

VPDL-5WP-P-C
PowerDome Lite
Programming & Installation Manual





#### ISSUE 1 - SEPTEMBER 2007

### **■ LIMITATION OF LIABILITY**

THE INFORMATION IN THIS PUBLICATION IS BELIEVED TO BE ACCURATE IN ALL RESPECTS, HOWEVER, WE CANNOT ASSUME RESPONSIBILITY FOR ANY CONSEQUENCES RESULTING FROM THE USE THEREOF. THE INFORMATION CONTAINED HEREIN IS SUBJECT TO CHANGE WITHOUT NOTICE. REVISIONS OR NEW EDITIONS TO THIS PUBLICATION MAY BE ISSUED TO INCORPORATE SUCH CHANGES.

#### Before You Begin

Read these instructions before installing or operating this product.

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

This manual provides installation and operation information. To use this document, you must have the following minimum qualifications:

- A basic knowledge of CCTV systems and components
- A basic knowledge of electrical wiring and low-voltage electrical connections

#### ■ Intended use

Only use this product for its designated purpose; refer to the product specification and user documentation.

## Customer Support

For assistance in installing, operating, maintaining and troubleshooting this product, refer to this document and any other documentation provided. If you still have questions, please contact Norbain Technical Support and Sales:

Norbain House

Eskdale Road, Winnersh Triangle, Wokingham, Berks RG41 5TS

0118-944-0123

Note: You should be at the equipment and ready with details before calling Technical Support.

#### Conventions Used in this Manual

Boldface or button icons highlight command entries. The following WARNING, CAUTION and Note statements identify potential hazards that can occur if the equipment is not handled properly:



#### Warning:

Improper use of this equipment can cause severe bodily injury or equipment damage.



#### Caution:

Improper use of this equipment can cause equipment damage.

Note: Notes contain important information about a product or procedure.



#### ■ RoHS Announcement

All lead-free products offered by the company comply with the requirements of the European law on the Restriction of Hazardous Substances (RoHS) directive, which means our manufacture processes and products are strictly "lead-free" and without the hazardous substances cited in the directive



The crossed-out wheeled bin mark symbolizes that within the European Union the product must be collected separately at the product end-of-life. This applies to your product and any peripherals marked with this symbol. Do not dispose of these products as unsorted municipal waste.

### CE Mark



This apparatus is manufactured to comply with the radio interference. The company does not warrant that this manual will be uninterrupted or error-free. We reserve the right to revise or remove any content in this manual at any time.

- \* This symbol indicates electrical warnings and cautions.
- \*\* This symbol indicates general warnings and cautions.

NORBAIN SD LTD reserves the right to make changes to the product and specification of the product from time to time without prior notice.

### **■ IMPORTANT SAFEGUARDS**

- 1. Read these instructions.
- 2. Keep these instructions.
- Heed all warnings.
- 4. Follow all instructions.
- 5. Do not use this apparatus near water.
- 6. Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that product heat..
- 9. Do not defeat the safety purpose of the polarized or grounding-type Plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where thy exit from the apparatus.
- 11. Only use attachments/accessories specified by the manufacturer.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- 13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 14. CAUTION THESE SERVICING INSTRUCTIONS ARE FOR USE BY QUALIFIED SERVICE PERSONNEL ONLY. TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN THE OPERATING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO.
- 15. Use Certified/Listed Class 2 power supply transformer only.

## 1 Introduction



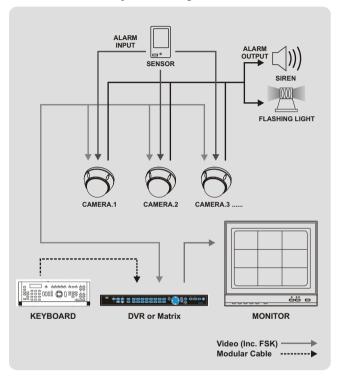
#### 1.1 Features

The PTZ Dome keyboard controller and the PTZ 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.

- Auto focus 22X Optical Zoom (11X Digital Zoom)
- · Day & Night (Auto / BW / Colour)
- Pan 360° Endless Rotation
- 60 Preset Positions
- 4 Tours consist of Preset, the Speed is selectable from 1 to 10
- 1 Auto Scan, the Speed is sele ctable from 1 to 10
- 8 Area Titles
- Home Function: camera automatically goes to preset, tour, auto scan after the controller has been idle for an amount of time
- 1 Alarm Input (OFF / NC / NO), 1 Alarm Output (OFF / NC / NO) and 1 Alarm state (momentary)
- Programmable user preferences (preset, tour, auto scan, area title, alarm etc.)
- · Up to 63 selectable camera addresses
- · Built-in RS-485 receiver driver
- · Clear bubble with black liner (shelter) for concealing the camera
- Optional tinted bubble, wall mount
- AC 24V or DC 12V
- · Use Certified/Listed Class 2 power supply transformer only

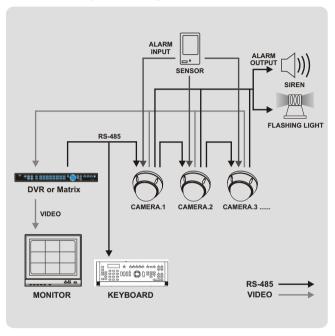
## 1.2 Operational Requirements

## 1.2-1 FSK Coaxial System Configuration



## 1.2 Operational Requirements, continued

## 1.2-2 RS-485 System Configuration

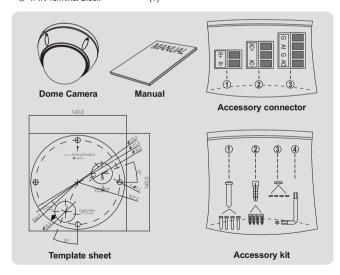


## 2 Installation and Connection



## 2.1 Package Contents

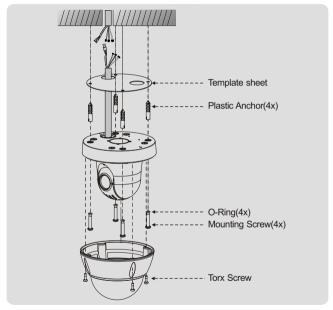
Instruction manual (This do	cument)	1
Template sheet		1
① Mounting screws (PH 6 x 35.0)	(4)	
② Plastic anchors	(4)	
③ O-Ring	(4)	
4 Torx wrench (T-25)		
· Accessory connector		1
① 2PIN Terminal Block	(1)	
② 3PIN Terminal Block	(1)	
(3) APIN Terminal Block		



#### 2.2 Base Installation

 Make mounting holes and cable hole in the place(ceiling) to which this dome camera is installed using the supplied template sheet.

Warning: The total mass of the main unit is approx 1.3kg. Check whether the ceiling to which the Dome Camera is installed is strong enough to hold the unit mass. If not, the Dome Camera could fall, causing injury.

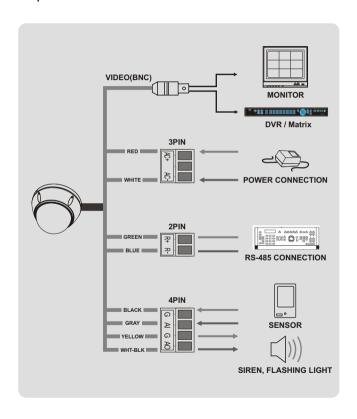


- Extract each wire through the cable hole and connect the supplied power. RS-485 and alarm-in-out Terminal Block.
- 3. Unlock torx screws (4x) the dome cover and fix the dome base firmly with supplied mounting screws (4x), plastic anchors (4x), O-Rings (4x)
- 4. Lock the housing cover with torx screws (4x).

## 2.3 Basic Configuration PTZ Dome Camera System

#### CAUTION

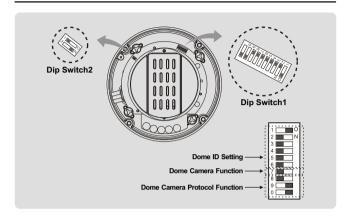
Do not connect the power cable until all other connections have been completed.



## 2.4 Setting Dome Camera 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 "485-TERMINATION" ON at the DOME SETUP MENU of the OSD (Refer to 3.10-2 485-TERMINATION). Without proper termination, there is potential for control signal errors. Total length of the cable for communication should not exceed 1.2km.

## 2.5 Setting the Protocol of Dome Camera



S/W-No.	ON	OFF	Function
7	NTSC	PAL	NTSC/PAL

Figure 1 - Dome Camera Function Select Switch

No. 8	No. 9	No. 10	Protocol
OFF	ON	ON	Vista-FSK
OFF	OFF	ON	Vista-485
OFF	OFF	OFF	Pelco-D
ON	OFF	OFF	Pelco-P

Figure 2 - Dome Camera Protocol Selection Switches

No. 1	No. 2	BPS
OFF	OFF	2400bps
ON	OFF	4800bps
OFF	ON	9600bps
ON	ON	19200bps

Figure 3 - Dome Camera Baud Rate Setting Switches

## 2.6 Setting Address (ID) of Dome Camera

To prevent wrong operation and malfunction, each dome camera must have a unique address (ID).

The factory default setting is 1.

Refer to Figures 1 and Table 1 for setting the dome camera address (ID) and protocol selection.



#### **TABLE1: ID SETTING**

ID Address	SW1	SW2	SW3	SW4	SW5	SW6
1	ON	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF
17	ON	OFF	OFF	OFF	ON	OFF
18	OFF	ON	OFF	OFF	ON	OFF
19	ON	ON	OFF	OFF	ON	OFF
20	OFF	OFF	ON	OFF	ON	OFF
21	ON	OFF	ON	OFF	ON	OFF
22	OFF	ON	ON	OFF	ON	OFF
23	ON	ON	ON	OFF	ON	OFF
24	OFF	OFF	OFF	ON	ON	OFF
25	ON	OFF	OFF	ON	ON	OFF
26	OFF	ON	OFF	ON	ON	OFF

ID Address	SW1	SW2	SW3	SW4	SW5	SW6
27	ON	ON	OFF	ON	ON	OFF
28	OFF	OFF	ON	ON	ON	OFF
29	ON	OFF	ON	ON	ON	OFF
30	OFF	ON	ON	ON	ON	OFF
31	ON	ON	ON	ON	ON	OFF
32	OFF	OFF	OFF	OFF	OFF	ON
33	ON	OFF	OFF	OFF	OFF	ON
34	OFF	ON	OFF	OFF	OFF	ON
35	ON	ON	OFF	OFF	OFF	ON
36	OFF	OFF	ON	OFF	OFF	ON
37	ON	OFF	ON	OFF	OFF	ON
38	OFF	ON	ON	OFF	OFF	ON
39	ON	ON	ON	OFF	OFF	ON
40	OFF	OFF	OFF	ON	OFF	ON
41	ON	OFF	OFF	ON	OFF	ON
42	OFF	ON	OFF	ON	OFF	ON
43	ON	ON	OFF	ON	OFF	ON
44	OFF	OFF	ON	ON	OFF	ON
45	ON	OFF	ON	ON	OFF	ON
46	OFF	ON	ON	ON	OFF	ON
47	ON	ON	ON	ON	OFF	ON
48	OFF	OFF	OFF	OFF	ON	ON
49	ON	OFF	OFF	OFF	ON	ON
50	OFF	ON	OFF	OFF	ON	ON
51	ON	ON	OFF	OFF	ON	ON
52	OFF	OFF	ON	OFF	ON	ON
53	ON	OFF	ON	OFF	ON	ON
54	OFF	ON	ON	OFF	ON	ON
55	ON	ON	ON	OFF	ON	ON
56	OFF	OFF	OFF	ON	ON	ON
57	ON	OFF	OFF	ON	ON	ON
58	OFF	ON	OFF	ON	ON	ON
59	ON	ON	OFF	ON	ON	ON
60	OFF	OFF	ON	ON	ON	ON
61	ON	OFF	ON	ON	ON	ON
62	OFF	ON	ON	ON	ON	ON
63	ON	ON	ON	ON	ON	ON

For example :

ID Address	SW1	SW2	SW3	SW4	SW5	SW6
1	ON	OFF	OFF	OFF	OFF	OFF



ID Address	SW1	SW2	SW3	SW4	SW5	SW6
2	OFF	ON	OFF	OFF	OFF	OFF



•

.

•

ID Address	SW1	SW2	SW3	SW4	SW5	SW6
63	ON	ON	ON	ON	ON	ON



## 2.7 Connecting Wiring

#### 2.7-1 Connecting to the FSK

The dome camera can be controlled remotely by an external device or control system, such as a control keyboard, using video out. Connect the video out(BNC) connector to DVR video input.

#### 2.7-2 Connecting to the RS-485

The dome camera can be controlled remotely by an external device or control system, such as a control keyboard, using RS-485 half-duplex.

# 2.7-3 Connecting Video out connector (if RS-485 connecting) Connect the video out(BNC) connector to the monitor or video input of the DVR

#### 2.7-4 Connecting Alarms

#### · Al (Alarm In)

You can use external devices to trigger the dome camera to react to events.

Mechanical or electrical switches can be wired to the AI (Alarm In) and G (Ground) connectors. See Chapter 3 - Program and Operation for configuring alarm input.

#### G (Ground)

### NOTE: All the connectors marked G or GND are common.

Connect the ground side of the alarm input and/or alarm output to the G (Ground) connectors.

#### · AO (Alarm Out)

The dome camera can activate external devices such as buzzers or lights. Connect the device to the AO (Alarm Out) and G (Ground) connectors. See Chapter 3 - Program and Operation for configuring alarm output.

#### 2.7-5 Connecting the Power

Connect the power of AC 24V or DC 12V 1A to the dome camera. When using a DC 12V adapter, connector the positive(+) pole to the 'AC+' position and the negative(-) pole to the 'AC-' position. Use Certified / Listed Class 2 power supply transformer only.

# **3** Program and Operation



#### Notice

The symbols shown below mean some action of the joystick controller is required.

▲ / ▼ : to move joystick up and down direction.◀ / ▶ : to move joystick left and right direction.

to twist joystick.to push defined key.

## 3.1 Start up Screen

START UP
PROTOCOL: VISTA-FSK

DOME: 01
Vx.xx

#### 3.2 Password Menu

PASSWORD ==== EXIT

▲ / ▼ : to move cursor up and down.

◀ / ►: to move cursor left and right or select.

to change the values. (0~9)(Default Password : 1234)

◀ / ESC : to exit current menu.

To access on-screen menus with the Vista VKBD range of keyboard, press and hold the dome menu key ( ) for two seconds. The password menu will not appear if the 'PASSWORD DISPLAY' is turned 'OFF'.

#### 3.3 Main Menu

MAIN MENU
PRESET
TOUR
AUTO SCAN
AREA TITLE
ALARM
CAMERA SETUP
DOME SETUP
EXIT

▲ /▼: to move cursor up and down.
 • : to select the highlighted field
 ◄/ESC: to exit current menu.

The **MAIN MENU** displays the available all functions of dome. Move cursor up and down to choose area, and then move cursor right to select option. When the password protection is disabled, this menu will display When the dome menu key is pressed.

#### 3.4 Preset Menu

PRESET MENU NUMBER: 01 TITLE: ======== 0/1234567890 1/1234567890 \* \* 2/1234567890 3/1234567890 4/1234567890 5/1234567890 HOME POSTION: 07 EXIT 306.2 017.4

▲ / ▼ : to move cursor up and down.

◀ / ▶ : to move cursor left and right or select.

• : to change the value at **NUMBER: XX**, or character

√ESC : to exit current menu.

If an operator wishes to visit the same locations on a regular basis, presets should be programmed. Preset are memorized pan, tilt and zoom setting. Once programmed, select the preset number on your Keyboard or DVR will automatically call up that memorized position. In addition, presets may be assigned to a Home Position. The dome can store up to 60 presets when using an external keyboard.

#### 3.4-1 Set Presets at the MENU

- 2.Press IRIS OPEN or ENTER the "CONTROL" message will displayed on screen this allows you to move the position of the dome.
- 3.Move the dome to the desired location using the joystick and set the size of image on screen using zoom in or zoom out.
- 4.When the dome is in the desired location, press[RIS CLOSE] or ESC to save this preset, the message "CONTROL" will then disappear.
- 5. The '\*' mark will briefly appear then the Preset is being saved.

To insert a Title for a Preset, move cursor to **TITLE:** then move cursor right 
▶ to enter title field, use • to change the letter / number of the selected letter. Use the ▶ key to move to the next field. If a Title is not set, "**PRESET <number>**" will display.

To set a **Home Position** highlight "**Home Position** "then use • to select a saved preset. The return to home dwell time is set in the Dome Menu / Home Function Menu.

### 3.4-2 Programming a Preset using short cut keys on the keyboard.

- 1. You can programme a Preset using the short cut buttons.
- 2. Move the dome to the desired position using the joystick.
- 3. Press Fn and the Preset Number you want to save and then press 

  ⇒ button in this sequence. For example, to save preset number 23, press Fn + 2 + 3 + ⇒ button in sequence.

(For VKBD keyboard press ↑ + 2+3+🔀)

#### 3.4-3 Recall Presets

Press Preset Number and press button.

For example, recall Preset 13, press 1+3+8 button in this sequence.

#### 3.4-4 Home Position

The Dome will automatically return to the Home Position. If an operator wishes to do this manually, use the following procedure. Press 1+ button. The words "Home Position" will be displayed.

TOUR MENU
TOUR: 1
TITLE: =======

DWELL TIME: 10 SEC
SPEED: 07
================

SAVE
EXIT

▲ / ▼ : to move cursor up and down.

/ : to move cursor left and right or select.

: to change characters at TITLE, DWELL TIME, SPEED or Change the saved preset number when the '==' in highlighted

√ESC : to exit current menu.

#### 3.5-1 Set Tours

1. Move cursor to  $\mathbf{TOUR}$ : and select "TOUR<number>" using  $\mathbf{Q}$  .

- To insert a Title of the Tour, move cursor to TITLE: 1.then move cursor right ▶ to enter title field, useto change the letter / number of the selected letter. Use the ▶ key to move to the next field. If a Title is not set, "TOUR<number>" will display.
- 3. Set Dwell time(10~99 seconds) by (at **DWELL TIME**.
- Move cursor to '==' and select the required preset number by using (♠) .
   Insert each point progressively.
- 5. Move cursor to right at the **SAVE** menu to save this Tour. The word "**Saving...**" will flash on screen.
- Move cursor to right at the EXIT menu to escape this menu. (Selecting EXIT before Save will not save your changes.)
- N.B. More than one Preset must have been set before a Tour can be programmed.

#### 3.5-2 Delete Tour

- 1. Move cursor to **TOUR**: and select tour number to delete.
- Press 1 + 2 button then the selected Tour will be deleted.

#### 3.5-3 Recall Tour

Press Tour Number then the Doutton. For example, if you want to recall the Tour 3, press 3 + Doutton in this sequence. If the TOUR ELEMENT of the OSD DISPLAY MENU (Dome Setup) is enabled, the Tour name / number and Preset name / number will be displayed when the tour is running.

AUTO SCAN MENU
SCAN: 1
TITLE: ========
START POINT: 000.0 000.0
END POINT: 000.0 000.0
SCAN DIR.: CW
SPEED: 07
SWAP: OFF
SAVE
EXIT

▲ / ▼ : to move cursor up and down.

◀ / ▶ : to move cursor left and right or select.

( ): to change values at TITLE, SCAN DIR, SPEED or SWAP.

√/ESC : to exit current menu.

#### 3.6-1 Set Auto Scan1

- To insert a Title for the Scan, move cursor to TITLE: then move cursor right ▶ to enter title field, use • to change the letter / number of the selected letter. Use the ▶ key to move to the next field. If a Title is not set, "SCAN<number>" will display.
- 2. Move cursor to the START POINT:
- Press IRIS OPEN or ENTER the "CONTROL" message will displayed on screen this allows you to move the position of the dome.
- 4. Move the dome to desired PAN, Tilt and Zoom starting point of Auto Scan range.
- When the dome is in the desired location, press IRIS CLOSE or ESC to save the Auto Scan, the message "CONTROL" will then disappear.
- Move cursor to END POINT: Repeat points 3, 4 and 5. (Note. At this point, only PAN position will be adjustable.)
- SCAN DIR. Auto Scan has 2 Directions. CW for Clock Wise and CCW for Counter Clock Wise.
- SPEED is selectable from 1 to 10.
- 9. SWAP will change (swap) the START POINT and END POINT around.
- 10. Select **SAVE** to save this Auto Scan.
- 11. Select **EXIT** to escape this menu. (Selecting **EXIT** before **Save** will not save your changes.)

#### 3.6-2 Set ShortCut Auto Scan1

You can adjustable the Auto Scan1's Pan Limit by using the ShortCut buttons

- 1. Move the dome to the desired Pan Starting position using Joystick.
- Press Fn+6+5+ ★ button in this sequence. Then "SAVING: PAN LEFT AND TILT" is displayed briefly.
- To adjust the Pan End Point, move the dome to the desired position by using the Joystick.
- Press Fn+6+6+ button in this sequence. Then "SAVING: PAN RIGHT" is displayed briefly.

#### 3.6-3 Delete Auto Scan1

- 1. Move cursor to **SCAN**: and select scan number to delete.
- 2. Press 1 + w button then the selected Scan will be deleted.

#### 3.6-4 Recall Auto Scan1

To recall the Auto Scan Press •• If a Title is not set, "SCAN<number>" will display.

AREA TITLE MENU
AREA: 1
TITLE: AREA1=====
START POINT: 000.0
END POINT: 045.0
SAVE
EXIT

▲ /▼ : to move cursor up and down.

◀ / ▶ : to move cursor left and right or select.

• : to change values at TITLE or AREA.

◀ /ESC : to exit current menu.

#### 3.7-1 Set Area Titles

Each area title has default value. There are 8 Area titles that are divide 360 degrees into 8 equal parts.

- 1. To modify an area, move to START POINT:
- Press IRIS OPEN or ENTER the "CONTROL" message will displayed on screen this allows you to move the position of the dome.
- 3. Move the dome to desired starting point of the Area to be modified.
- When the dome is in the desired location, press [IRIS CLOSE] or [ESC] to save the Area, the message "CONTROL" will then disappear.
- 5. Move cursor to END POINT: Repeat points 3, 4 and 5.
- 6. Select SAVE to save this Area Title.
- Select EXIT to escape this menu. (Selecting EXIT before Save will not save your changes.)

#### 3.7-2 Delete Area Titles

- 1. Move cursor to AREA: and select area number to delete.
- 2. Press 1 + w button then the selected Area will be deleted.

#### 3.7-3 Display Area Titles

If the AREA TITLE ELEMENT of the OSD DISPLAY MENU (Dome Setup) is enabled, the Area name / number will be displayed.

ALARM MENU
INPUT: NC
OUTPUT: NO
OPTION: TIME OUT
PRESET: 01
HOLDING TIME: 10 SEC
SAVE AND EXIT
EXIT

▲ /▼ : to move cursor up and down.

> : to select.

to change values./ESC: to exit current menu.

#### 3.8-1 Set Alarm

· INPUT: NC / NO / OFF

Select the alarm input type. **NC** (Normal Closed), / **NO** (Normal Open). If you select the input type as **OFF**, the dome will not respond to an alarm input.

· OUTPUT: NC / NO / OFF

Select the alarm output type. **NC** (Normal Closed), / **NO** (Normal Open). If you select output type as **OFF**, the dome will not send a response when an input occurs.

- OPTION: MOMENTARY
  - MOMENTARY: The alarm is automatically reset after the alarm duration time has elapsed.
- · PRESET: XX

The dome will be sent to the preset number selected when an alarm is activated. The camera remains at the preset position during the alarm period. After the alarm is released, dome camera returns to its previous function.

· HOLDING TIME: 10~99 SEC

This is activated when the **MOMENTARY** option is selected; the holding is selectable between 10 and 99 seconds.

#### 3.8-2 Release Alarm

If you want to release alarm, press **ESC** button at any alarm option.

## 3.9 Camera Setup Menu

CAMERA SETUP MENU
FOCUS CONTROL
WB CONTROL
AE CONTROL
L/L CONTROL
PICTURE
NIGHT SHOT CONTROL
INITIALIZE CAMERA
EXIT

▲ / ▼ : to move cursor up and down.

to select.

◀ / ESC : to exit current menu.

#### · FOCUS CONTROL

This sub-menu controls the focus and digital zoom modes.

#### · WB CONTROL

This sub-menu controls the white balance mode.

#### · AE CONTROL

This sub-menu controls the auto exposure options.

#### · L/L CONTROL

Selects between Internal and line lock.

#### PICTURE

The following areas are selected: sharpness, mirror, freeze, nega / posi, DNR and PIP.

#### NIGHT SHOT CONTROL

The following areas are selected: Auto, Monochrome and colour.

#### · INITIALIZE CAMERA

This sub-menu resets the camera setup menu (only) to the default settings

#### 3.9-1 Focus Control Menu

FOCUS CONTROL MENU
MODE: AUTO
DISTANCE: 0.1M
DIGITAL ZOOM: OFF
SAVE AND EXIT
EXIT

▲ / ▼ : to move cursor up and down.

to select.

• : to change values.

◀ /ESC: to exit current menu.

· MODE: AUTO / MANUAL

You can select focussing menu, auto or manual.

· DISTANCE: 0.1 / 1.0 / 1.5 / 2.5 / 6.0 M

Camera will not focus nearer than the value selected.

· DIGITAL ZOOM: ON / OFF

When set to OFF, the camera will only use the optical zoom.

#### 3.9-2 WB Control Menu

WB CONTROL MENU
MODE: AWB
RGAIN:
BGAIN:
SAVE AND EXIT
EXIT

▲ /▼ : to move cursor up and down.

to select.

: to change values.

◀ /ESC: to exit current menu.

#### · MODE: AWB / INDOOR / OUTDOOR / MANUAL / WAWB

- AWB : Auto White Balance mode.

- INDOOR: Indoor White Balance mode.

- OUTDOOR: Outdoor White Balance mode.

- MANUAL: Manual mode, adjust R and B Gain manually

- WAWB: Wide Range Auto White Balance mode.

• R-GAIN: 0 ~ 255

While in the manual mode, you can adjust the red colour gain.

• B-GAIN: 0 ~255

While in the manual mode, you can adjust the blue colour gain.

#### 3.9-3 AE Control Menu

AE CONTROL MENU
MODE: AUTO
SHOT: NORMAL
SHUTTER:
IRIS:
GAIN:
BRIGHT: 30
BLC MODE: OFF
BLC LEVEL: -SAVE AND EXIT
EXIT

▲ /▼: to move cursor up and down.

> : to select.

: to change values.

◀ /ESC: to move joystick left and exit the AE control Menuexit

#### · MODE: AUTO / SHUTTER PRI / IRIS PRI / MANUAL / FLICKERLESS

- AUTO: automatically adjusts each value.
- SHUTTER PRI(ority): allows you to set the shutter speed value, all other values are controlled automatically.
- IRIS PRI(ority): allows you to set the iris value all other values are controlled automatically.
- MANUAL: allows you to adjust the Shutter, Iris and Gain.
- FLICKERLESS: This function is used to removing flicker when the format of the camera signal does not coincide with power source frequency.
- · SHOT: NORMAL / LOW-SHUTTER / WDR / DIS
  - DIS means Digital Image Stabilization.
  - WDR means Wide Dynamic Range
  - Low-Shutter means Low Shutter Speed Mode.
- SHUTTER: X60 / X32 / X16 / X8 / ... / 2000 / 4000 / 10000 The shutter speed is set in this menu.
- IRIS: F1.6 / F2 / F2.8 / F4 / F5.6 / F8 / F11 / F16 / F22 / F32 / CLOSE The lens's F-number is manually set in this menu.
- GAIN: 0 ~ 30 DB

The value is adjustable from 0 to 30.

#### • BRIGHT: 0 ~ 90

The brightness level is adjustable from 0 to 90.

• BLC MODE: ON / OFF

The Back Light Compensation is active when set to **ON**.

• BLC LEVEL: 0 ~ 90

The BLC Level is adjustable from 0 to 90.

### 3.9-4 L/L Control Menu

L/L CONTROL MENU
SYNC: INTERNAL
PHASE:
SAVE AND EXIT
EXIT

▲ /▼ : to move cursor up and down.

to select.

: to change values.

◀ /ESC: to exit current menu.

### . MODE: INTERNAL / LINE LOCK

- INTERNAL: Synchronizes the camera to an internal clock.
- LINE LOCK: Synchronizes camera to AC power. This choice eliminates picture roll in multi-camera systems.

PHASE: PAL(0 ~ 620), NTSC(0 ~ 519)

 Using the line-lock mode eliminates picture roll in multiphase power application.

#### 3.9-5 Picture Menu

PICTURE MENU
SHARPNESS: 08
MIRROR: OFF
NEGA/POSI: POSI
DNR: ON
PIP: OFF
SAVE AND EXIT
EXIT

▲ /▼ : to move cursor up and down.

to select.

to change values./FSC: to exit current menu.

· SHARPNESS: 0 ~ 15

The Sharpness can be adjusted from 0 to 15 the default value is 8.

· MIRROR: ON / OFF

This reverses the Video image along the vertical line.

· NEGA/POSI: NEGA / POSI

You can see the NEGAtive screen or POSItive screen.

· DNR: ON / OFF

The **DNR** means Digital Noise Reduction.

· PIP: ON / OFF

The **PIP** means Picture-In-Picture. If set to ON, a small screen will be appeared at the lower right corner of the main image.

### 3.9-6 Night Shot Control Menu

NIGHT SHOT CONTROL MENU
D/N MODE: AUTO
D/N LEVEL: HIGH
DELAY: 10 SEC
SAVE AND EXIT
EXIT

▲ /▼ : to move cursor up and down.

: to select.

: to change values.

◀ /ESC: to exit current menu.

#### · D/N MODE: AUTO / BW / COLOUR

- AUTO: The camera will automatically switch from Colour to B/W (monochrome) depending on the ambient light, allowing the camera to be effective in both day and night time environments.
- D/N LEVEL: HIGH / MID / LOW
   Adjust the light level at which the camera will switch between COLOUR and BW modes. This is effective only in AUTO mode.
- DELAY: 0 / 10 / 15 / 20 SEC
   Adjust the time delay from when the light level reaches its switch over threshold. This is effective only in AUTO mode.

## 3.9 Camera Setup Menu, continued

#### 3.9-7 Initialize Camera

Running this menu, will reset all the camera's settings (Camera Setup Menu) to their default states.

CAMERA WILL BE INITIALIZED!! ARE YOU SURE? NO YES

## 3.10 Dome Setup Menu

DOME SETUP MENU
TILT AUTO FLIP: ON
485-TERMINATION: OFF
AUTO CALIBRATION
PASSWORD
OSD DISPLAY
HOME FUNCTION
INITIALIZE DOME
DOME INFORMATION
SAVE AND EXIT
EXIT

▲ /▼: to move cursor up and down.

> : to select.

: to change values.

√ESC: to exit current menu.

#### 3.10-1 Tilt Auto Flip

The Auto Flip allows the dome camera module to turn automatically by 180 degrees when the camera tilts to its lowest position, allowing the operator to track properly.

Move the dome down to the vertical position briefly release the joystick handle then continue moving the joystick in the downwards direction and the dome will move upwards. Released for the second time the joystick control will revert to standard operation. The tracking speed will be the same as previous.

#### 3.10-2 485-Termination

The last device connected (i.e. at the end-of-line), whether a dome camera or keyboard controller, must have the cable for communication terminated by setting this menu. Without proper termination, there is potential for control signal errors. Total length of the cable for communication should not exceed 1.2km.

### 3.10 Dome Setup Menu, continued

### 3.10-3 Auto Calibration Menu

AUTO CALIBRATION MENU
EXECUTION
EXIT
PRESS ENTER TO EXECUTE

▲ / ▼ : to move cursor up and down.

to select.

◀ / ESC : to exit current menu.

If the dome looses orientation, select "EXECUTION" of the AUTO CALIBRATION MENU. The motor of the Pan/Tilt will reset the orientation automatically.

### 3.10 Dome Setup Menu, continued

### 3.10-4 Password Menu

PASSWORD MENU
DISPLAY: ON
CHANGE PASSWORD: ====
SAVE AND EXIT
EXIT

▲ /▼ : to move cursor up and down.

◀ / ►: to move cursor left and right or select.

• : to change values.

◀ /ESC: to exit current menu.

If you want to protect the whole menu from unauthorised access, select **ON** at the **DISPLAY MENU**. The **PASSWORD MENU** will display when the ( $\oplus$ ) button is pressed to enter the **MAIN MENU**. After entering the correct password, move the joystick right and the **MAIN MENU** will appear. **Default Password is '1234'**.

### 3.10-5 OSD Display Menu

OSD DISPLAY MENU
DOME ID: ON
PT POSITION: ON
PAN DIRECTION: OFF
TOUR ELEMENT: OFF
AREA TITLE: OFF
ALL DISPLAY
DEFAULT
SAVE AND EXIT
EXIT

▲ /▼ : to move cursor up and down.

> : to select.

: to change values.

◀ /ESC : to exit current menu.

This sub-menu allows you to choose whether to have a title free screen or selected function titles displayed. The PT POSITION means Pan / Tilt Position. If the PAN DIRECTION is ON, 'N' (North) will display when at the 0 degrees. If the TOUR ELEMENT is ON, the individual preset numbers / names display during the tours progress shown in the lower left corner. Selecting ALL DISPLAY sets all options to ON. DEFAULT makes only DOME ID & PT POSITION to ON and the rest to OFF.

### 3.10-6 Home Function Menu

HOME FUNCTION MENU MODE: ON FUNCTION TYPE: PRESET FUNCTION NUMBER: 01 DWELL TIME: 010 SEC SAVE AND EXIT EXIT

▲ /▼ : to move cursor up and down.

: to select.

to change values./ESC: to exit current menu.

Mode: ON/OFF

Function type: Preset / Tour / Auto Scan

Function number: xx Dwell time: 10 ~ 600sec.

The Home Function can be set so that the camera automatically goes to a preset, a tour or auto scan after the Keyboard control has been idle for a selected period.

For example, the Mode is **ON**, Auto Scan 1 selected and the Dwell time is 20 seconds. If the Keyboard control is idle for 20 seconds, the commence Auto Scan 1 until stop until an other command is received.

### 3.10 Dome Setup Menu, continued

### 3.10-7 Initialize Dome

INITIALIZE DOME MENU
PRESET DATA
TOUR DATA
AUTO SCAN DATA
AREA TITLE DATA
DOME SETUP DATA
ALL DOME DATA
EXIT

PRESS ENTER TO EXECUTE

▲ / ▼ : to move cursor up and down.

to select.

◀ / ESC : to exit current menu.

You can reset to default all data separately (In the Dome Menu), or all dome menu sub-menus by selecting **ALL DOME DATA** will reset to default all dome data (preset, tour, auto scan, area title, dome setup) it will not affect camera setting menu.

### 3.10-8 Dome Information

DOME INFORMATION
VERSION: Vx.xx
EXIT

This menu just displays dome's software version.

# **4** Troubleshooting and Maintenance



### 4.1 Troubleshooting

If you experience difficulties operating your camera, refer to the following. If the guidelines do not enable you to solve the problem, contact an authorized technician

PROBLEM	CHECK
Nothing appears on the screen.	Check all cable connections and the power of the interface unit.
The image on the screen is dim.	• Is the lens dirty? If so, clean the lens with a soft, clean cloth.
The camera is not working properly and the surface of the camera case is hot.	Is the camera connected to the proper power?
The contrast on the screen is too weak.	<ul> <li>Adjust the contrast feature of the monitor.</li> <li>Is the camera exposed to strong light? If so, change the camera position.</li> </ul>
The image on the screen is flickers.	Does the camera face directly into the sun or fluorescent lighting? If so, reposition camera. Check for flickerless setting of the camera.

### 4.2 Preventive Maintenance

Following the preventive maintenance schedule allows detection and correction of minor faults before they become serious and cause equipment failure.

Periodically perform the following:

- 1. Inspect all connecting cables for deterioration or other damage.
- Wipe housing with a clean damp cloth.
   Clean P.C(LEXAN) dome/windows with an approved P.C(LEXAN)
   Cleaner.\*
- 3. Verify that all the mounting hardware is secure.
- \* (Novus LEXAN cleaner-plastic polish)

# **5** Specifications



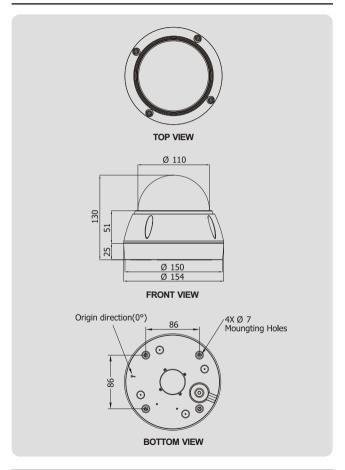
# 5.1 General Specifications

MODEL		DDEL	PAL		
POWER	Power Source		DC12V / AC24V ±10%		
POWER	Power Consumption		12.0 Watts		
	Image Sensor		1/4" SONY Super HAD CCD		
	Total Pixels		795(H) × 596(V)		
	Scanning System Scanning Frequency		2:1 interlace		
			15.625KHz(H), 50Hz(V)		
	Sync. System		Internal / Line Lock		
	Resolution		480 TV lines(COLOUR), 530 TV lines(B/W)		
	Min. illumination		0.5 lux (Colour), 0.05 lux (B/W), 0.001 lux (Low-shutter)		
	ideo Output		1.0 Vp-p (75 ohm, composite)		
	S/N Ratio		more than 50dB (AGC off)		
	Camera Control		RS485 (Vista-FSK, Vista-485, Pelco-D, Pelco-P)		
	F	Focus Mode	Auto / Manual		
		Distance	0.1M / 1.0M / 1.5M / 2.5M / 6.0M		
GENERAL		Digital Zoom	Off / On		
	Ü	White Balance	AWB / Indoor / Outdoor / Manual / WAWB		
	C	Auto Exposure	Auto / Shutter PRI / Iris PRI / Manual / Flickerless		
	T I O	Shot	Normal / DIS / WDR / Low Shutter		
		Shutter Speed	1/50 ~ 1/10,000 sec.		
	N		[x2 ~ x60 (Low Shutter)]		
	С	Iris Control	Auto / Manual (F1.6 ~ F32, Close)		
	A M	Gain Control	Auto / Manual (0 ~ 30dB)		
	E	BLC	Off / On		
	R A	Brightness	0 ~ 90 steps		
		Sharpness	0 ~ 15 steps		
		Picture	Mirror, Nega/Posi, DNR, PIP		
		D&N Control	Auto / BW / COLOUR [Mechanical IR cut filter]		

# 5.1 General Specifications, continued

MODEL		DEL	PAL		
		Panning Angle	360°continuous rotation		
			Manual : Max. 150°/sec.		
		Panning Speed	Auto: Max. 375°/sec.		
		Tilting Angle	0°~ 90° [Auto Flip : Off / On]		
		Tilting Speed	Manual : Max. 150°/sec.		
	F		Auto: Max. 375°/sec.		
		Preset	60 Positions		
	c	Tour	Courses (1~4 x 16 Preset)		
	NT-ON DOME	Auto Scan	Course (1)		
		Area Title	Courses (8)		
		Alarm Input	Off / NC / NO (1 Channel)		
GENERAL		Alarm Output	Off / NC / NO (1 Channel)		
		Alarm State	Momentary		
		485-Termination	Off / On		
	_	Auto Calibration	Execution		
		Password Protection	Off / On (OSD setup protection)		
		Home Function	Off / On (Preset, Tour, Auto Scan)		
		Dome ID	63 ID (DIP switch)		
		Baud Rate	2400 / 4800 / 9600 / 19200 bps (DIP switch)		
	L E N S	Zoom Ratio	Optical x22, Digital x11 Zoom (Video AF)		
		Focus Length	f = 3.9 mm ~ 85.8 mm		
		Aperture Ratio	F1.6 (wide) ~ F3.7 (tele)		
	Power Input		3-pin terminal block		
	Video Output		BNC connector		
	RS485	Control	2-pin terminal block		
CONNECTOR	Alarm Input/Output		4-pin terminal block		
& ETC.	Operating Temperature		-10°C ~ +50°C		
EIG.	Operating Humidity		0 ~ 96% (non-condencing)		
	Storage Temperature		-20°C ~ +60°C		
	External Dimension		Ø154.0 x 130 (H) mm (Bubble diameter Ø110.0)		
	Weight		1300g		

# 5.2 Dimensions



### APPENDIX. PELCO PROTOCOL FUNCTION LIST

FUNCTION	KEY	Preset No.	How To.	EXAMPLE
PRESET	PRESET	1 - 60	No.+PRESET	1+PRESET
PRESET shortcut saving	NOTE1	1- 60	NOTE1	NOTE1
RUN PAN ZERO	PRESET	34	No.+PRESET	34+PRESET
SCAN	PRESET	61 - 64	No.+PRESET	61+PRESET
SCAN LEFT LIMIT	NOTE1	65	NOTE1	NOTE1
SCAN RIGHT LIMIT	NOTE1	66	NOTE1	NOTE1
TOUR	PRESET	71 - 74	No.+PRESET	71+PRESET
ALARM RESET	PRESET	90	No.+PRESET	90+PRESET
RUN HOME	PRESET	91	No.+PRESET	91+PRESET
DOME MENU	PRESET	95	No.+PRESET	95+PRESET
ESC KEY	PRESET	96	No.+PRESET	96+PRESET
CTRL_KEY(In Menu)	PRESET	95	No.+PRESET	95+PRESET
VERSION DISPLAY	PRESET	99	No.+PRESET	99+PRESET

#### NOTE1

To program, position camera, enter desired preset number(1-60), and hold down **PRESET** for two seconds.

In CM6700 and CM6800 models, a prompt appears on the monitor. Select 'SET' and press  $\boxed{\text{ACK}}$  or tap the joystick to the right and release.