Honeywell

Honeywell

ScanDome II^{TM} Dome Camera

HSDN-251NS/PS , HSDN-230NS/PS

Operation & Programming Manual

Honeywell
CCTV Products

Please read this manual thoroughly before use and keep it handy for future reference.
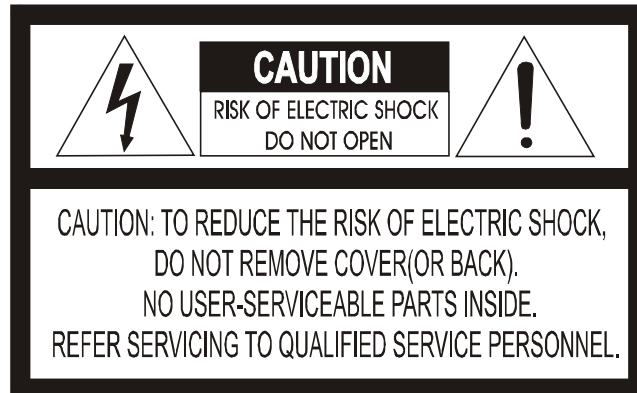
Rev.040602

Warnings and Cautions

WARNING

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

CAUTION

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.

EXPLANATION OF GRAPHICAL SYMBOLS

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

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

FCC COMPLIANCE STATEMENT

FCC INFORMATION: THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS A DIGITAL DEVICE, PURSUANT TO PART 15 OF THE FCC RULES. THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE WHEN THE EQUIPMENT IS OPERATED IN A COMMERCIAL ENVIRONMENT. THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTION MANUAL, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS. OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE HARMFUL INTERFERENCE IN WHICH CASE THE USER WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT HIS OWN EXPENSE.

CAUTION: CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

THIS CLASS A DIGITAL APPARATUS COMPLIES WITH CANADIAN ICES-003.

CET APPAREIL NUMÉRIQUE DE LA CLASSE A EST CONFORME À LA NORME NMB-003 DU CANADA.

CE COMPLIANCE STATEMENT

WARNING

THIS IS A CLASS A PRODUCT. IN A DOMESTIC ENVIRONMENT THIS PRODUCT MAY CAUSE RADIO INTERFERENCE IN WHICH CASE THE USER MAY BE REQUIRED TO TAKE ADEQUATE MEASURES.

IMPORTANT SAFEGUARDS

1. READ INSTRUCTIONS -- All the safety and operating instructions should be read before the appliance is operated.

2. RETAIN INSTRUCTIONS -- The safety and operating instructions should be retained for future reference.

3. CLEANING -- Unplug video monitor or equipment from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

4. ATTACHMENTS -- Do not use attachments not recommended by the video monitor or equipment manufacturer as they may result in the risk of fire, electric shock or injury to persons.

5. WATER AND MOISTURE -- Do not use video monitor or equipment near water -- for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, or the like.

6. ACCESSORIES -- Do not place video monitor or equipment on an unstable cart, stand or table. The video monitor or equipment may fall, causing serious injury to a child or adult, and serious damage to the equipment. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.

6A. Video monitor or equipment and cart combinations should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the equipment and cart combination to overturn.

7. VENTILATION -- Slots and openings in the cabinet and the back or bottom are provided for ventilation, and to ensure reliable operation of the video monitor or equipment and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the video monitor or equipment on a bed, sofa, rug, or other similar surface. Video monitor or equipment should never be placed near or over a radiator or heat register. Video monitor or equipment receiver should not be placed in a built-in installation such as a bookcase unless proper ventilation is provided.

8. POWER SOURCES -- Video monitor or equipment should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your video monitor or equipment dealer or local power company. For video monitor or equipment designed to operate from battery power refer to the operating instructions.

9. GROUNDING OR POLARIZATION -- This video monitor may be equipped with a polarized alternating - current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

   Alternate Warnings - This video monitor is equipped with a three-wire grounding-type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.

10. POWER CORDS -- Do not allow anything to rest on the power cord. Do not locate video monitor or equipment where the cord will be abused by persons walking on it.

11. HEED WARNINGS -- Follow all instructions marked on the video monitor or equipment.

12. LIGHTNING -- For added protection for video monitor or equipment during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the video product due to lightning and power-line surges.

13. OVERLOADING --Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

14. OBJECT AND LIQUID ENTRY -- Never push objects of any kind into video monitor or equipment through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

15. SERVICING -- Do not attempt to service video monitor or equipment yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

16. DAMAGE REQUIRING SERVICE -- Unplug video monitor or equipment from the wall outlet and refer servicing to qualified service personnel under the following conditions:

   A. When the power-supply cord or the plug has been damaged.
   B. If liquid has spilled, or objects have fallen into the video product.
   C. If the video product has been exposed to rain or water.
   D. If the video product does not operate normally by following the operating instructions, adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the video product to its normal operation.
   E. If the video product has been dropped, or the cabinet damaged.
   F. When the video product exhibits a distinct change in performance -- this indicates a need for service.

17. REPLACEMENT PARTS -- When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

18. SAFETY CHECK -- Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks to determine that the video product is in proper operating condition.

19. FIELD INSTALLATION -- This installation should be made by a qualified service person and should conform to all local codes.

Table of Contents

Chapter 1 — Introduction

1.1 Features

The ScanDome II^{TM} Keyboard Controller and the ScanDome II^{TM} dome camera make up the building blocks for any surveillance/security system. Using multiple Keyboard Controllers and multiple dome cameras, no place is too large for monitoring. Extensible and flexible architecture facilitates remote control functions for a variety of external switching devices such as multiplexers and DVRs.

- Built-in 25 times optical power zoom camera with True Night Shot function.(HSDN-251 Series)

- 240 Preset positions.

- 8 Tours consist of Preset, Pattern, Auto-Scan and Tour itself can be programmed over 300

  functions and Preset location. While moving, each Preset scan can be watched in smooth

  Vector Scan mode.

- 8 Auto Scan including vector scan

- 4 Pattern (240second)

- 8 Privacy zone

- 8 Alarm input / 4 Aux out (NC & NO)

- Variable speed from 0.1°/sec to 90°/sec.

  Turbo speed is Max 360°/sec with Ctrl key pressed.

  Maximum speed is inversely proportional to the zoom ratio.

- Programmable user preferences (alarm, preset, title, etc.).

- Up to 999 selectable camera addresses (Option 3999)

- Built-in RS-485/422 receiver driver.

- Built-in power-line surge protection and lightning protection

- Clear bubble with black liner (shelter) for concealing the camera.

- Optional Tinted Bubble, Indoor(HSGN-502) & Outdoor (HSGN-502SH) pendant housing with

  heater & blower, Indoor Flush Mount(HSG-502F), Parapet mount & Roof Top mount.

UP TO 255 MULTIPLEXER

Alarm Input
UP TO 8

<Sensor>

UP TO 99 DVR

Alarm
Output
UP TO 4

<Siren>

<Flashing Light>

<Master Keyboard>

UP TO 32 CAMERA

UP TO 3 Slave Keyboard
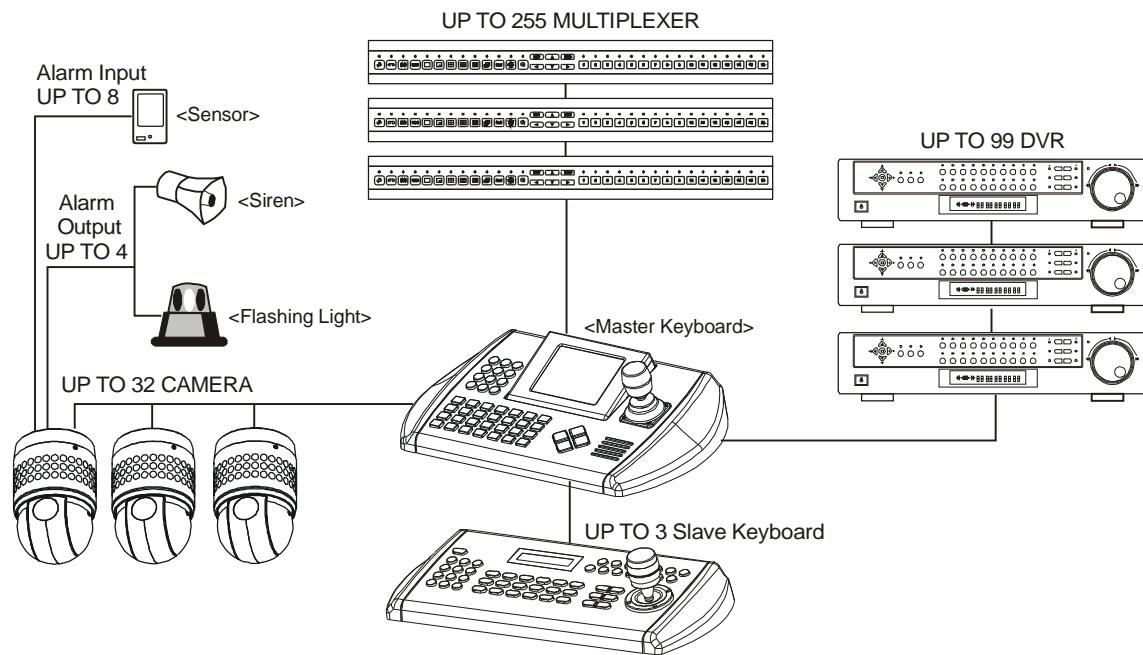
Figure 1 – Typical System Configuration

Chapter 2 — Installation and Configuration

2.1 Package Contents

The package contains the following.

ScanDome II^{TM} (Dome Camera) 1
Bubble Ring 1
Instruction Manual (This Document) 1
Assembly Screws for Attaching ScanDome II^{TM} 3
Plastic Anchor 3
10Pin Connector 1
12Pin Connector 2

CAUTION: Be sure to have caution labels(E version only) on both body and base of the camera. Different version will not support alarm input and output.
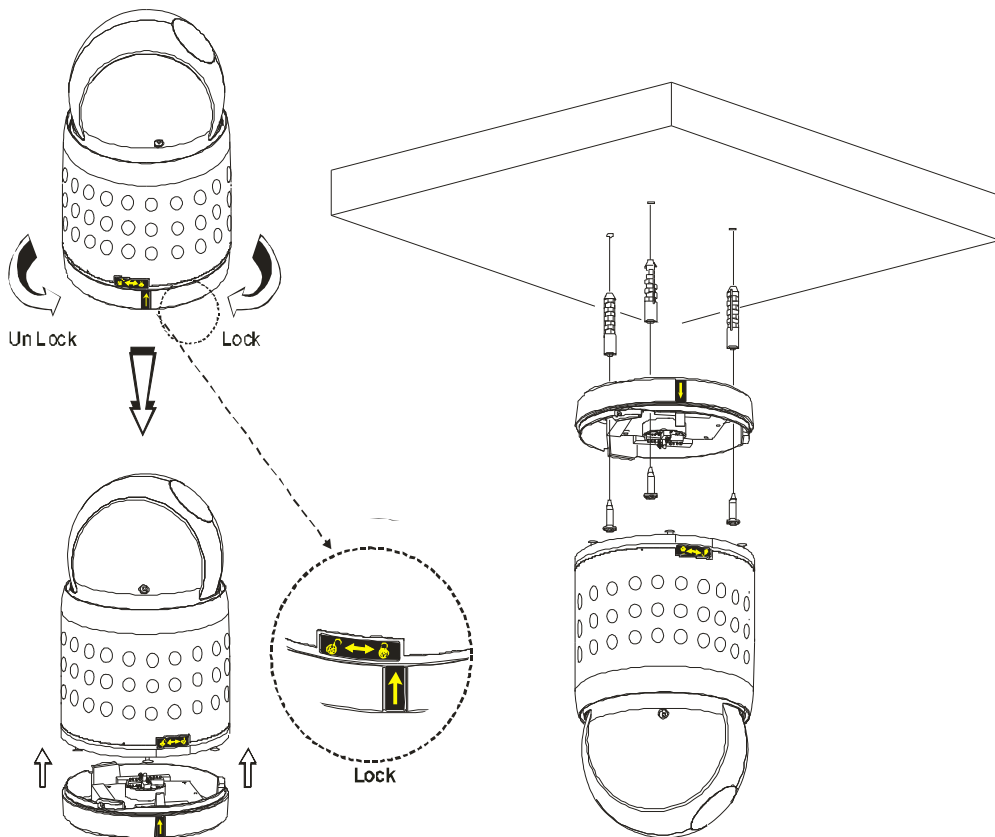
Figure 2 – Installation

2.2 Basic Configuration of ScanDome II^{TM} Dome Camera System.
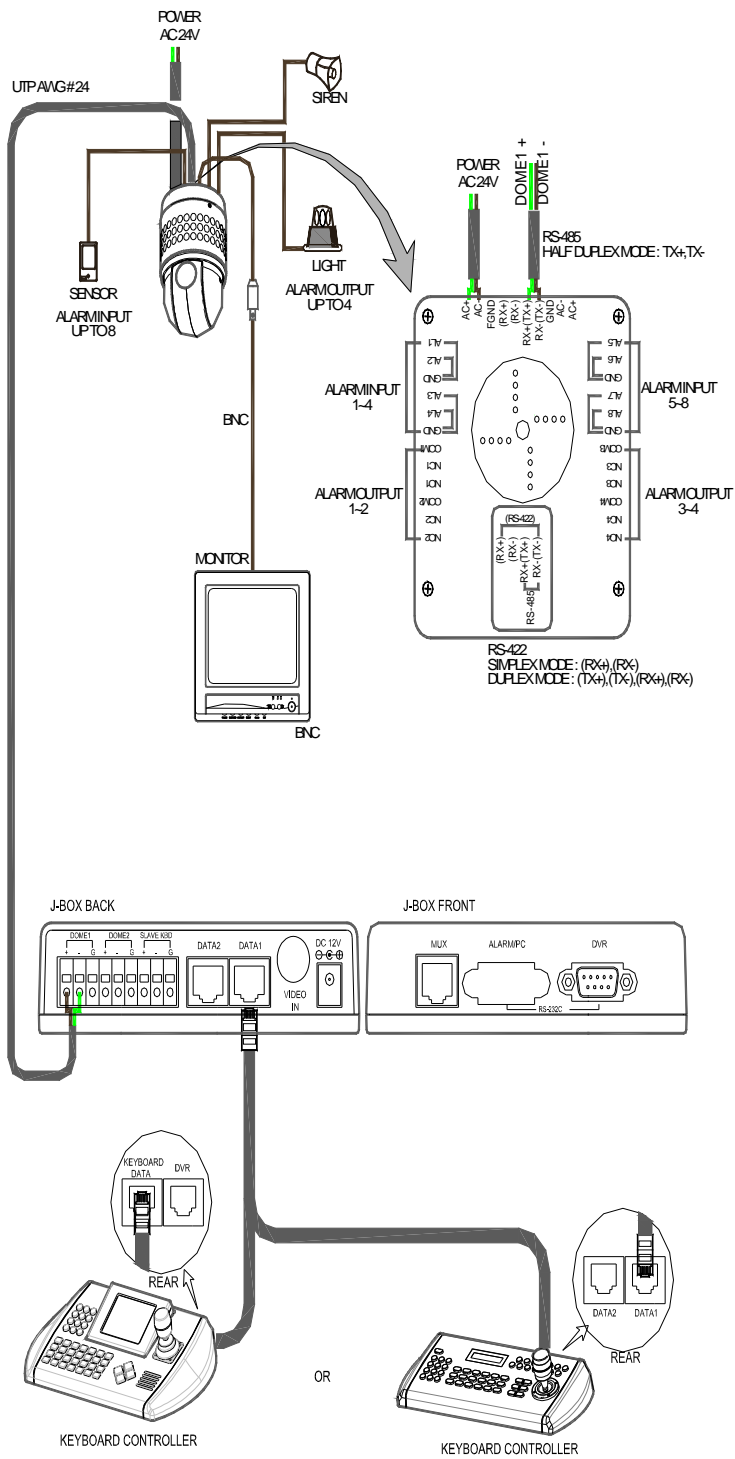
Figure 3– Basic installation diagram

The dome camera must be installed by qualified service personnel in accordance with all local and federal electrical and building codes. The system should be installed according to Figures 2 through 8.
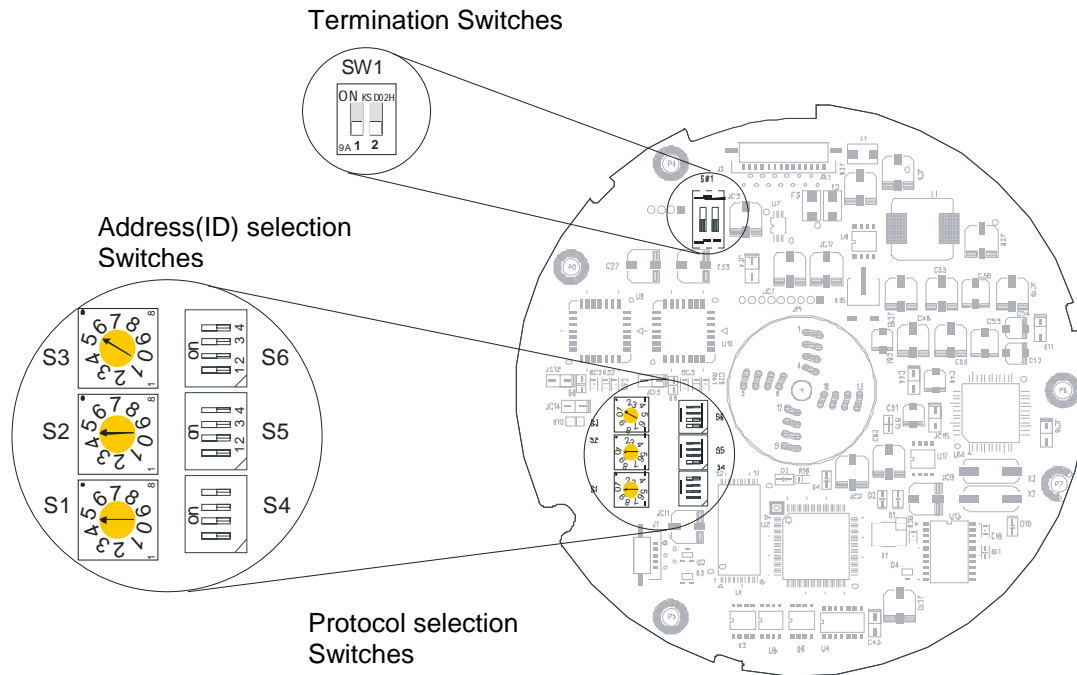
Figure 4– Layout of Switches

2.3 Setting Unit for Termination

The device which is connected at end of line, whether it be a dome camera or keyboard controller, must have the cable for communication terminated by setting the appropriate DIP switch. Without proper termination, there is potential for control signal errors. Total length of the cable for communication should not exceed 1.2Km.

SW1	1	2
Terminated	ON	ON
Not terminated	OFF	OFF
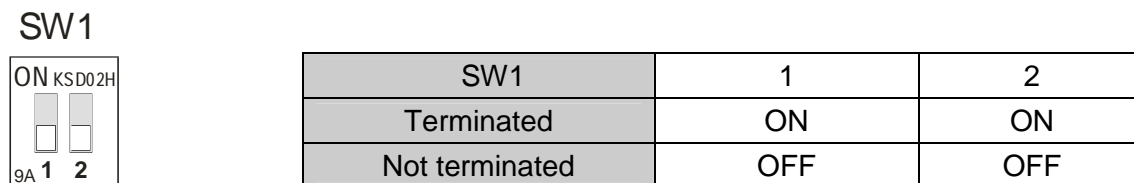
Figure 5– Setting Unit for Termination

Cable for communication

3rd Branch Not allowed
Without spliter /repeater

Enable Termination (On)

Enable Termination (On)

Cable for communication
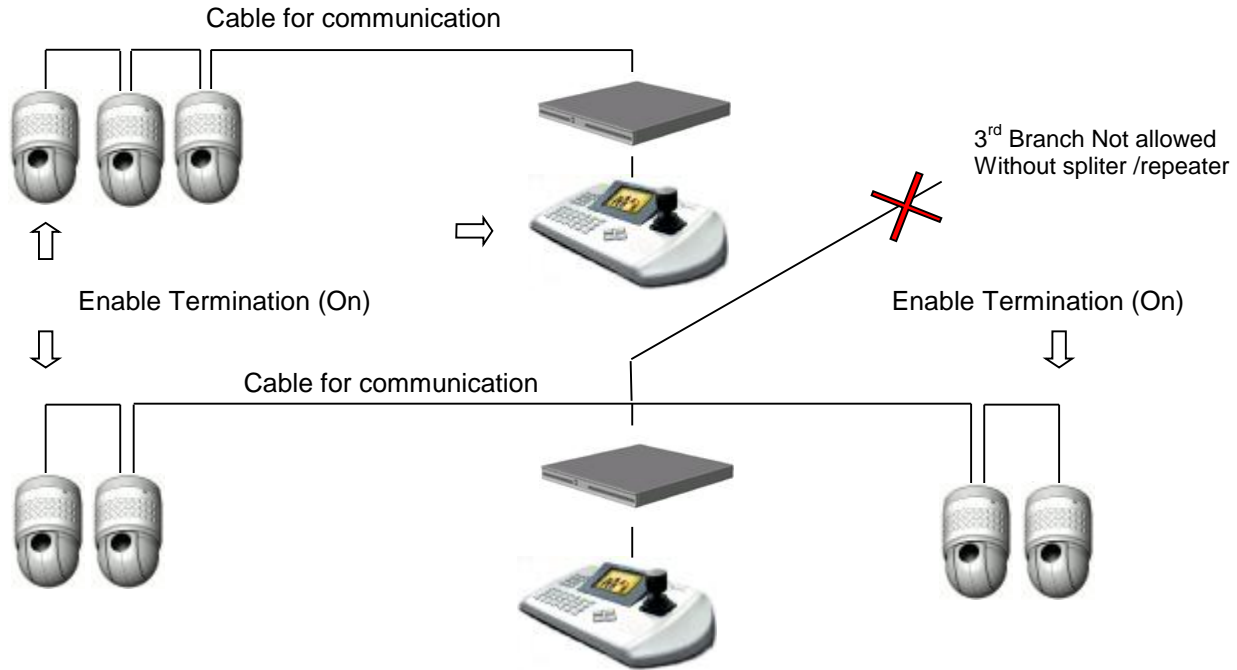
Figure 6 Termination Diagram

2.4 Setting Address (ID) of Dome Camera

To prevent damage, each dome camera must have a unique address (ID). When installing multiple dome cameras using a multiplexer, it is suggested that the dome camera address match the multiplexer port number.

Example: Port 1 = Dome 1, Port 2 = Dome 2 … Port 16 = Dome 16. If more than 16 dome cameras are installed using two or more multiplexers, ID of the dome camera should be ID of MUX x No. of camera IN. (e.g. multiplexer ID= n, Camera IN= m then ID of Dome =16x(n-1)+m)

Refer to Figures 3-4 for setting the dome camera address (ID) and protocol selection.
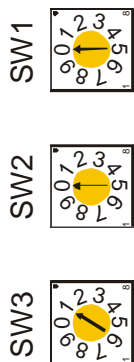
DOME ID	SW1	SW2	SW3
1	0	0	1
2	0	0	2
.	.	.	.
999	9	9	9

Figure 7– Setting Address (ID) of Dome Camera

2.5 Setting Protocol of Dome Camera

If a dome camera is to be installed with a Scandome II^{TM} keyboard controller, select F2 protocol.

Consult service personnel if a dome camera is installed with device other than a keyboard controller.

S/W		On	Off	**FUNCTION**
D1	S4-1	Enable	Disable	Alarm
D2	S4-2	PAL	NTSC	NTSC/PAL
D3	S4-3			Reserved
D4	S4-4	RS-422	RS-485	RS-422/RS-485

D5	D6	D7	**PROTOCOL**
S5-1	S5-2	S5-3	
Off	Off	Off	F2,F2E,P,D,E & Ph Protocol
Off	Off	On	Reserved
Off	On	Off	S 422
Off	On	On	Reserved
On	Off	Off	V Protocol
On	Off	On	Reserved
On	On	Off	D Color
On	On	On	Reserved

D8	D9	D10	**BAUD RATE**
S5-4	S6-1	S6-2	
Off	Off	Off	2400 bps
Off	Off	On	4800 bps
Off	On	Off	9600 bps
Off	On	On	19200 bps
On	Off	Off	38400 bps
On	Off	On	57600 bps
On	On	Off	115200 bps
On	On	On	230400 bps

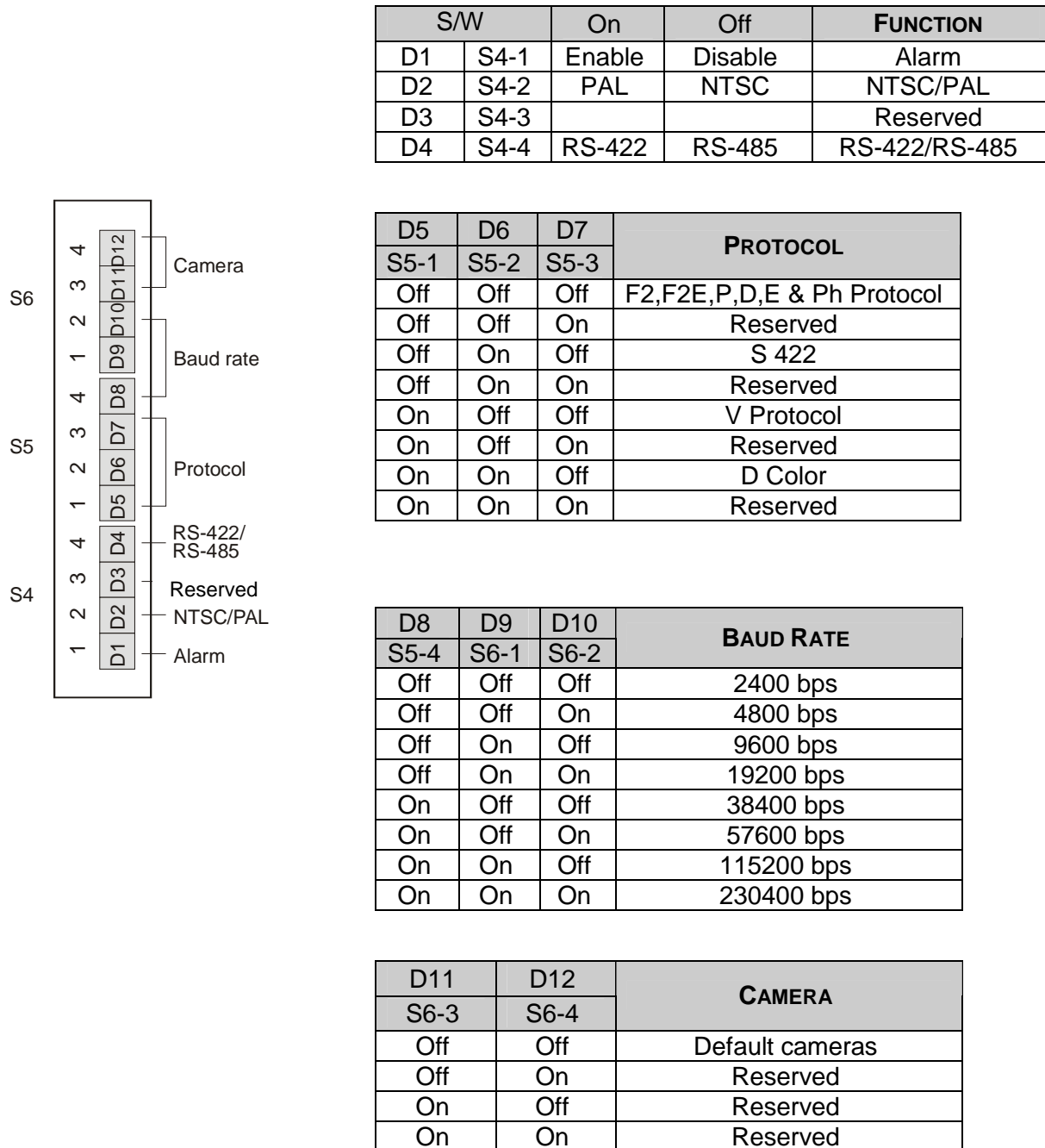| D11	D12	**CAMERA**
S6-3	S6-4	
Off	Off	Default cameras
Off	On	Reserved
On	Off	Reserved
On	On	Reserved

Figure 8– Protocol Selection Switches

2.6 Connecting Wiring

• Connecting to the RS-485/ 422

The dome camera can be controlled remotely by an external device or control system, such as a control keyboard, using RS485 half-duplex , RS422 duplex or simplex serial communications signals. Connect Marked Rx+, Rx- to Tx+ and Tx- of the RS485 control system.

If control system is RS422, connect Rx+(Tx+), Rx+(Tx-) and (Rx+), (Rx-) of the dome camera to Tx+, Tx- and (Rx+), (Rx-) of the control device respectively.

• Connecting Video out connector

Connect the video out(BNC) connector to the monitor or video input.

• Connecting Alarms

AL1 to 8 (Alarm In)

You can use external devices to signal the dome camera to react to events. Mechanical or electrical switches can be wired to the AL (Alarm In) and GND (Ground) connectors.. See Chapter 3 — Program and Operation for configuring alarm input.

GND (Ground)

NOTE: All the connectors marked GND are common.

Connect the ground side of the Alarm input and/or alarm output to the GND connector.

NC(NO)1 TO 4 (Normal Close or Normal Open : Alarm Out)

The dome camera can activate external devices such as buzzers or lights. Connect the device to the NC(NO) (Alarm Out) and COM (Common) connectors. See Chapter 3 — Program and Operation for configuring alarm output.

• Connecting the Power

Connect the power of AC 24V 850mA to the dome camera.

2.7 Getting Started

Once installed apply power to the dome camera. The dome camera will start a configuration sequence. When configuration is done, the following information is displayed:

RAM TEST
CHECK NO. : OK!
CHECK AAAA : OK!
CHECK 5555 : OK!

⇩

SCANDOME II Vx.xxx
CAMERA TYPE xxxx

WAIT DOME SETTING.
INIT TILT ORGIN SET OK
INIT PAN ORGIN SET OK
INIT CAMERA SET OK

Chapter 3 — Program and Operation

3.1 Selecting Dome Camera

Before you program or operate a dome camera, you must select the dome camera by pressing the dome camera No. + CAM

Example: Pressing 1 , 0 and CAM key sequentially will select dome camera 10. The selected dome camera ID will be displayed on the LCD monitor of the keyboard controller.

3.2 Accessing On-Screen Menu Utility

You can call up the On-screen menu utility on your monitor by pressing MENU key on the keyboard controller, the following On-screen menu utility will appear:

```
                MAIN MENU

        AUTO SCAN
        PRESET
        TOUR
        PATTERN
        ALARM
        AREA TITLE
        PRIVACY ZONE
        CAMERA
        DOME SETUP
        EXIT(ESC TO EXIT)
```
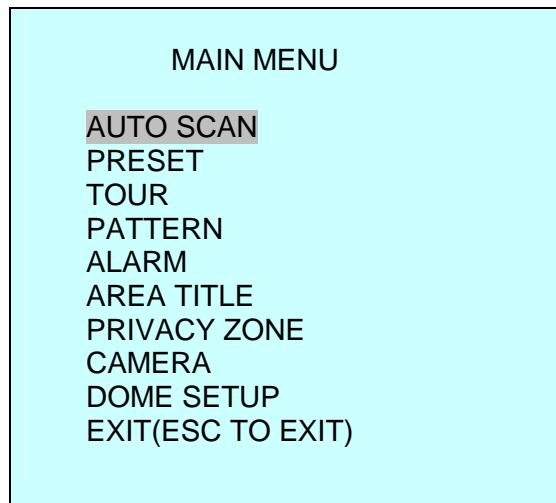
3.3 How to control On-Screen Menu Utility

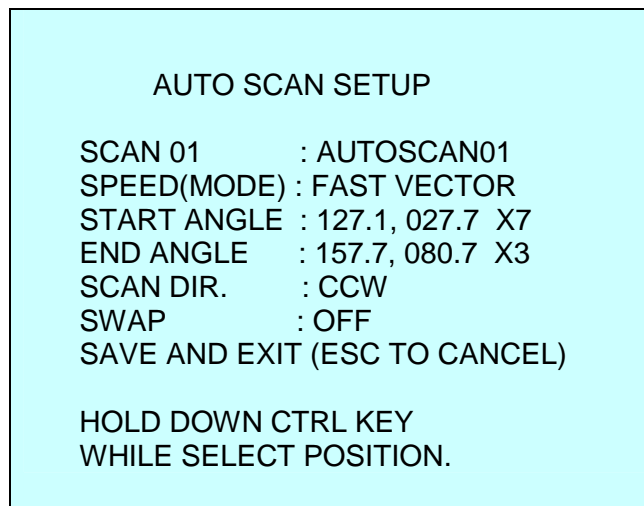| Action	Function
MENU	Call on On-screen menu utility
Joystick left or right	Go into the sub-menu items. Execute the command(exit) Change value. Navigate through the menu items.
Joystick up or down	Navigate through the menu items.
Joystick down	Finish editing title.
Zoom handle twist	Change value. Enter editing title mode.
CTRL + Joystick	Change value of angle
ESC	Escape (EXIT)

3.4 Auto Scan (First Item of the Main menu / Shortcut: Scan)

The Auto scan supports up to 8 programmed angles at user-programmable speeds. Follow these steps to program Auto Scan:

```
            AUTO SCAN SETUP

    SCAN 01         : AUTOSCAN01
    SPEED(MODE) : FAST VECTOR
    START ANGLE  : 127.1, 027.7  X7
    END ANGLE     : 157.7, 080.7  X3
    SCAN DIR.        : CCW
    SWAP             : OFF
    SAVE AND EXIT (ESC TO CANCEL)

    HOLD DOWN CTRL KEY
    WHILE SELECT POSITION.
```

1. Press the Scan key to enter Auto Scan menu directly. Or press the Menu key to display the main menu on the monitor. Scroll to Auto Scan and push the Joystick to the right.

2. Select an Auto Scan number by pushing the Joystick left or right.

11

3. Twist the **Joystick** to enter the title by scrolling through the alphanumeric characters and pushing the handle to the right or left to move to the next space. Press **Enter** key or push the **Joystick** down to finish title mode

4. Push the handle downward to select "SPEED" and set the speed by moving the **Joystick** left and right to select the auto scan speed.

5. When finish entering the speed, select "START ANGLE" with the **Joystick**. Hold down the **Ctrl/PGM** key while selecting the start position using the **Joystick**. Current panning position will be displayed. Release **Ctrl/PGM** key to complete the selection of the start position.

6. Push the **Joystick** downward to select "END ANGLE." Hold down the **Ctrl/PGM** key while moving the joystick to select the end position. The end position angle should be larger than start position. Release the **Ctrl/PGM** key to complete the selection of the end position.

7. Push the **Joystick** downward to select "SCAN DIR" and set the scan direction by moving the **Joystick** left and right to select the auto scan direction.(CW or CCW)

8. Push the **Joystick** downward to select "SWAP" and set the swap by moving the **Joystick** left and right to select the swap ON or OFF.

9. Select Save and Exit by pushing the **Joystick** to the right. Press **ESC** to exit the program without saving.

Pressing the **Home** key causes the camera to go to the 000.0 angle immediately.

NOTE: Using the Tour mode in conjunction with preset and Auto Scan, you can make the camera travel from one preset position to another preset position at a specific speed. (Pan only)

a. Before entering the Auto Scan menu, select a preset position as a starting point for Auto Scan.

Example: **2** + **Prst** and do step 1 to 4. Instead of step 5, just press the **Ctrl/PGM** key at the start angle position, the current position will be displayed as a start position.

b. Save and exit from the menu.

c. In normal mode, call a preset to be the end point of scan. Press **3** + **Prst** then press **Scan** key to enter the Auto Scan menu. Move the cursor position to END ANGLE. Just press **Ctrl/PGM** key at the end angle position. Do step 7 to 9.

Example: Preset 001>002>003>004>005>006, Auto Scan 01 starts at 002, ends at 003, Auto Scan 02 starts at 005, ends at 006. Tour 001, 002, A01, 004, A02.
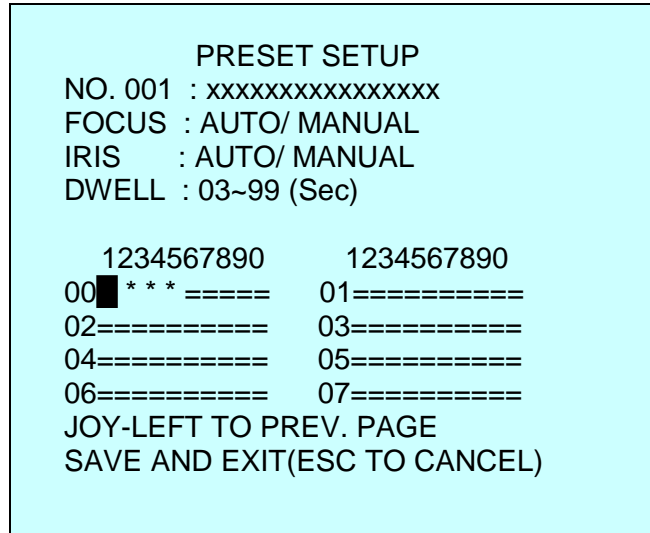
1 è 2 2~3 è 4 è 5~6 è 1 è 2 2~3 ……

Where   è : Quick move,   ~ : Programmed speed by Auto Scan.

3.5 Preset (Second Item of the Main menu / Shortcut: **Prst**)

If you need to view specific places routinely, you should program presets. A preset is a programmed video scene with automatic pan, tilt, zoom, focus and iris settings. Once programmed, entering the number and pressing a preset button on your controller automatically calls up the preset. In addition, presets may be assigned to alarm actions or as the "home" position for the dome camera. As many as 240 presets, whose positions are saved in the dome's firmware, may be programmed.

There are three pages of preset menu, each page can hold 80 presets. Pages can be scrolled by pushing the **Joystick** to the Left or Right on the first or last No. of Preset.

```
              PRESET SETUP
   NO. 001  : xxxxxxxxxxxxxxxx
   FOCUS  : AUTO/ MANUAL
   IRIS     : AUTO/ MANUAL
   DWELL  : 03~99 (Sec)

      1234567890      1234567890
   00█ * * * =====   01==========
   02==========      03==========
   04==========      05==========
   06==========      07==========
   JOY-LEFT TO PREV. PAGE
   SAVE AND EXIT(ESC TO CANCEL)
```

x : 16 digits of title for preset label
= : blank preset position
*   : position has the preset
█ : Current cursor position

Follow steps below to store the Preset positions:

1. Press **Menu** to display the main menu. Select the Preset option by using the **Joystick** to the right. (Press Prst to go directly to the Preset menu without going through the main menu.)
2. Select the blank preset position to be stored by pushing the **Joystick** up, down, right, or left.

3. The position, which is marked with ★, already has the preset view assigned. To review the stored preset, press Prst key on the ★, The camera will show the stored preset view.

4. After selecting a blank position, press and hold **Ctrl/PGM**, use the **Joystick** to control the direction of the camera and lens.

5. After aiming the camera (view direction and lens control), release **Ctrl/PGM**. Then twist the **Joystick** handle or Press **Tele** or **Wide** Key to store the selected view. The position number will be displayed and the user will be prompted to enter a preset title.

6. Enter the title for the preset position using the **Joystick**. (Rotate handle clockwise and counterclockwise or press **Tele** or **Wide** Key to scroll through the alphanumeric characters, push the handle to right or left to select next or previous digit.)
7. When you are finished entering the title, push the **Joystick** downward. Set the focus by pushing the **Joystick** to the right or left. Set the IRIS value in the same manner as the focus.
8. Move to the DWELL setting by pushing the **Joystick** down. Twist the **Joystick** clockwise or counterclockwise to increase or decrease dwell time of the preset position.
9. To select the next page of presets, scroll the page by pushing the **Joystick** to the Left on the first and last columns of the menu.
10. Repeat steps 2 through 7 for each additional preset position.
11. To edit the title of a stored preset, use the **Joystick** to position the cursor on the desired preset position. Press the Prst key to recall the stored preset. Twist the zoom handle clockwise to enter the preset title, focus and IRIS. Preset titles are useful with short cut preset programming. Refer to Shortcut programming below.
12. Select Save and Exit by pushing the joystick to the right. Press ESC to exit the Preset menu without saving.

NOTE: Press the Home key at programmed position to delete a programmed preset view.

3.6 Shortcut of Preset Program.

Select a view to be stored (direction of the camera, zoom and focus), then press No. (**1** to **240**), and then press **Pgm**, **Prst** subsequently. The current view will be stored to the selected preset number if position is empty. If selected preset number is not empty, "*PRESET EXISTING*" message will be displayed on the monitor and ask to overwrite.

Example: **1**, **0**, **1** + **Pgm** + **Prst** will store current view as preset No. **101**. In this case, focus and Iris mode will be programmed as Auto, dwell time will be set to 3 sec.

3.7 Tour (THIRD ITEM OF THE MAIN MENU / SHORTCUT: **Tour**)

There are 8 programmable Tours. Each Tour consists of up to 42 Preset positions, Patterns, Scans or other Tours (second-level). Using second-level Tours, it can be expanded to over 300 functions in a single Tour. However Tours in second level Tour will be ignored when called by a Tours. The following example illustrates this concept:

If   Tour1 has Preset1è Preset2è Tour2è Tour3 and
           Tour2 has Preset3è Preset4è Tour4è Preset5 and
           Tour3 has Preset6è Pattern and
           Tour4 has Preset7.

           Tour1 executes as follows:
           Preset1 è Preset2 è Preset3 è Preset4 è Preset5 è Preset6 è Pattern1 è Preset1 è ... (Repeat)

           Tour2 executes as follows:
           Preset3 è Preset4 è Preset7 è Preset5 è Preset1 … Repeat
           (Tour4 is still valid if called directly from Tour2.)

```
TOUR 01      : xxxxxxxxxxxxxxxx
SCAN TYPE : NORMAL      DWELL: 03


=== === 003 === === === ===
A08 === === === === === ===
=== T02 === 001 === === ===
=== === === T08 === === ===
=== === === === === === ===
=== === === === === === ===
SAVE AND EXIT ( ESC TO CANCEL)
PRESS FUNCTION KEY AND THEN ZOOM
KEY TO SELECT FUNCTION NO
```

xxxxx	: 16 digits of title for tour label
===	: blank preset position
SCAN TYPE	: Max (Normal)/ Slow V. Scan/ Fast V. Scan
DWELL	: 03-99 Sec
003	: Preset 003 (1~240)
A08	: Auto Scan 08 (1~8)
P01	: Pattern 01 (1~4)
T02	: Tour 02 (1~8)

Follow the steps below to program the Tours:

1. Press **Menu** to display the main menu on the monitor. Scroll to Tour and push the **Joystick** to the right to enter the Tour menu. Or just press the Tour key on the keyboard
2. Choose an empty location to be programmed by pushing the **Joystick** up, down, right, or left.
3. To see a stored preset view, use the **Joystick** to move the cursor to a stored position. By pressing Prst key, the camera will move to the stored Preset view.
4. To add a stored preset as a Tour, twist the Zoom handle or press Zoom Key (Programmed preset will scroll). To remove a stored preset from the Tour, press the Home key, blank position mark (===) will be displayed. You can overwrite the programmed position.
5. To place functions other than preset, press Tour, Ptrn, or Scan for Tour, Pattern or Auto Scan respectively.
6. Repeat Step 2 through 5 for each desired position. Each title will be displayed on top of the line.
7. Up to 36 Presets, Tours, Patterns Scans can be selected for a Tour. You can expand the Tour sequence by calling other programmed tours. Push the **Joystick** handle to right or left while the cursor is on the top of the line (TOUR 01) to select another page of the Tour menu. (TOUR 01)
8. You can enter a title for the selected Tour by twisting the **Joystick** while the cursor is on the top of the line (TOUR 01). Rotate the handle clockwise or counterclockwise to scroll through the alphanumeric characters. Push the handle to the right or left to select the next or previous digit.
9. Select Save and Exit by pushing the **Joystick** to the right. Press **ESC** to exit the program without saving.

NOTE: Press the Home key at a programmed position to delete programmed function.
In the Tour mode, in conjunction with preset and Auto Scan, you can make the camera travel from a preset position to another preset position at a specific speed.

Example: Preset 001>002>003>004>005>006, Auto Scan 01 starts at preset 002, ends at preset 003, Auto Scan 02 starts at preset 005, ends at preset 006; Tour 001, 002, A01, 004, A02.

$$1 \grave{e} 2 \quad 2\sim3 \grave{e} 4 \grave{e} 5\sim6, \text{repeat}$$
where   è : Quick move, ~ : Programmed speed

3.8 Pattern (Fourth 4 Item of the Main menu / Shortcut: Ptrn)

The Pattern feature records user control of the selected dome camera for up to 240 seconds. Up to four 4 patterns can be stored and played back by pressing No.+ Ptrn keys subsequently.

```
            PATTERN SETUP

    NO.    TITLE          SEC
    01: xxxxxxxxxxxxxxxx  000
    02: xxxxxxxxxxxxxxx   041
    03: xxxxxxxxxxxxxxx   010
    04: xxxxxxxxxxxxxxx   020
    TOTAL                 071

    SAVE AND EXIT ( ESC TO CANCEL)

    HOLD DOWN CTRL KEY
    WHILE RECORDING.
```

Follow steps below to program the Pattern:

1. Press Menu key to display the main menu on the monitor.
2. Scroll down to PATTERN and push the Joystick to the right. Or simply press the Ptrn key rather than use the Main Menu.
3. Select the empty Pattern number to be programmed by pushing the Joystick Up or Down. If last column is not 000, a pattern has already been recorded. Patterns can be over written.
4. Press and hold down the Ctrl/PGM key while controlling the camera direction and zoom with the Joystick. Your controls will be automatically recorded until you release the Ctrl/PGM key. You can repeat this procedure until you have the pattern you want. Previously recorded patterns will be overwritten each time you do this.
5. Scroll down to the Save and Exit option and push the Joystick to the right to save and exit.
6. You can title the selected Pattern by twisting the Joystick. Rotate the handle clockwise or counterclockwise to scroll through the alphanumeric characters, push the handle to right or left to select next or previous space.
7. Pressing ESC will not save your information and exits to the previous mode.

   Press the Home key at any programmed position to delete that programmed pattern.

NOTE: If total recording time reaches 240 seconds, it will automatically stop for a moment and restart recording. Previous data will be overwritten.

3.9 Alarm (This menu shows on only specific model, Fifth Item of Main menu)

```
                    ALARM SETUP

NO  PRI  PRS   IN    OUT    HLD   LATCH
01   1   001   OFF   OFF    03     OFF
02   8   001   OFF   OUT1   03     OFF
03   1   240   NO    OUT1   03     OFF
04   2   001   NC    OUT4   03     OFF
05   1   001   OFF   OFF    03     OFF
06   8   001   OFF   OUT1   03     OFF
07   1   240   NO    OUT1   03     OFF
08   2   001   NC    OUT4   03     OFF
SAVE AND EXIT ( ESC TO CANCEL)
```

NO   : Alarm input number
PRIO   : Lower No. has higher priority, Equal priority alarms will be serviced repeatedly.
PRS   : Stored preset number to be called by alarm.
IN   : NO/NC - normally open /Closed OFF - ignore
OUT   : OUT1~OUT4 - Relay out 1,2,3,4, OFF - No output.
HOLD   : Alarm will be held for programmed time (01 to 99 seconds)
LATCH : ON - Shows all alarms including past alarm, OFF - Shows activated alarms only.

There is one "0" PRIO which is a first priority. "0" priority can choose Autoscan, Pattern or Tour. When responding "0" priority alarm, there is no respond other alarm until finishing "0" priority action

1. Press Menu to display the main menu on the monitor. Select the Alarm option by pushing the **Joystick** up or down and push to right to enter the detail menu.
2. Select the alarm input number by pushing the joystick up or down and select the column you wish to setup. Selected position will be highlighted.
3. Select the Preset, Status of Input (NC/NO/OFF), and Output (OUT1~4/OFF) by pushing the joystick to the right or to the left.
4. To increase or decrease the preset number or to change the status or output number, twist the joystick clockwise or counterclockwise. In case of preset, programmed preset number will be scrolled.
5. Select the Save and Exit option by pushing the joystick up or down. Save and exit the program by pushing the joystick to the right. Press **ESC** to exit the program without saving.

3.10 Area Title (Sixth Item of Main menu)

Enter a specific name on programmed angle between START and END. For the screen below, when the camera points at an angle between 124.3° to 359.5°, ABC will be displayed on the screen.

```
                    AREA TITLE SETUP

NO          TITLE           START     END
01    ACB                   124.3    359.5
02    xxxxxxxxxxxxxxx       =====    =====
03    xxxxxxxxxxxxxxx       =====    =====
04    xxxxxxxxxxxxxxx       =====    =====
05    xxxxxxxxxxxxxxx       =====    =====
06    xxxxxxxxxxxxxxx       =====    =====
07    xxxxxxxxxxxxxxx       =====    =====
08    xxxxxxxxxxxxxxx       =====    =====
SAVE AND EXIT ( ESC TO CANCEL)
HOLD DOWN CTRL KEY
WHILE SELECTIONG SECTION
```

Pages can be scrolled through by pushing the joystick to the Left or Right on the first or last column of the menu. Pushing the joystick to left on the "NO" column (01 ~ 08) of the menu to scroll to the previous page. Push the joystick to right on the "END" column to go to the next page.

1. Press **Menu** to display the main menu on the monitor. Select the Area Title option by pushing the joystick up or down and push to right to enter the detail menu.
2. Select the area number by pushing the joystick up or down. Select Start, End or number column to be set by pushing the handle to the right or left. The selected column will be highlighted.
3. To enter area title, select the number column and rotate the handle clockwise or counterclockwise. You can select alphanumeric characters by rotating the handle. Move to the next character by pushing the **Joystick** to the right. To finish entering the title, push the joystick down.
4. To adjust panning limit, press the **Ctrl/PGM** key and hold down. Then use the **Joystick** to go the desired direction. The end limit must be in an increasing direction. (Start < End).
5. When you press the **Ctrl/PGM** key, the current position of the pan will be printed in the highlighted column. With this feature, you can easily set the next start point as the previous end point.
6. Select the Save and Exit option by pushing the joystick up or down. Save and exit the program by pushing the **Joystick** to the right. Press ESC to exit the program without saving.

   Pressing the **Home** key will delete programmed data. (Angles will be turned ==== immediately.)

3.11 Privacy Zone (Seventh Item of Main menu)

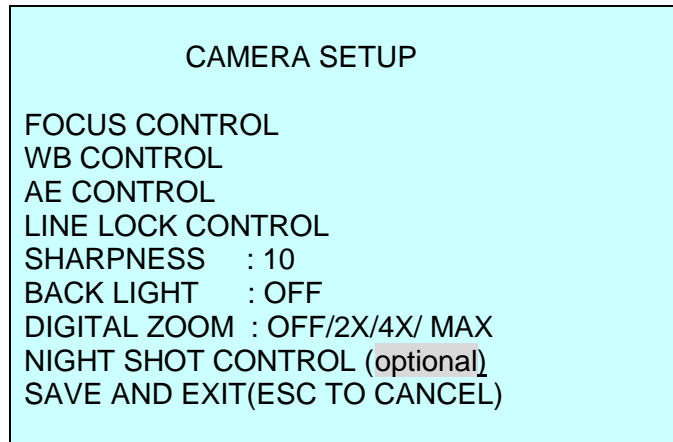Hide up to 8 unwanted views in a camera.

```
          PRIVACY ZONE SETUP

NO        TITLE              METHOD
01    xxxxxxxxxxxxxxx    ON      BLOCK
02    xxxxxxxxxxxxxxx    OFF     V.OFF
03    xxxxxxxxxxxxxxx    NONE    ====
04    xxxxxxxxxxxxxxx    NONE    ====
05    xxxxxxxxxxxxxxx    NONE    ====
06    xxxxxxxxxxxxxxx    NONE    ====
07    xxxxxxxxxxxxxxx    NONE    ====
08    xxxxxxxxxxxxxxx    NONE    ====
SAVE AND EXIT ( ESC TO  CANCEL)
HOLD DOWN CTRL KEY
WHILE SELECTION ZONE TO BE MASKED.
```

1. Press **Menu** to display the main menu on the monitor. Select the Privacy Zone option by pushing **Joystick** Up or Down and push to right to enter the detail menu.
2. Select the privacy zone number by pushing the joystick up or down.
3. To enter the zone name, rotate the handle clockwise or counterclockwise. You can select alphanumeric characters by rotating the handle. Move to the next character position by pushing the joystick to the right. To finish entering the title, push the **Joystick** down or press the **Enter** key.
4. To adjust the "marked" (privacy) area, press and hold down the **Ctrl/PGM** key and then use the joystick (direction and zoom) until you get desired view. Release the key, the right column will be set to ON.
5. You can overwrite an existing zone. Use the Home key to delete the marked zone, or push the joystick to the right or left to turn the stored zone On or Off.
6. Select the Save and Exit option by pushing the joystick up or down. Save and exit the program by pushing the joystick to the right. Press **ESC** to exit the program without saving.

Press the **Home** key to delete programmed privacy zone.

3.12 Camera (Eighth Item of Main menu)

NOTE: The menu features will vary depending on the camera module installed in your dome camera.

```
                CAMERA SETUP

   FOCUS CONTROL
   WB CONTROL
   AE CONTROL
   LINE LOCK CONTROL
   SHARPNESS    : 10
   BACK LIGHT   : OFF
   DIGITAL ZOOM : OFF/2X/4X/ MAX
   NIGHT SHOT CONTROL (optional)
   SAVE AND EXIT(ESC TO CANCEL)
```

SHARPNESS   The higher the value,the more edges in the picture will be enhanced(0~15)
BACK LIGHT   Objects in front of bright backgrounds will be clearer with BLC ON.
Digital ZOOM   OFF : Zoom range is limited to the optical.
2x   : Zoom is extendable up to 2x of digital range.
4x   : Zoom is extendable up to 4x of digital range.
MAX: Zoom is extendable Max digital Zoom range.

•**FOCUS CONTROL**

```
                FOCUS SETUP

      MODE          : AUTO
      SAVE AND EXIT(ESC TO CANCEL)
```
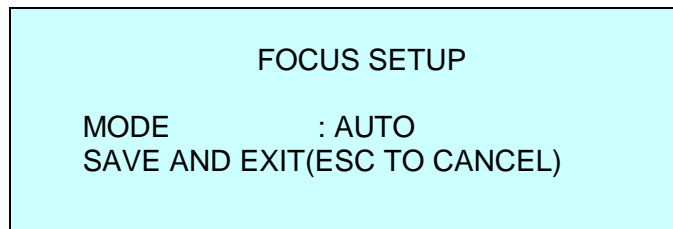
MODE : AUTO / MANUAL
Use manual mode in normal use.

CAUTION: Avoid continuous, 24-hour use of the auto focus. This may cause the lens to malfunction.

•**WB (white balance) CONTROL**

```
                        WB MENU

        MODE   : ATW
        CONT   : AUTO
        SAVE AND EXIT(ESC TO CANCEL)
```

MODE   ATW / INDOOR / OUTDOOR / MWB / AWC
CONT   AUTO/ 3200K / 5400K / 0-99 / LOCK, PUSH

Use the ATW mode for normal use.
CONT menu is controllable only in **MWB** and **AWC** modes.
In MWB (MANUAL WB)mode , Its value is changed by pushing the joystick to the right or left.
In **AWC**(Auto white control) mode , Push and hold the joystick to the right or left
LOCK mode becomes **PUSH** mode and white balance acts automatically.
Pull the joystick , Mode becomes **LOCK** mode and white balance is locked as manual mode.

•AE CONTROL

```
                      AE SETUP

        MODE             : FULL AUTO
        SLOW SHUTTER : X10
        IRIS             : AUTO
        GAIN             : AUTO
        BRIGHT           : 14
        SHUTTER          : NORMAL
        SAVE AND EXIT(ESC TO CANCEL)
```

MODE   FULL AUTO / SHUTTER FIX / IRIS FIX / AGC FIX / MANUAL
SLOW SHUTTER   OFF ~ x2 / x4 …x10(only HSDN-251 series)
                  The number of fields (x2~x10) effects only FULL AUTO,IRIS FIX mode.
                  The number of fields mean time of CCD charge integration.
IRIS   CLOSE / F22 / F19 / F16 / F14 / F11 / F9.6 / F8.0 / F6.8 / F5.6 / F4.8 /
                  F4.0 / F3.4 / F2.8 / F2.4 / F2.0 / F1.6 / AUTO
GAIN   AUTO / OFF / 8 dB / 10 dB ……/ 38 dB
                  The AGC(OFF~38dB) effects only AGC FIX and MANUAL mode.
BRIGHT   00 ~ 15[00~99]
                  Bright value effect only FULL AUTO, SHUTTER FIX and AGC FIX modes
SHUTTER   1/60 (1/50) , 1/100(1/120) , … , 1/3500 , 1/4000 / 1/6000 / 1/10000
                  The shutter speed effects only SHUTTER FIX and MANUAL mode.
SAVE AND EXIT (ESC TO CANCEL)

NOTE : Values in ( ) are for PAL Camera
        Values in [ ] are for HSDN-230 series

•LINE LOCK CONTROL

```
            LINE LOCK MENU

      MODE  :           INTERNAL
      PHASE :             004
      EXIT (ESC TO EXIT)
```
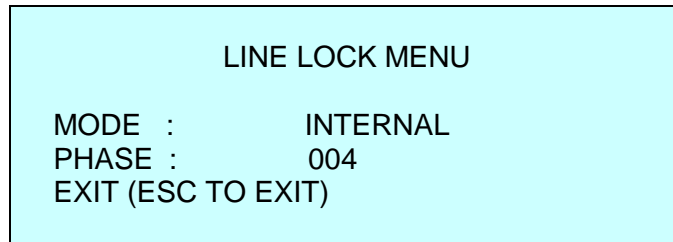
MODE   INTERNAL / EXTERNAL   Adjusts phase of picture with other
PHASE   0~255   cameras in EXTERNAL mode.
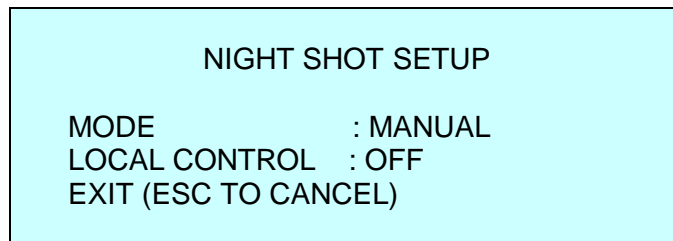EXIT(ESC TO EXIT)

•NIGHT SHOT MENU (251NS/PS model only)

The NIGHT SHOT option removes the IR cutoff filter of the camera and makes the camera sensitive to near infrared. When NIGHT SHOT is ON , the color mode change B/W mode automatically.

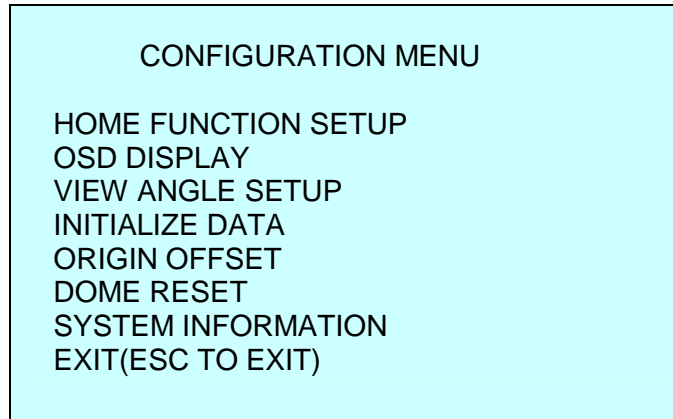The operator can enable NIGHT SHOT for all dome cameras at the same time.
If the NIGHT SHOT mode is set to GLOBAL, "999" + **Enter/Glbl** will turn Off the NIGHT SHOT mode
"888" + **Enter/Glbl** will turn On the NIGHT SHOT mode.


```
            NIGHT SHOT SETUP

      MODE              : MANUAL
      LOCAL CONTROL   : OFF
      EXIT (ESC TO CANCEL)
```
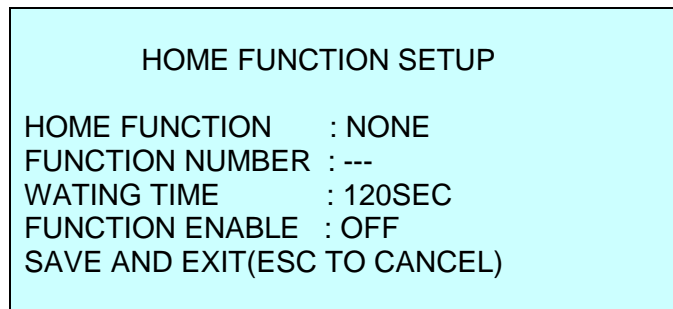
MODE   AUTO / MANUAL / GLOBAL
AUTO: Camera goes in to B&W mode at low light.
GLOBAL: Controlled by remote ("888"+**Enter/Glbl**).
MANUAL : ON/OFF will enable and disable Night Shot mode of an individual camera.

3.13 Dome Setup (Ninth Item of Main menu)

```
                    CONFIGURATION MENU

            HOME FUNCTION SETUP
            OSD DISPLAY
            VIEW ANGLE SETUP
            INITIALIZE DATA
            ORIGIN OFFSET
            DOME RESET
            SYSTEM INFORMATION
            EXIT(ESC TO EXIT)
```

•HOME FUNCTION SETUP

After a dome control menu item has been selected, follow the directions below to set the function.

```
                    HOME FUNCTION SETUP

        HOME FUNCTION      : NONE
        FUNCTION NUMBER  : ---
        WATING TIME          : 120SEC
        FUNCTION ENABLE   : OFF
        SAVE AND EXIT(ESC TO CANCEL)
```
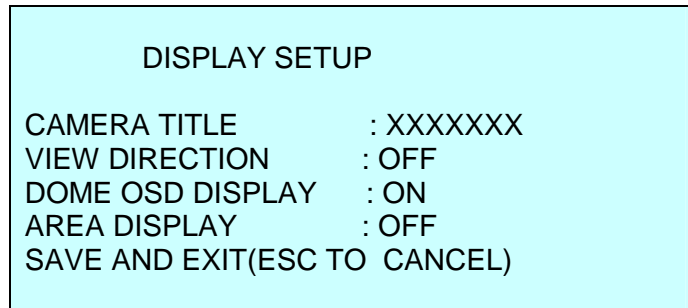
HOME FUNCTION	: None/ Preset/ Tour/ Pattern/ Auto Scan
FUNCTION NUMBER	: xxx
WAITING TIME	: 10~240 Seconds
FUNCTION ENABLE	: ON/ OFF

The Home function can be set so that the camera automatically goes to Preset, Tour, Pattern, Auto Scan after the keyboard controller has been idle for a amount of time. For example, if the joystick controller is idle for 10 seconds, the camera goes to preset 1.

Follow these steps to program the Home position:

1. Press **Menu** to display the main menu on the monitor.
2. Select Home Function by pushing the **Joystick** to the right or to the left to scroll through the None, Tour, Pattern, Auto Scan and Preset functions.
3. Select Function Number by pushing the **Joystick** down, and push the **Joystick** to the right or to the left. The executable function number will scroll. Each function has maximum numbers. For example, you can have 240 Presets, 8 Tours, 4 Patterns and 8 Auto Scan options.
4. Select Function Time by pushing the **Joystick** down. Push the **Joystick** to the right or to the left to select from 10 to 240 seconds.
5. Select Function Enable by pushing the **Joystick** down. Turn the Home Enable ON or OFF by pushing the **Joystick** to the right or to the left.

•OSD DISPLAY

```
                 DISPLAY SETUP

CAMERA TITLE          : XXXXXXX
VIEW DIRECTION        : OFF
DOME OSD DISPLAY      : ON
AREA DISPLAY          : OFF
SAVE AND EXIT(ESC TO  CANCEL)
```

```
CAMERA TITLE
VIEW DIRECTION       : ON / OFF
DOME OSD DISPLAY     : ON / OFF
AREA DISPLAY         : ON / OFF
```

• VIEW DIRECTION

"ON" sets current direction as N(north) and the coordinate angle to 000. "OFF" hides the directional title. Every 90 degrees of clockwise rotation will change the title to E(East), S(South), W(West). If using the ON/OFF option frequently, it is recommended that you set "North" as a Preset. Recall the "North" Preset before enabling the directional title.
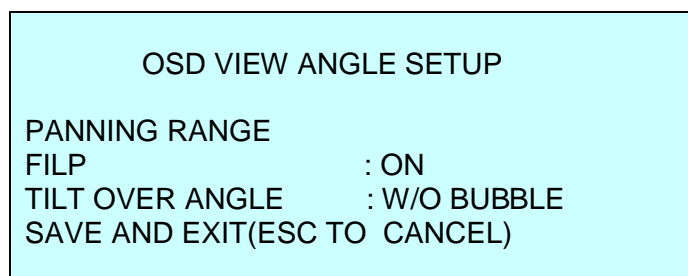
•DOME OSD DISPLAY

All display or title will disappear when DOME OSD DISPLAY sets OFF
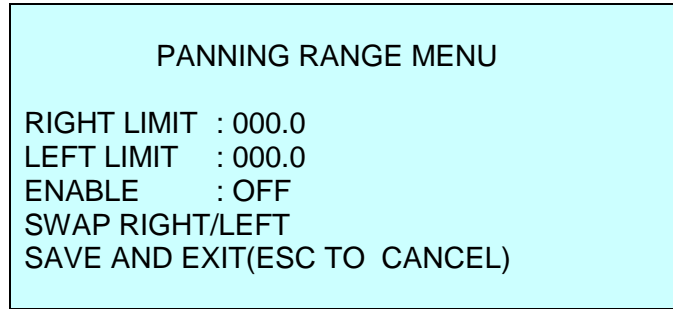
•AREA DISPLAY

If this option is enabled, the nearest area title will be displayed when the camera is moving whether by manual operation, Auto Scan, or Pattern. Select ON or OFF by pushing the **Joystick** to the right or to the left. The Dome camera's OSD will override this function (Dome camera's OSD must be enabled).

•VIEW ANGLE SETUP

```
            OSD VIEW ANGLE SETUP

PANNING RANGE
FILP                    : ON
TILT OVER ANGLE        : W/O BUBBLE
SAVE AND EXIT(ESC TO  CANCEL)
```

•PANNING RANGE

When the dome camera is installed near wall, panning range could be programmed by user.

```
PANNING RANGE MENU

RIGHT LIMIT  : 000.0
LEFT LIMIT   : 000.0
ENABLE       : OFF
SWAP RIGHT/LEFT
SAVE AND EXIT(ESC TO  CANCEL)
```

•FLIP

Allows the dome camera to automatically turn 180 degrees when the camera tilts to its lower position.
When camera reaches floor alone moving object, it will stop. Release the **Joystick** handle instantly and then pull down to run flip function. The speed of following object will be same speed as previous.

•TILT Over Angle

This option is used to set the limit of the horizontal view angle so that the trim ring or ceiling does not obstruct the horizontal image when zooming out (wide angle).

ON: In some installations it is desirable for the dome camera to be able to see the above horizon. When this option is chosen, the dome will tilt up over the horizon(About 10 degree). When the lens is zoomed out, you can see the ceiling line. But when the lens is zoomed in the viewing angle is narrower, and the ceiling line disappears.

Without Bubble: The tilt range of the camera is limited to see the horizon so the picture shows part of the ceiling line.

With Bubble: The tilt range of the camera is limited to see below the horizon (- 10 degrees). Over Angle is not sufficient enough to avoid ceiling obstructions, please adjust Origin Offset of tilt angle as described below.

•INITIALIZE DATA

```
INITIALIZE DATA

FACTORY DEFAULT
ERASE PROGRAMMED DATA
EXIT(ESC TO EXIT)
```
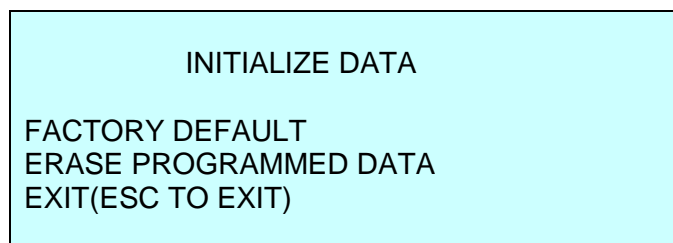
Erase all stored data from the Flash-ROM of the selected dome camera. You will be asked to enter Yes or No. If you intend to erase all data then press the Menu key, otherwise press the **ESC** key to exit without erasing. The erased data includes all stored data (titles, presets, and tours….) except origin offset.

The offset value is still valid after all data is erased. The offset value can be zero only with default set of Offset origin menu.

CAUTION: All the data in the selected dome camera will be lost unless you download the data into a safe place. (Refer to Download/ Upload data function in Keyboard Configuration utility.) Data from the selected dome camera can be stored in the keyboard controller temporarily. If you want to save the data of all installed dome cameras, you need a special I/O interface and software for PC.

•ORIGIN OFFSET

This feature is useful to align a new dome camera exactly the same as the previously installed dome camera.
Dome camera's origin set and all data initialize option do not override offset values. Only the default set option in this menu will set the offset value to zero. This can be used to avoid ceiling obstructions.

```
            OFFSET SETUP


PAN OFFSET          : 000.0
TITLT  OFFSET       : 00.0
ENABLE              : OFF
SAVE AND EXIT(ESC TO  CANCEL)
```

•DOME RESET

This feature is used to re-calibrate the orientation of a selected dome camera. Origin offset value is not affected by this function. (Offset is still valid after origin set)

•SYSTEM INFORMATION

```
            SYSTEM INFORMATION

    CAMERA TYPE  : XXXXXXX
    H/W VERSION   : V1.0
    ROM VERSION  : V1.0
    PROTOCOL        : SCANDOME II
    BUADRATE       : 9600BPS
    EXIT(ESC TO EXIT)
```

A Dome camera's Setup menu provides essential information about the dome camera if service is required. When you view this screen, you can determine the camera type, ROM version. The information on this screen cannot be modified.

Appendix A — Specifications

Camera	HSDN-251NS/PS
Image Sensor	1/4" SONY Super HAD Color CCD (Sony)
Picture elements	NTSC : 768x494 Approx. 380K pixels PAL : 752x582 Approx. 410K pixels
Horizontal Resolution	470 / 460 lines(NTST/PAL)
Lens	25x optical zoom with auto focus 8x digital zoom F1.6 to F3.7, f=3.8mm to 95mm
View angle	Approx. 56º (WIDE end) to 3.6º (TELE end)
Minimum Illumination	1.0 lx (30 IRE) ; NIGHT SHOT OFF (Color) 0.1 lx (30 IRE) ; NIGHT SHOT ON (Black & White) 0.01 lx ; Field integration x128 ON
S/N ratio	more than 48dB

Camera	HSDN-230NS/PS
Image Sensor	1/4" SONY Super HAD Color CCD (Sony)
Picture elements	NTSC : 768x494 Approx. 380K pixels PAL : 752x582 Approx. 410K pixels
Horizontal Resolution	470 / 460 lines(NTST/PAL)
Lens	23x optical zoom with auto focus 8x digital zoom F1.6 to F3.8, f=3.8mm to 87.4mm
View angle	Approx. 51º (WIDE end) to 2.3º (TELE end)
Minimum Illumination	1.0 lx (30 IRE)
S/N ratio	more than 49dB

General	
Certification	CE EMC, FCC CLASS A
Electrical	
Input Voltage	18 to 30 VAC; 24 VAC nominal, built-in power-line surge
Power voltage	Nominal 24 VAC/VDC 850mA maximum,
Power Consumption	Maximum 20W
Alarm Output	4 Normal relays 24 VDC/1A Max (selectable NC/NO)
Alarm Input	8 Normal dry contact (selectable NC/NO)
Control	RS-485/422 baud rate: 2400 ~230k bps (default:9600bps)
Access Time	0.75 second maximum preset recall time
ID (Camera Address)	999 (Factory mode selectable over ID999 camera)
Mechanical	
Dimension	See Figure-9
Weight	Approx 1.4 kg
Pan Angle	360º continuous rotation
Speed	0.1º to 90º/sec. (proportional to zoom)
	360º/sec. maximum (with Ctrl/PGM key pressed)
	Preset Speed : 380º/sec
Repeatability	0.2°
Flip	Rotate 180° at bottom of tilt
Preset Position	240 positions with camera status (16-character title)
Tour	8 tours
Pattern	Four patterns, 240 second
On-Screen Display	Displays camera ID and area name on screen
Environment	
Operating temperature	0°C to 50°C (32°F to 122°F)
Operating humidity	0 to 90%RH (non-condensing)
Storage temperature	-20° C to 60° C (4° F to 140° F)

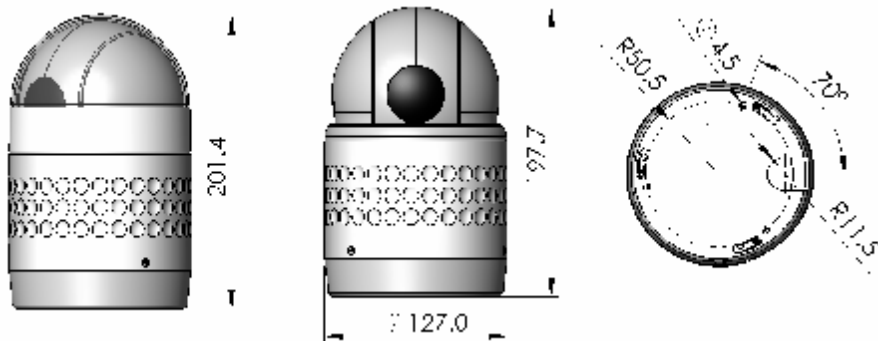Specifications are subject to change without notice.

Figure 9– Dimension

Appendix B — Troubleshooting

If problems occur, verify the installation of the camera with the instructions in this manual and with other operating equipment. Isolate the problem to the specific piece of equipment in the system and refer to the equipment manual for further information.

Problem	Possible Solution
No video.	Verify that power is connected to all pieces of equipment in the system. Verify that the power switches are in the ON position. Check the video connections (see Figures 2 to 5).
Poor video quality.	Check that the BNC connectors are inserted properly. Check the voltage level of the dome camera. Check that 8-pin cable is connected to the Keyboard. 8-pin cable for Keyboard is proprietary. Cable for video is shielded.
Dome cameras lose their positions.	Reset the cameras using the Dome configuration menus. Check that the dome cameras are inserted properly in the base. Check the voltage level of the dome camera.
Camera number does not match the multiplexer number.	Check the camera ID and insert the BNC cable into the proper input of the multiplexer.
Picture is torn when switching	Check Line Lock setting and adjust phase of L/L (see page 22)

Appendix C — Glossary

Alarm Actions

The assigned responses for the dome camera when inputs change from normal to abnormal states.
The dome may run a Preset, Pattern, or have no assigned action for each of the four dome inputs. The dome may also send alarm states to the host controller for processing. See also Input and Normal Input State.

Areas

Programmed start and end points of the dome's field of view around its pan axis.
Each area is a part of a circular viewing area that extends around the dome. The areas can be different sizes. Up to 16 areas can be programmed for the dome.

Automatic Gain Control (AGC)

Allows for the amplification of the video signal in scenes with minimal ambient light. Many low-light scenes result in picture noise. As gain is increased, the picture noise is also amplified. When AGC is enabled, the value of the gain setting is based on feedback from the camera. When AGC is disabled, the camera uses the value set for the manual gain setting. The trade-off between picture level and noise may be adjusted when AGC is disabled.

On-screen Menu

The text overlay menu system used for setting dome features. The utility is accessed using a keystroke combination. The utility provides settings for camera functions, zoom, alarms, text display, and password protection.

Flip

Allows the dome to automatically turn 180 degrees when the camera tilts to its lower limit and stays in that position for a brief delay. When the dome flips (rotates), the camera starts moving upward as long as the tilt control is kept in the down position. Once the control is released, the tilt control returns to its normal operational mode. The flip feature is useful when you need to track someone who walks directly beneath the dome and continues on the other side.

Home Position

The default position to which the dome camera returns after an assigned period of inactivity passes. The default position may be a Preset, Tour, Pattern, or No Action.

Input Alarm

A connection point on the dome camera that enables the system to monitor Input Devices. There are four inputs available for the dome camera.

Input Devices

External devices that provide information about the condition of system components that connect to the inputs on the dome camera. Typical input devices include door contacts, motion

detectors and smoke detectors.

IR Mode

A feature of the camera that permits manual or automatic switching between color and IR (black-and-white) operation. When IR mode is active, clearer images may be obtained under low-light conditions.

Line Lock

Allows you to phase lock the video with the AC power line. When line lock is enabled, it prevents vertical video rolling when switching multiple cameras to a single monitor. If text appears slightly tinted on color monitors, disabling the line lock may prevent this problem.

Name Information

Relates to the display the dome name, the area where the dome is pointing, the name of the preset or pattern that is running, and alarm names. The display of each type of name setting can be enabled or disabled. When the display of camera or area title(name) is enabled, the information appears on the screen continuously. Preset, tour and pattern titles(names) appear only while they are active.

Normal Input State

Describes the expected state of a device connected to one of eight dome camera's inputs. The normal state may be open or closed. When a device is not in its normal input state, an alarm is issued.

North Position

User-definable setting that may correspond to magnetic north or some well-known landmark. Used to approximate the camera dome's pointing direction when Direction Indicators are enabled.

Low Shutter

Setting used to improve the quality of video obtained in extreme low-light situations. When the Low Shutter setting is enabled, low-light information is collected over multiple fields based on the Shutter Limit setting. As a result, video may appear blurred or choppy in extreme low-light situations. This setting does not effect camera operation in normal lighting situations. See also Automatic Gain Control (AGC).

Pattern

A series of pan, tilt, zoom and focus movements from a single programmable dome. Up to 8 patterns may be programmed for the dome camera.

Preset

Programmed video scene, based on a specific pan, tilt, zoom, and focus settings. Up to 240 presets may be programmed for the dome camera.

Privacy Zones

Masked areas of the dome camera's viewing area. These masks prevent operators of the surveillance system from viewing these designated zones. The Privacy Zones move in relation to the dome camera's pan/tilt position. In addition, the apparent size of the Privacy Zone adjusts automatically as the lens zooms in or out. Up to eight Privacy Zones may be established for a dome camera.

Shutter Limit

Setting used to define the maximum exposure time for the Open Shutter setting. The values for the setting range from 1/2 to 1/60. The default setting is 1/4.

White balance

Adjustments in the color hue (red and blue) gains for a camera so that true white appears white in the image. It is normally compensated for by the automatic gain control. In some lighting conditions, you may need to manually adjust the red and blue settings for optimal viewing. When Automatic White Balance is enabled, the camera measures the image and automatically adjusts the red and blue settings to balance white. When Automatic White Balance is disabled, the camera uses the values set for the red and blue settings to balance white.

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