used for 100Ω termination.

Set on 10th Dip Switch only for the last looped camera from the controller.

Even in case of only one camera, set on 10th Dip Switch of the cameras.

TERMINATION SW1-ON

CAM 1   CAM 2   CAM n-1   CAM n

TROUBLESHOOTING

If you have trouble in operating in your camera, refer to the following.

PROBLEM	SOLUTION
No operating	Check if the power supply is DC12V. Check if RS-485 communication cable is connected correctly. Check camera ID setting. Check the termination.
No picture	Check if all the cables are connected correctly. Check if the monitor is adjusted correctly. Check if video signal line is cut.
Dark screen	Adjust the monitor status.
Abnormal camera Operation status	Check if voltage level is out of the specification. Check the termination.
Screen not clear	Check if there is dust on the lens. Adjust the monitor status. If excessive light is seen on a screen, change the camera angle or location. Adjust the lens focus again.

SPECIFICATIONS

MODEL	10X A/F CAMERA MODULE	3X PAN FOCUS MODULE
PAN /TILT Pan Rotation Angle	360° Endless	
Pan Speed — Manual	100° ~ 150°/sec	
Pan Speed — Preset	Max 200° /sec	
Tilt Rotation Angle	0° ~ 90°	
Tilt Speed — Manual	100° ~ 150°/sec	
Tilt Speed — Preset	Max 200° /sec	
System Accuracy	0.02°	
FUNCTIONS Presets	165 positions with a 16-character label available for each position with different speed steps	
Group Tour	Max. 8 Programmable group tours (each one consisting of up to 60 preset steps with different steps)	
Auto scan	Programmable Auto scan	
Pattern	8 Programmable Patterns (total 480 seconds)	
Privacy Zone	4 privacy zones	-
Sector	8 selectable Sectors with 16 characters	
Password Protection	Yes	
Alarm Input	4 alarms OFF/NC/NO (with various programmable states)	
Alarm Actions	Activate preset, Group scanning or Patterns	
Auto Flip	ON / OFF	
OSD Menu	Multiple Languages on screen	
Communication	RS-485	
Protocol	Pelco D/P	
POWER Consumption (12V DC)	9W Max (Heater Type 15W)	
Consumption (24V AC)	18W Max (Heater Type 30W)	
Power Supply(12V DC)	DC12V 750mA (Heater Type DC12V 1.2W)	
Power Supply(24V AC)	AC 24V 650mA (Heater Type AC24V 1.3W)	
OTHERS Construction	die-casting , Anti-vandal dome cover	
Dimensions	158.8φ (D) * 163.0mm(H)	
Weight	1.5 kg	
Motor Type	Stepper Motor	
Micro Steps	1/4 Step	
Storage Temperature	-10 ~ 60	
Operating Temperature	0 ~ 50	
Certifications	CE, FCC	
CAMERA MODULE Image Sensor	1/4" Sony Super HAD CCD	
Total Image Pixels — NTSC	811(H) * 508(V) 410K	
Total Image Pixels — PAL	795(H) * 596(V) 470K	
Number Of Effective Pixels — NTSC	768(H) * 494(V) 380K	
Number Of Effective Pixels — PAL	752(H) * 582(V) 440K	
Horizontal resolution	More Than 500TV Lines	More Than 520TV Lines
Lens — Optical	10x Optical Zoom (F=3.8 to 38mm)	3x Optical Zoom (F=1.9~2.8, f=4.1~7.3mm)
Lens — Digital	10x (100x with optical)	-
Day & Night (ICR)	Auto/ Day/ Night	-
Min. Shooting Distance	0.35m(Wide)/0.8m(Tele)	0.32m(Wide)/1.5m(Tele)
Digital Slow Shutter	2/4/8/16/24/32/64/128/ OFF	-
Min. illumination — Normal mode	0.7Lux (50IRE)	1.0Lux (50IRE)
Min. illumination — Night mode	0.02Lux (ICR On)	
Luminance S/N Ratio	More than 50dB	
Video Output	VBS:1.0Vp-p/75 Ohm	
BLC	ON / OFF	
Flickerless — NTSC	ON / OFF (1/100)	
Flickerless — PAL	ON / OFF (1/120)	
WHITE BALANCE	AWB/ATW/INDOOR/ OUTDOOR	AWB only

DIMENSIONS

ø167

157

ø100

UNITS . mm
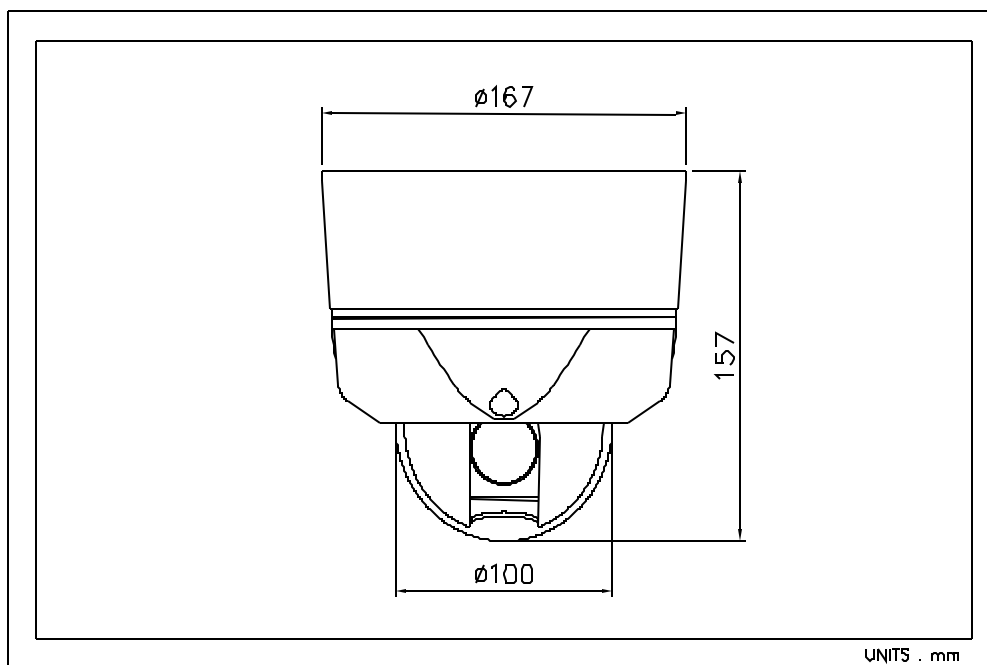
General Information

Limited Warranty

At Discount Security Cameras (DSC) we take pride in offering only the highest quality reliable products. In the rare event that a defect does occur we offer the following warranty:

All products are warranted by Discount Security Cameras for 1 year from date of purchase, except for Clearance items, which are warranted for 30 days. If a product is defective we will repair or replace it. The customer is responsible for the shipping to send the product to us. We will cover the freight to return the product back to the customer.

After 1 year we will continue to service your products for the standard labor rate (currently $45 per hour-minimum 2 hours) plus parts or phone technical support for $50.00/hour.

The following situations void the product warranty: 1. Opening the housing of any camera with a fixed lens; 2. Cutting the connectors off any equipment; 3. Adding 3rd party software to a DVR without prior approval from our technical support department; 4. Damage caused by nature such as water flooding, winds, lightning and other similar events; the fault of the installer or customer (for example dropping or breaking the product, improper voltage, or improper installation) and failing to follow safety tips as previously mentioned above.

RMA: All returns and warranty services require a valid Returned Merchandise Authorization Number (RMA#) issued by Discount Security Cameras. Merchandise will not be honored and will be returned to customer without RMA#. You must provide the Optiview Serial number of the unit when calling for technical service or Return Material Authorization (RMA) number.

All returns and warranty services **require** a valid Returned Merchandise Authorization Number (RMA#) issued by Optiview. RMA numbers are only valid for 14 days from date of issuance.

Technical Support

You will need to contact the vendor, where you originally purchase this Mini PTZ Camera, if you need technical support. The Serial number of the Camera is located at the bottom of the main internal dome camera which can be access by opening up the clear acrylic dome cover. You will need to have this ready prior to calling our Optiview Technical support group to avoid delay or denial of support for this product. You may also use your Order number or Invoice number as your reference prior to calling us for technical support. You can contact us at 904-855-1121 or email us at tech@videodvr.com.

Return Policy

Merchandise may be returned for a refund or exchange for 15 days from day of receipt as long as the equipment is still in "as new" condition. A 15% restocking fee may apply. Shipping costs are not refundable (unless the product is defective - see warrantee below).

"As New" means that all items must be undamaged and in their original cartons and packaging along with all accessories, documentation, and parts. No wires or pigtails can be cut. The product exterior must be intact and unmarked. The original carton must be in another "shipping" box. No postmarks or labels shall be on the original box. Cable must be unopened (or still on reel).

A Return Merchandise Authorization (RMA) number must be obtained from Optiview prior to the return of any merchandise. An RMA number is only valid for 14 days (returned products must be received within 14 days from issuance of the RMA number).

Return and Warranty information may be updated or changed without prior notice.

For complete and updated information on warranty and return policy, go to
http://www.optiviewpro.com/return_warranty.htm

Camera Serial #: _____

Invoice/Order#_____   Date of Purchase: _____