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Ultra-Z

PROFESSIONAL PTZ CAMERA

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User Manual

Z-27e

Contents

Before installing

⚠ ·Installation should be carried out only by qualified personnel and in accordance with any wiring regulations in force at the time.
·The speed dome is heavy and could cause injury if not correctly mounted in accordance with these instructions. Use only the fittings supplied with the speed dome and ensure that all lanyard safety cables are connected correctly during installation.
·Adequate protection against lightning strikes and power surges must be installed to prevent damage to the speed dome.
·Any safety warnings on the product and in these instructions must be adhered to.
·If cleaning is necessary, disconnect power to the speed dome first. Do not use abrasive cleaners, as these will cause damage to the cover and cause poor image quality. Use a damp cloth to gently clean the dome cover and dry off with a soft clean cloth.
·Do not use any brackets, mounts or other accessories not specifically designed for use with this speed dome.
·Do not attempt to service or repair the speed dome as opening or removing covers may expose dangerous voltages or other hazards. Refer all servicing to qualified service personnel.

Key features

Presets

Up to 127 sets of positional and zoom level information can be stored as presets. These can be called manually by the operator, automatically by an alarm input, or grouped to form a sequence of actions to run automatically.

Each preset can also be programmed with the following:

Alarm action - relay outputs can be triggered when particular presets are called

Title - each preset can be titled with up to 10 characters so that zones can easily be identified

Pattern tours

Any dome movement can be recorded - and subsequently played back - as four separate pattern tours. These can be played back individually or grouped to form a sequence of tours.

Auto Scan between2presets

Scan is a useful feature when,for example,the operator wishes to 'patrol' a perimeter fence. If one preset is defined at one end of the fence and a second preset is defined at the other, the scan function will smoothly and accurately move from one end to the other and then back again in a repeating sequence. Speed can be adjusted as necessary and up to 8 scan functions can be defined.

Group function

The group function is a powerful feature which allows the operator to define a sequence of speed dome actions to form an automatic patrol sequence. Actions can be a mix of preset positions, pattern tours and scan functions. Up to 8 groups can be defined and each group can have up to 20 actions which repeat indefinitely until interrupted by the operator or an alarm input. Specific parameters such as preset speed, dwell time and action loop can also be specified

Privacy zones

By defining a privacy zone, sensitive scenes such as windows can be masked off so they cannot be viewed by the operator. Up to 8 privacy zones can be defined. Privacy zone size adjusts automatically depending on the speed dome zoom level.

Alarm inputs and outputs

This speed dome has 8 alarm inputs and 4 alarm outputs. Any alarm input can be set to call a predefined preset, scan function, pattern or group. Any preset can be configured to activate any or all of the alarm outputs. For example, a PIR detector connected to alarm input 1 could call preset 7 to view that particular scene whilst activating an external lamp connected to relay 1 and an external siren connected to relay 3.

On Screen Display (OSD)

The operator can choose if any or all of the following information is displayed on screen during normal speed dome operation.

Preset status and title
Speed dome position coordinates and zoom level
Alarm I/O status
·Time and Date
Speed dome ID

The speed dome also has a full on screen menu setup allowing quick and easy configuration of all the speed dome features.

Powerful park function

The speed dome can be configured to run a specified VST function, pattern tour, group or preset after a defined period of inactivity.

New features

1. Special Preset setting

   The user could set the parameters of focus Mode, Color, WDR, Stabilizer, Auto slow shutter, White Balance, AE Mode according to different scene on each preset, in this case, the camera can always give the best picture quality.

2. Nest Group

   One group could nest another group, one group could only be nested once.

3. Schedule function

   The user could set a schedule to make the speed dome run different functions(such as preset, pattern, group, auto scan) at different time. Up to7 schedules can be defined.

4. soft camera ID

   The user could adjust the camera ID by keyboard, no need to process on dip switch.

5. Firmware updating and baut rate adjusting could be processed in junction box conveniently, no need to open the speed dome housing.

6. Pelco D/P and AD protocol are available.

7. Full duplex RS422 and semideplex RS485 port are available. The user could select different communication mode by adjusting dip switch.

8. Powerful lightningproof design could resist up to 20KV lightning or surge.

9. Powerful power supply design

10. Password protection

    The user could set a password for the speed dome to prevent unpermitted processing.

Configure, fix and wire

Before proceeding with installation, the speed dome foam packing pieces must be removed. Remove the outer dome cover with the tool supplied and carefully remove the foam packing pieces. When handling the dome cover, always wear the gloves supplied to avoid getting fingerprints on the outer dome cover.
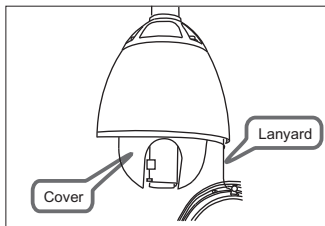
1. Remove the foam packing pieces
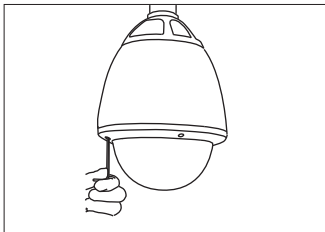
1. Wearing the gloves and using the supplied tool, remove the outer dome cover.
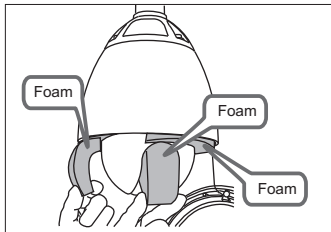
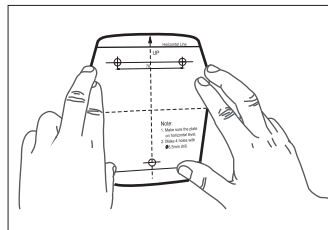2. Remove the foam pieces from the camera module.

3. Carefully unclip the black inner dome

2. Reassemble the speed dome

Refit the black inner dome cover and outer dome cover. If the lanyard safety wire was removed, it must be refitted before the dome cover is fixed.

3. Fix the bracket

1. Fix the supplied mounting template, taking account of any pipework, cables, overhangs etc. that may obstruct the bracket once fitted.
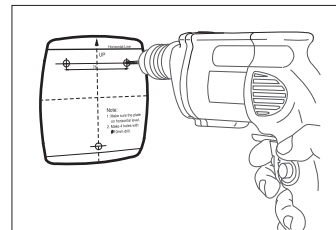
2. After making suitable checks for buried pipes and cables, drill fixing holes suitable for the bolts supplied with the speed dome.

Pendent option
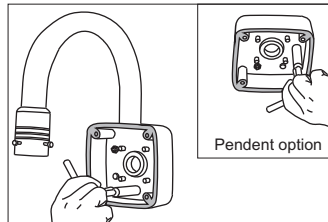
3. Remove the junction box cover. Using the supplied bolts and tool, firmly fix the bracket.

Pendent option
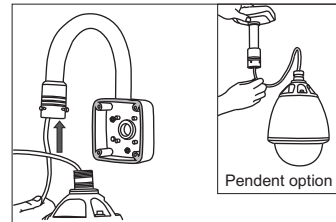
4. Feed the speed dome cable through the bracket.

Pendent option
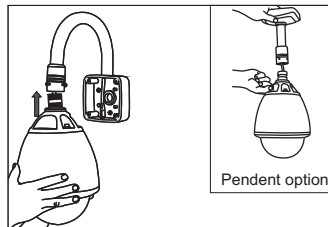
5. Bring the speed dome up to the bracket.
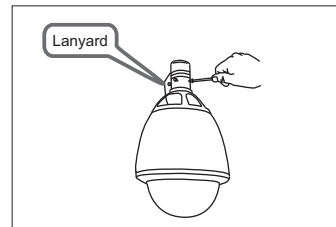
6. Tighten the three screws to fix the speed dome and ensure the lanyard safety chain is properly connected.

4. Complete the install
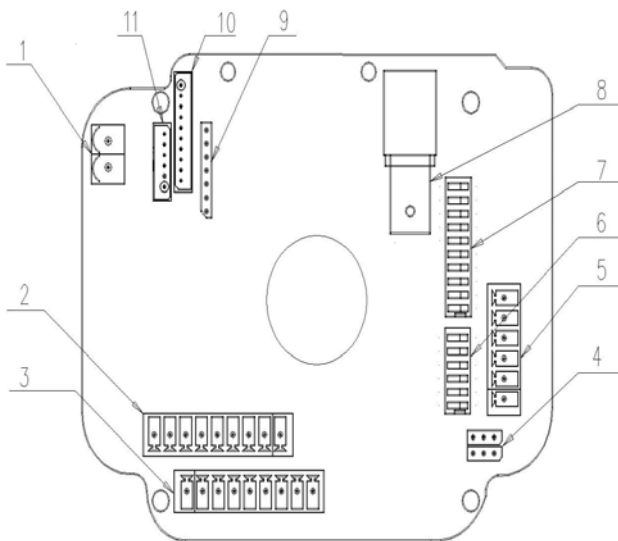
1. AC24V IN
2. ALARM OUT
3. ALARM IN
4. 120R
5. RS485/RS422
6. PROTOCOL
7. ADDRESS
8. ANALOG VIDEO OUT
9. MAIN CPU ISP
10. 10PIN KB LINE
11. 6PIN KB LINE

Protocol & Baud rate DIP switch table

1	2	3	Protocol/Rate
OFF	OFF	OFF	PelcoD, 2400 bps
OFF	ON	OFF	PelcoP, 4800 bps
ON	ON	OFF	PelcoP, 9600 bps
OFF	OFF	ON	VC, 9600 bps
ON	OFF	ON	AD, 4800 bps
OFF	ON	ON	AD, 4800 bps
ON	ON	ON	PelcoD, 4800 bps

Note: Dip switches 4-6 are reserved and must not be changed.

Dip4 reserved
Dip5 Rs485/Rs422
Dip6 NTSC/Pal

Speed dome ID DIP switch table

| 1	2	3	4	5	6	7	8	9	10	DIP
1	2	4	8	16	32	64	128	–	–	VAL/ID
ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	–	–	1
OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	–	–	2
ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	–	–	3
OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	–	–	4
ON	OFF	ON	OFF	OFF	OFF	OFF	OFF	–	–	5
OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	–	–	6
ON	ON	ON	OFF	OFF	OFF	OFF	OFF	–	–	7
OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	–	–	8
–	–	–	–	–	–	–	–	–	–	–
ON	ON	ON	ON	ON	ON	ON	ON			255

Factory default switch positions

Speed dome ID is set using standard binary notation

Note: ID 0 should not be used. Where multiple speed domes are connected, a unique ID must be assigned to each one. Dip switches 9-10 are reserved and must not be changed.

5. Complete the install

Seal

Seal

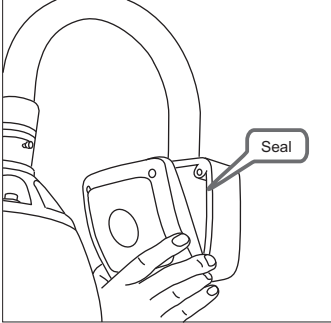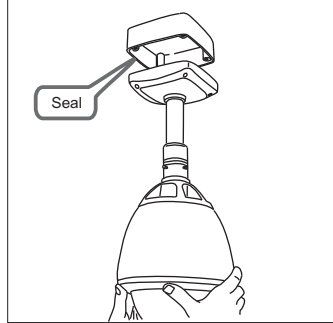1a - wall bracket option. After making all the connections to the PCB, fit the junction box cover with the four screws.

1b - pendent option. After making all the connections to the PCB, raise the dome assembly to the junction box, connect the dome cable to the PCB and fix with the four screws.

Note: when fixing the cover to the junction box, ensure that the seal is also fitted properly and that none of the cables are trapped

6. Verify basic operation

```
 HIGH SPEED DOME
 ------------------------
 FIRMWARE VER    2.23T27V
 COLOUR SYSTEM : PAL
 PROTOCOL      : PELCO-D
 ADDRESS       : 001
 BAUD RATE     : 2400
 Comm.Mode     : RS485/422
 ZOOM MODULE   : OK
 ALARM I/O     : OK
 HOME TEACHING.. WAIT...
```

```
07/JAN/2007
14:46:46




CAM 1            O:----
325/37/x1        I:12345678
```

1. After carefully checking the installation, including all cable connections, apply power to the dome and check that the startup and self test screen is displayed.
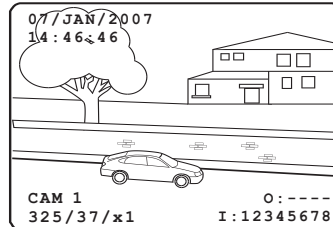
2. After the self test is complete, the dome starts normal operation. Verify that there is basic PTZ control from your control equipment.

If there's a problem at this stage…

…work through the logical steps below to determine and rectify the problem

No picture - check the PCB to make sure the red power LED is lit. If not, check that the PSU is correctly connected and has power. If you have a test meter, verify that the output of the PSU is approximately 24V AC.

If the power LED is lit, check the BNC crimp connection is correctly made at both the PCB end and the DVR / monitor / matrix end. A portable test monitor connected directly to the video output of the speed dome is also a useful test - if a picture is displayed, double check the BNC connections and the signal cable used.

No PTZ control - check that the control equipment you are using is compatible with the speed dome and is configured to match the speed dome settings correctly.

If dip switches were changed on the speed dome, check the power on self test screen to ensure that protocol, ID and baud rate are as expected.

If the settings match, you should check the polarity of the connections, both on the control equipment and the speed dome. If you suspect there is a polarity issue, swap the A & B wires at the speed dome to see if this resolves the problem.

Check also that there are no other telemetry devices on the system with the same ID as the speed dome. If in doubt, connect the speed dome directly to the PTZ controller and isolate all other equipment.

Basic speed dome operation

There are many different PTZ keyboards and DVR systems capable of controlling this speed dome, and it would be impossible to describe them all here. Therefore, examples given in the following pages are based on the more popular control equipment available. Whilst the principles of operation are the same, regardless of the control equipment used, reference may need to be made to the manual supplied with your particular control equipment.

Understanding the On Screen Display (OSD)

DATE/CLOCK: Shows current time and date

ACTION TITLE: Shows current speed dome action

```
11-07-15           PRESET3
09:37:15           RECEPTION




                            O:-23-
CAM001 307/46/×003   I:12345678
```

PRESET LABEL: If defined, is displayed when a preset position is called

CAMERA ID: Shows the current ID as defined by the dip switch settings

ALARM I/O: Shows which alarm inputs and outputs are active

PTZ INFORMATION: The current pan/tilt position in degrees and the current zoom level

Programming, calling and deleting presets


```
11-07-15           Preset001
12:38:05




                            O:----
CAM001  325/37/×001   I:12345678
```



```
11-07-15          PRESET003
12:42:22          PARKING BAY 1




                            O:----
CAM001  325/37/×003   I:12345678
```
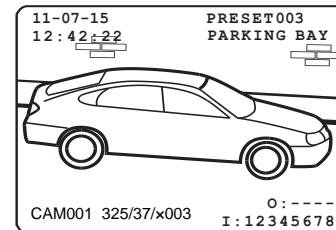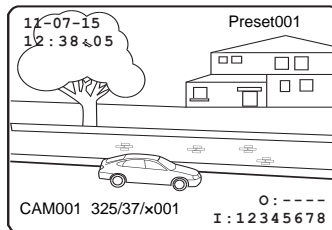
To program a preset position, move the speed dome to the desired scene and zoom level and press:

SET - XXX - ENTER

Where **XXX** is a preset number between 1 & 128 (but note that preset 95 is reserved and cannot be used). Confirmation is displayed on the OSD.

To delete a preset position, press:

CLEAR - XXX - ENTER

Where **XXX** is a preset number between 1 & 128 (but note that preset 95 is reserved and cannot be used). The preset position is cleared from memory.

To go to a preset position thats already been programmed, press:

SHOT - XXX - ENTERXXX - Preset

Where **XXX** is a preset number between 1 & 128 (but note that preset 95 is reserved and cannot be used). The speed dome moves to the preset position. Confirmation and preset title (if defined) is displayed on the OSD.

To reprogramme a preset position, follow the steps for programming a preset - it is not necessary to delete the old preset position first

Programming the speed dome

The speed dome setup menu allows the operator to customise and program all aspects of speed dome operation. All menu settings are retained in non-volatile memory so if power is lost to the speed dome for any reason, all settings will be retained.

```
           MAIN MENU
------------------------------
→<SYSTEM INFORMATION>
 <DISPLAY SETUP>
 <DOME CAMERA SETUP>
 <ALARM SETUP>
 <SYSTEM INITIALISE>
 <PASSWORD SETUP>
 <HELP>

 EXIT
```

To access the speed dome setup menu, key:

SHOT - 95 - ENTER

To navigate the main menu, move the joystick up / down to choose a menu item or change settings within a menu item.

To enter a menu item or confirm a new setting, key: **NEAR**
To exit a menu item or cancel a new setting, key: **FAR**

Where a menu item is surrounded by brackets, it indicates that there is a sub menu.

Where a menu screen shows **EXIT**, selecting this option will exit the menu and the speed dome will return to normal operation. Where a menu screen shows **BACK**, selecting this option will return to the higher menu level.

The main menu has five options:

<SYSTEM INFORMATION> - Provides information such as firmware version, protocol and ID values as defined by the dip switch settings.

<DISPLAY SETUP> - Allows the operator to specify which On Screen Display information is shown during normal operation. Also allows privacy zones to be defined and time/date to be changed

<DOME CAMERA SETUP> - Allows all operating features of the speed dome to be programmed and managed. Also allows settings for the camera module to be changed

<PASSWORD SETUP> - Allows a password to be set to protect the speed dome setup

<SYSTEM INITIALISE> - Allows various speed dome settings to be reset to factory defaults

System information

```
      SYSTEM INFORMATION
------------------------------
 FIRMWARE VER    2.23T27V
 COLOUR SYSTEM : PAL
 PROTOCOL      : PELCO-D
 ADDRESS       : 001
 BAUD RATE     : 2400
 Comm.MODE       RS422/RS485

→ BACK
 EXIT
```

From the main menu, use the joystick to highlight **SYSTEM INFORMATION** and key: **NEAR**

To return to the main menu, highlight **BACK** and key: **NEAR**

To exit the setup menu completely, highlight **EXIT** and key: **NEAR**

Display setup

```
         DISPLAY SETUP
------------------------------
→ CAMERA ID          ON/OFF
  ACTION TITLE     ON/OFF/AUTO
  PTZ INFORMATION  ON/OFF/AUTO
  PRESET LABEL     ON/OFF/AUTO
  ALARM I/O            ON/OFF
  DATE/TIME        ON/OFF/AUTO
 <DATE TIME SETUP>
 <PRIVACY ZONE>
 BACK
 EXIT
```

From the main menu, use the joystick to highlight **DISPLAY SETUP** and key: **NEAR**

CAMERA ID (ON / OFF) - shows camera ID according to the DIP switch settings,   eg CAM 1.

ACTION TITLE (ON / OFF / AUTO) - shows current speed dome action, eg PRESET3.

PTZ INFORMATION (ON / OFF / AUTO) - shows the current pan / tilt position in degrees and the current zoom level.

PRESET LABEL (ON / OFF / AUTO) - shows preset title (if defined) when a preset is called.

ALARM I/O (ON/OFF) - shows real time status of the alarm inputs and outputs.

<DATE TIME SETUP> - sub menu to change the date and time

<PRIVACY ZONE> - sub menu to setup the speed dome privacy zones

Highlight the item to modify and key: **NEAR**
Use the joystick to change the setting and key: **NEAR** to save or: **FAR** to cancel.

Note: If the auto option is chosen, the relevant information is displayed for a few seconds before disappearing.

DATE TIME SETUP

```
         DATE/TIME SETUP
------------------------------
→DATE    07-01-07/SUN
 TIME    14:37:15

 BACK
 EXIT
```

From the display setup menu, use the joystick to highlight **DATE/TIME SETUP** and key: **NEAR**

Highlight the item to modify and key: **NEAR**
Move the joystick up and down to change an individual value and left and right to move to the previous / next value

Privacy zone

```
          PRIVACY ZONE
-------------------------------
→ZONE NO.      1/8

  ZONE DISPLAY   ON/OFF
  CLEAR ZONE     CANCEL/YES
  <EDIT ZONE>
  BACK
  EXIT
```
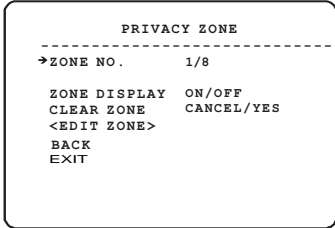
From the display setup menu, use the joystick to highlight **PRIVACY ZONE** and key: **NEAR**

ZONE NO. (1-8) - shows the privacy zone currently being modified.

DISPLAY - determines whether the privacy zone is displayed during normal operation.

<EDIT ZONE> - allows the operator to define the privacy zone.
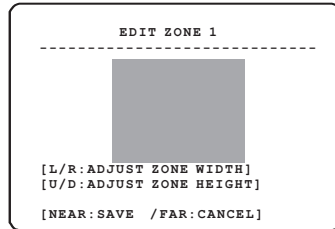
Highlight the item to modify and key: **NEAR** Use the joystick to change the setting and key: **NEAR** to save or: **FAR** to cancel.

Edit zone

```
          EDIT ZONE 1
-------------------------------




  MOVE TO TARGET POSITION
  [NEAR:SELECT/FAR:CANCEL]
```
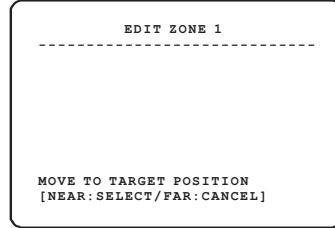
From the privacy zone menu, use the joystick to highlight **EDIT ZONE** and key: **NEAR**
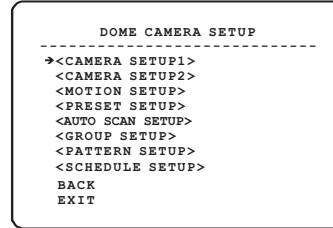
Use the joystick to move the speed dome to the approximate position and zoom level for the privacy zone and key: **NEAR** to select or **FAR** to cancel and return to the privacy zone menu.

```
          EDIT ZONE 1
-------------------------------

       [          ]


  [L/R:ADJUST ZONE WIDTH]
  [U/D:ADJUST ZONE HEIGHT]

  [NEAR:SAVE  /FAR:CANCEL]
```

Move the joystick left and right to finely adjust the width of the privacy zone and up and down to finely adjust the height.

To save the privacy zone, key: **NEAR** or key: **FAR** to cancel.

Dome camera setup

```
        DOME CAMERA SETUP
-------------------------------
→<CAMERA SETUP1>
 <CAMERA SETUP2>
 <MOTION SETUP>
 <PRESET SETUP>
 <AUTO SCAN SETUP>
 <GROUP SETUP>
 <PATTERN SETUP>
 <SCHEDULE SETUP>
 BACK
 EXIT
```

From the main menu, use the joystick to highlight **DOME CAMERA SETUP** and key: **NEAR**

<CAMERA SETUP1>,<CAMERA SETUP2> - setup of specific camera module features.

<MOTION SETUP> - setup of the pan / tilt / zoom operation of the speed dome, park action configuration, and configuration of the alarm inputs.

<PRESET SETUP> - full management and programming of individual presets.

<AUTO SCAN SETUP> - full management programming of SCAN functions.

<GROUP SETUP> - full management and programming of group functions.

<PATTERN SETUP> - full management and programming of pattern tours.

<SCHEDULE SETUP> - full management and programming of Schedule.

Highlight the setup menu required and key: **NEAR**

Remember: A menu item surrounded by brackets shows it has a sub menu.

Camera setup1

```
          CAMERA SETUP1
-------------------------------
→DIGITAL ZOOM     OFF/ON
 FOCUS MODE       AUTO
 <WHITE BALANCE>
 <AE MODE>
 <BACKLIGHT>
 BACK
 EXIT
```
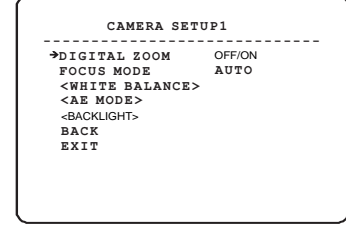
From the dome camera setup menu, use the joystick to highlight **CAMERA SETUP1** and key: **NEAR**

DIGITAL ZOOM (ON / OFF) - disables or enables the 10x digital zoom. When disabled, the maximum zoom level is 36x (optical).

FOCUS MODE
MANUAL - the operator must focus the camera manually using the NEAR and FAR keys.
SEMIAUTO - the camera automatically focuses during normal PTZ movement but preset focus information is stored when a preset is programmed and recalled each time the preset is called
AUTO - the module auto focuses continually

<WHITE BALANCE> - sub menu to change the white balance settings

<AE MODE> - sub menu to change the auto exposure settings

<BACKLIGHT> - to change backlight settings.

WB mode setup

```
         WB MODE SETUP
-------------------------------
→WB MODE          AWC
  RED ADJUST      ---
  BLUE ADJUST     ---
  BACK
  EXIT
```
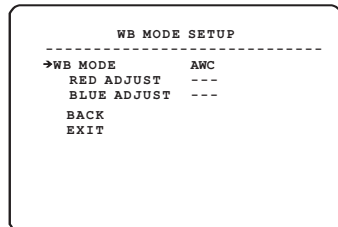
From the zoom camera setup menu, use the joystick to highlight **WHITE BALANCE SETUP** and key: **NEAR**

WB MODE

AWC- the speed dome determines the optimum white balance settings for a given scene
MANUAL - the operator can adjust white balance settings manually
iNDOOR- indoor mode
OUTDOOR-outdoor mode
ATW-auto trace white balance mode

RED ADJUST - in manual mode, the red colour content can be adjusted

BLUE ADJUST - in manual mode, the blue colour content can be adjusted

Auto exposure setup

```
          AE   SETUP
-------------------------------
  SENS-UP         OFF
  DAY/NIGHT       AUTO
  SSNR            OFF
  IRIS LEVEL      AUTO
  AGC LEVEL       OFF
  SHUTTER SPD     ESC
  BRIGHTNESS      054

  BACK
  EXIT
```

From the zoom camera setup menu, use the joystick to highlight **AUTO EXPOSURE SETUP** and key: **NEAR**

SENSUP (OFF/ ON) -operator can select sensup mode,

DAY/NIGHT (AUTO/DAY/NIGHT) - the operator can choose to fix the camera in to DAY (colour) or NIGHT (B&W with IR cut filter mode). In AUTO mode, the camera switches between DAY and NIGHT depending on the surrounding light level
SSNR- select ON/OFF
IRIS LEVEL- select IRIS level
AGC LEVEL- select AGC level
SHUTTER SPD- select shutter speed
BRIGHTNESS- adjust brightness level

```
        BACKLIGHT   SETUP
-------------------------------
  BACKLIGHT         BLC

    HLC   MODE  -----
    USER BLC SET
    BACK
    EXIT
```

BACKLIGHT (BLC/HLC/OFF) -operator can select back light mode
HLC MODE (LOW/OFF/HIGH) -operator can select HLC mode
USER BLC SET - set BLC position and size

Camera setup2

```
         CAMERA SETUP2
-------------------------------
→PIC FREEZE       OFF
  PIC FLIP        OFF
  ZOOM SPEED      7
  FLICKERNESS     OFF
  STABILIZER      OFF
  BACK
  EXIT
```
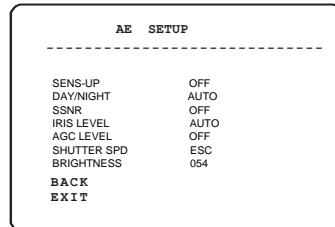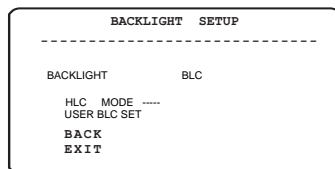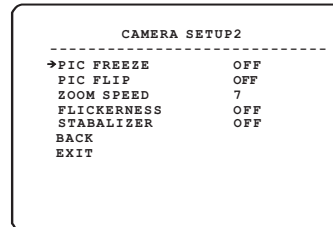
From the dome camera setup menu, use the joystick to highlight **MOTION SETUP** and key: **NEAR**

PIC FREEZE - when set to ON, there's no image flash.

PIC FLIP - when set to ON, the image will be turned 180 degrees.

ZOOM SPEED - Operator can select zoom speed.

FLICKERNESS - Should be set to ON when used in certain lighting conditions (EG Fluorescent lighting) to prevent picture flicker.

STABILIZER - Used to select stabilizer mode

Highlight the item to modify and key: **NEAR**
Use the joystick to change the setting and key: **NEAR** to save or: **FAR** to cancel.

Motion setup

```
         MOTION SETUP
-------------------------------
→AUTO FLIP          ON
  JOG SPEED         SLOW
  JOG DIRECTION     NOR
  PWR UP ACTION     ON
  ZOOM PROPORTIONAL ON
  PRESET LOCK       OFF
  <PARK ACTION>
  BACK
  EXIT
```
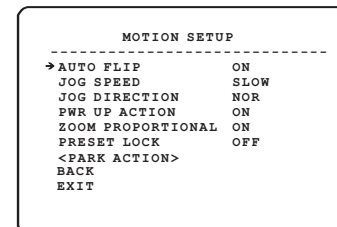
From the dome camera setup menu, use the joystick to highlight **MOTION SETUP** and key: **NEAR**

AUTO FLIP (ON / OFF) - when set to ON, the dome will flip 180 degrees when the tilt position reaches 90 degrees.

JOG SPEED - determines the maximum speed in degrees / second the dome will move during manual operation

JOG DIRECTION (INVERSE / NORMAL) - when set to normal, the pan direction is opposite to the joystick movement.

PWR UP ACTION - when set to ON, the speed dome will resume its last operation when power is restored after a power failure

<ZOOM PROPORTIONAL> - used to select zoom proportion.

<PARK ACTION> - Configure actions that run automatically after a defined period of inactivity

PRESET LOCK - when set to ON, preset programming directly from the keyboard is disabled to prevent tampering

Highlight the item to modify and key: **NEAR**
Use the joystick to change the setting and key: **NEAR** to save or: **FAR** to cancel.

Park action setup

```
   PARK  ACTION  SETUP
------------------------------
→PARK ENABLE      OFF
 PARK TIME        00:10:00
 PARK ACTION      HOME
 BACK
 EXIT


NOTE: PARK TIME UNITS
       IS SECONDS
```

From the motion setup menu, use the joystick to highlight **PARK ACTION SETUP** and key: **NEAR**

PARK ENABLE - when set to ON, the speed dome will run the specified park action after the wait time has elapsed

WAIT TIME - can be set between one minute and 4 hours. If no manual control occurs during this time, the park action will run

PARK ACTION - choose the action to run after the wait time has elapsed. This can be return to home position, go to a preset or run a SCAN, GROUP or PATTERN TOUR

Highlight the item to modify and key: **NEAR**
Use the joystick to change the setting and key: **NEAR** to save or: **FAR** to cancel.

Preset setup

```
        PRESET SETUP
------------------------------
→ PRESET NO.    001

 <EDIT SCENE>
 <PRESET DEFAULTS>
 <EDIT LABEL>
 CLEAR PRESET    CANCEL
 RELATE ALARM    NONE
 BACK
 EXIT
```

From the dome camera setup menu, use the joystick to highlight **PRESET SETUP** and key: **NEAR**

PRESET NUMBER (1 - 128) - The preset number currently being modified. If the preset number is already defined, the speed dome will move to that preset position, otherwise UNDEFINED is displayed under the preset number

<EDIT SCENE> - use this option to program the preset position

<PRESET DEFAULTS> - define default setting

<EDIT LABEL> - use to edit the preset label. *This option is only available when the selected preset position is already programmed*
CLR PRESET - use this option to delete the current preset position
RELATE ALARM- set to relate alarm

Highlight the item to modify and key: **NEAR**
Use the joystick to change the setting and key: **NEAR** to save or: **FAR** to cancel.

Edit scene

```
    EDIT SCENE - PRESET 001
------------------------------




 MOVE TO START POSITION
 [NEAR:SELECT FAR:CANCEL]
 CAM 001        O:----
 006/02  X001   I:----
```

From the preset setup menu, use the joystick to highlight **EDIT SCENE** and key: **NEAR**

Using the joystick, move the speed dome to the desired position and zoom level and key: **NEAR** to save or: **FAR** to cancel.

Preset defaults

```
PRESET DEFAULTS     PRE-001
------------------------------
 CLEAR DEFAULTS     CANCEL
 FOCUS MODE         AUTO
 STABALIZER         OFF
 <BLACKLIGHT>
 <WHITE BALANCE>
 <AE MODE>
 SAVE               YES
 BACK
 EXIT
```

From the motion setup menu, use the joystick to highlight **PRESET DEFAULTS** and key: **NEAR**

Preset defaults   - YES/CANCEL
for each preset, specifies the camera setting.
f*ollowing items are available only when yes is selected.*

Focus mode - AUTO/SEMIAUTO/MANUAL

STABILIZER - select stabilizer setting
BACKLIGHT - select backlight setting
WHITE BALANCE - select WB setting
AE MODE - select AE setting

Highlight the item to modify and key: **NEAR**
Use the joystick to change the setting and key: **NEAR** to save or: **FAR** to cancel.

Edit label

```
        PRESET LABEL SETUP
-----------------------------
LAB FOR PRE      [████████]
       ----------
  1234567890
  ABCDEFGHIJ
  KLMNOPQRST
  UVWXYZ - .■
  SAVE             CANCEL
  CLEAR            CANCEL
  BACK
  EXIT
```

From the preset setup menu, use the joystick to highlight **EDIT LABEL** and key: **NEAR**

The solid white square shows the current cursor position.
The flashing white square shows the currently selected character.

Move the joystick up / down / left / right to choose the required character and key: **NEAR** to insert it in the preset label. The solid white square moves to the next cursor position. Repeat until the preset label is complete.

If a mistake is made, use the joystick to select the backspace (←) and key: **NEAR**. The cursor moves back one square.

Select **OK** to save the preset label or **CANCEL** to lose changes, and key: **NEAR** to exit

Auto Scan Setup

```
          SCAN SETUP
-----------------------------
→ SCAN NO.        1/8
  1ST POS.        NONE
  2ND POS.        NONE
  SCAN SPEED      030
  DIRECTION       NORMAL
  CLEAR SCAN      CANCEL
  RUN SCAN
  BACK
  EXIT
```

From the dome camera setup menu, use the joystick to highlight **SCAN SETUP** and key: **NEAR**

SCAN NO. (1-8) - shows the SCAN number currently being modified.

1ST POS. - any defined preset between 1 & 127.

2ND POS. - any defined preset between 1 &127.

SCAN SPEED - determines the speed of movement in degrees per second between each preset position.

CLEAR SCAN - deletes the currently selected VST function.

RUN SCAN - runs the currently selected SCAN function for testing purposes

Highlight the item to modify and key: **NEAR** Use the joystick to change the setting and key: **NEAR** to save or: **FAR** to cancel.

Note:A scan always moves anti-clockwise to the 1st position and then clockwise to the 2nd position.

Group setup

```
        GROUP SETUP
------------------------------
→ GROUP NO.    1/8

  SAVE GROUP    CANCEL
  CLEAR GROUP   CANCEL
  RUN GROUP
  <EDIT GROUP>
  BACK
  EXIT
```

From the dome camera setup menu, use the joystick to highlight **GROUP SETUP** and key: **NEAR**

GROUP NO. (1-8) - shows the group number currently being modified.

CLEAR GROUP - the currently selected group can be deleted

RUN GROUP - runs the currently selected group for testing purposes

<EDIT GROUP> - allows the operator to program the group functions. operator can edit new nesting group action in each group

Highlight the item to modify and key: **NEAR**
Use the joystick to change the setting and key: **NEAR** to save or: **FAR** to cancel.

Edit group

```
        EDIT GROUP 1
------------------------------
→ NO ACTION AAA DWELL OPT
------------------------------
  1 PRESET 001 00:03 360
  2 NONE
  3 NONE
  4 NONE
  5 NONE
------------------------------
  BACK
  CANCEL
```

From the group setup menu, use the joystick to highlight **EDIT GROUP** and key: **NEAR**

To edit the group, key: **NEAR** again

Header explanation:
NO - the item number (between 1 & 20)
ACTION - the specific action for this item
AAA - the action number (eg if ACTION is set to PRESET, this value can be between 1 &128
DWELL - the amount of time before the next action in the list is called
OPT - for PRESET actions, this value is the speed at which the dome moves to the preset. For SCAN and PATTERN, this value is the number of times the action is repeated before the next action is called

Move the joystick up and down to choose the group item to modify and key: **NEAR.** The ACTION is highlighted in white

Move the joystick up and down to change the action type between NONE, PRESET, SCAN and PATTERN.

Move the joystick left and right to select and edit values for AAA, DWELL & OPT.

Edit group

```
        EDIT GROUP 1
------------------------------
  NO ACTION AAA DWELL OPT
------------------------------
  1 PATTERN  1 00:03    1
  2 PRESET   5 00:08  360
  3 SCAN     3 00:03    8
  4 PRESET  10 00:15  110
  5 PRESET   4 01:30   55
------------------------------
  BACK
  CANCEL          [NEAR:EDIT]
```

Key **NEAR** to save this item and continue adding more items as necessary, or key **FAR** to exit.

Pattern setup

```
        PATTERN SETUP
------------------------------
→ PATTERN NO.    1/4

  CLEAR PATTERN   CANCEL
  RUN PATTERN
  <EDIT PATTERN>
  BACK
  EXIT
```

From the dome camera setup menu, use the joystick to highlight **PATTERN SETUP** and key: **NEAR**

PATTERN NO. (1 - 4) - The pattern number currently being modified.

CLEAR PATTERN - the currently selected pattern can be deleted

RUN PATTERN - runs the currently selected pattern for testing purposes

<EDIT PATTERN> - allows the operator to program a patten tour

Highlight the item to modify and key: **NEAR**
Use the joystick to change the setting and key: **NEAR** to save or: **FAR** to cancel.

Edit pattern

```
        EDIT PATTERN 4
------------------------------


   MOVE TO START POSITION
   [NEAR:START /FAR:CANCEL
   CAM 001       O ----
   009/06  X001  I --------
```

From the pattern setup menu, use the joystick to highlight **EDIT PATTERN** and key: **NEAR**

Position the speed dome to the desired starting point and key: **NEAR**

```
EDIT PATTERN 4
□□□□□□□□□□□□□□□□□□□□□□□□□□
               □□□



[NEAR:SAVE  /FAR:DELETE]
```

Move the dome to the various positions and zoom levels required for the pattern. The white squares at the top of the display show remaining storage and disappear as the pattern is recorded.

To save the pattern, key: **NEAR**
To abandon pattern programming, key: **FAR**

Note: Pattern tour memory is only used when movements are recorded. Pauses between movements, regardless of time, do not use pattern tour memory

Schedule Setup

```
        SCHEDULE SETUP
------------------------------
   MASTER ENABLE        ON/OFF
 → DAY TIME   ACT   NO.
 1 MON 00:00  PAT  001    OFF
 2 UNDEFINED
 3 UNDEFINED
 4 UNDEFINED
 5 UNDEFINED
 6 UNDEFINED
 7 UNDEFINED
 BACK
```

From the main menu, use the joystick to highlight **SYSTEM INITIALISE** and key: **NEAR**

DAY TIME- selecting this option to set date and time

ACT- selecting this option to set dome motion

Highlight the item to modify and key: **NEAR**
Use the joystick to change the setting to ON and key: **NEAR** to run or: **FAR** to cancel.

Alarm Setup

```
        ALARM SETUP
---------------------------
→ ALARM IN CHANELS    01/16
  ALARM ENABLE        OFF
  RELATE PRESET
  RELATE RELAY OUT    ----
  INPUT SETUP
  RELAY ACTIVE TIME
  SAVE                YES
  <ALARM POSITION>
  BACK
  EXIT
```

From the main menu, use the joystick to highlight **ALARM SETUP** and key: **NEAR**

ALARM IN CHANEL - selecting alarm chanel

ALARM ENABLE - this option will enable alarm function

RELATE PRESET - selecting related preset

RELATE RELAY OUT - selecting related relay out

INPUT SETUP - set up alarm input

RELAY ACTIVE TIME - set relay active time.

<ALARM POSITION> - select alarm position

Highlight the item to modify and key: **NEAR**
Use the joystick to change the setting to ON and key: **NEAR** to run or: **FAR** to cancel.

System Initialise

```
       SYSTEM INITIALISE
-------------------------------
→ CLEAR ALL DATA         NO.
  CLR DISPLAY SET        NO.
  CLR CAMERA SET         NO.
  CLR MOTION SET         NO.
  CLR EDIT DATA          NO.
  REBOOT CAMERA          NO.
  REBOOT SYSTEM          NO.
  BACK
  EXIT
```

From the main menu, use the joystick to highlight **SYSTEM INITIALISE** and key: **NEAR**

CLEAR ALL DATA - selecting this option will perform a full factory reset on the speed dome. All presets, scan functions, patterns, groups and privacy zones will be erased

CLR DISPLAY SET - this option will reset the on screen display settings to factory default and erase all privacy zones

CLR CAMERA SET - this option will reset the camera module settings to factory default

CLR MOTION SET - this option will reset the motion menu settings to factory default

CLR EDIT DATA - this option will erase all presets, VST functions, patterns and groups

Highlight the item to modify and key: **NEAR**
Use the joystick to change the setting to ON and key: **NEAR** to run or: **FAR** to cancel.

Password setup

```
  PASSWORD SETUP
-------------------------------
→ CHECK PASSWORD        OFF
  <EDIT PASSWORD>
  SAVE                  CANCEL
  BACK
  EXIT
```

From the main menu, use the joystick to highlight **PASSWORD SETUP** and key: **NEAR**

CHECK PASSWORD (ON/OFF) - when set to ON, the correct password must be entered to access the speed dome setup menus

<EDIT PASSWORD> - allows the current password to be changed

SAVE - to save current password.

Edit Password

```
       Password setup
-------------------------------
INPUT CURRENT PASSWORD:

   11111111
```

From the password setup menu, use the joystick to highlight **EDIT PASSWORD** and key: **NEAR**

Default password is 11111111

The solid white square shows the current cursor position.
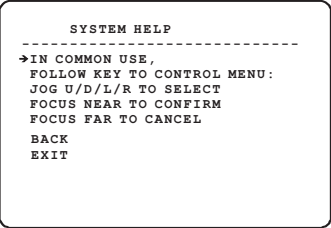This flashing white square shows the currently selected character.

Move the joystick up / down / left / right to choose the required character and key: **NEAR** to insert it in the password. The solid white square moves to the next cursor position. Repeat until password entry is complete.

If a mistake is made, use the joystick to select the backspace ( ) and key: **NEAR**. The cursor moves back one square.

Select **OK** to save the password or **CANCEL** to lose changes and key: **NEAR** to exit

Remember: When CHECK PASSWORD is set to ON, each time the operator attempts to enter the speed dome setup menu, the above screen will be displayed. The correct password must be entered to continue with menu setup

System Help

```
        SYSTEM HELP
-------------------------------
➔IN COMMON USE,
 FOLLOW KEY TO CONTROL MENU:
 JOG U/D/L/R TO SELECT
 FOCUS NEAR TO CONFIRM
 FOCUS FAR TO CANCEL
 BACK
 EXIT
```

From the main menu, use the joystick to highlight **SYSTEM HELP** and key: **NEAR**

Highlight the item to modify and key: **NEAR**
Use the joystick to change the setting to ON and key: **NEAR** to run or: **FAR** to cancel.

Calling the actions

Once the pattern tours, scan functions and groups have been programmed in the speed dome setup menu, they can all be accessed directly from the PTZ control equipment by using the following sequences.

1. To start a pattern tour press:

SHOT - 13X - ENTER

Where **X** is a pattern tour number between 1 & 4

The selected pattern tour will run indefinitely until a manual movement is made by the operator or an alarm input is received.

2. To start a scan function, press:

SHOT - 14X - ENTER

Where **X** is a scan function number between 1 & 8

The selected scan function will run indefinitely until a manual movement is made by the operator or an alarm input is received.
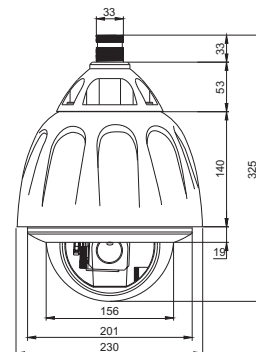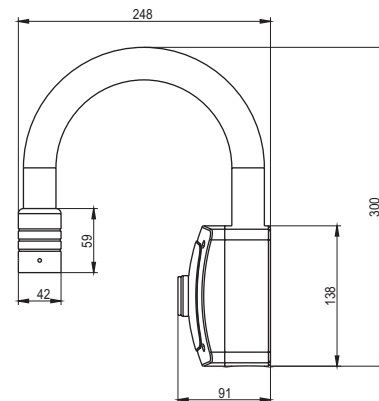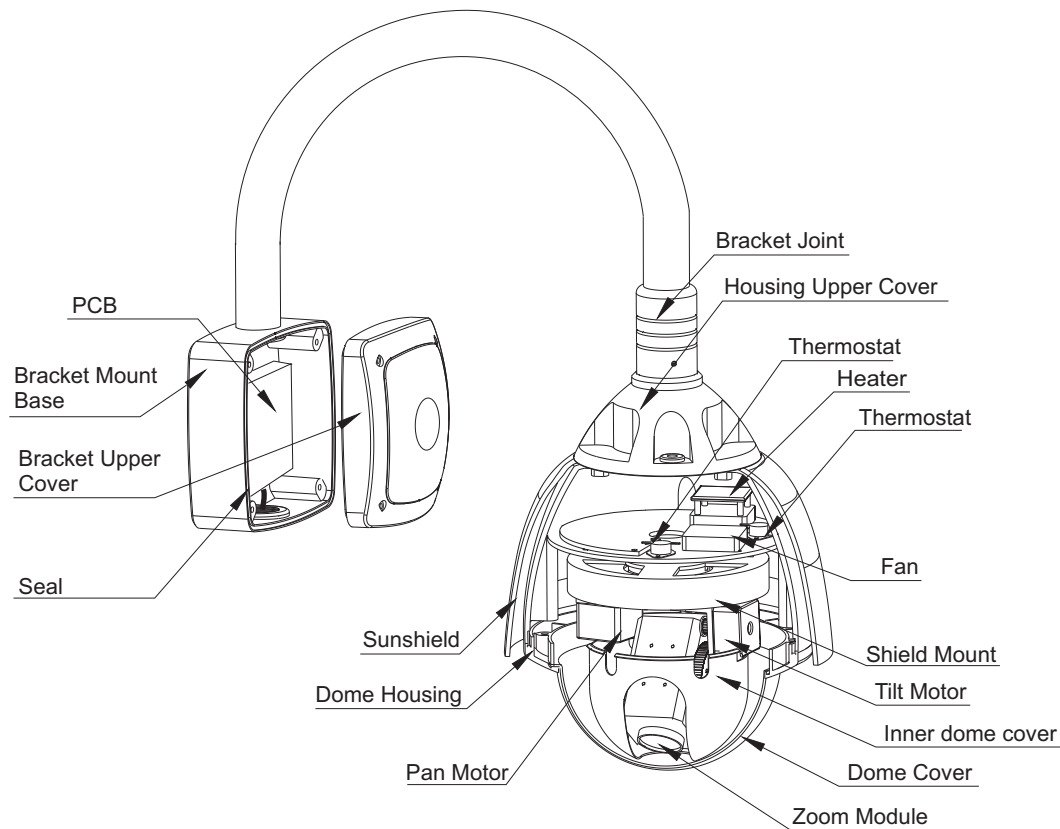
3. To start a group, press:

SHOT - 15X - ENTER

Where **X** is a group number between 1 & 8

The selected group will run indefinitely until a manual movement is made by the operator or an alarm input is received.

Shortcut Menu

SHOT - NO.-ENTER	FUNCTION
0 (TWICE)	ENTER MAIN MENU
33	RESERVED
34	RESERVED
62	RESERVED
63	RESERVED
92	RESERVED
93	RESERVED
94	REMOTE RESET
95	ENTER MAIN MENU
131-134	CALL PATTERN
141-148	CALL SCAN
151-158	CALL GROUP
161-165	RESERVED WORD
170	WDR OFF
171	WDR ON
172	AE AUTO
173	SET SHUTTER SPEED TO 1/120 SEC

Parts and dimensions

Bracket Joint

Housing Upper Cover

PCB

Thermostat

Bracket Mount Base

Heater

Thermostat

Bracket Upper Cover

Fan

Seal

Sunshield

Shield Mount

Dome Housing

Tilt Motor

Inner dome cover

Pan Motor

Dome Cover

Zoom Module

248

59

42

300

138

91

33

33

53

140

325

19

156

201

230

Wiring schematic

Power Cable

24V AC PSU

Video Cable

RS-485
Cable

Alarm Input
Cable

Alarm Sensor

Alarm Output
Cable

Siren / Light etc.
power source

Siren / Light etc.

Specifications

Camera	CCD	¼"
	Resolution	680TVL B/W, 560TVL COLOR
	Minimum Illumination	0.2 Lux COLOR, 0.02 B/W
	Optical Zoom	27x f=3.5 ~ 94.5mm, F=1.6~3.9
	Digital Zoom	16X
	S/N Ratio	52db
	Focus	Auto / Manual
	White Balance	AWC/ Manual/Outdoor/Indoor/Auto
	Back Light compensation	Low/ HLC / Off
Pan / Tilt	General	Pan: 360 degrees continuous rotation
		Tilt: 90 degrees with auto flip function
	Speeds	Manual / pattern tour: 1 - 255 degrees / second
		Preset to preset: 360 degrees / second
		VST: 1 - 255 degrees / second adjustable in 1 degree steps
	Preset positions	Up to 128, 10 character title per preset
	Pattern tours	Up to 4
	VSTfunction	Up to 8, speed adjustable
	Groups	Up to 8, each with up to 20 actions (preset, pattern tour or VST)
	Privacy zones	Up to 4, user definable
	Park function	Park to specified preset, pattern or VST after a defined period of inactivity (1 min ~ 4 hours)
Communication	Data type	RS-485/RS422
	Protocols	Pelco-D or Pelco-P
	Baud rates	2400, 4800, 9600
	Camera ID	1-255
	Alarm I/O	8 inputs, 4 outputs
	On Screen Display	OSD menu, camera position, dome ID, alarm status, preset / VST/ pattern tour status
Mechanical	Fan / Heater	Built in
	Sunshield	Fitted
	Operating temperature range	-35 deg C to +50 deg C
	Humidity	<95%
	Power supply	24VAC, 20 watts / 24V AC,60 watts (heater on)
	Dimensions (with standard wall	Overall height: 530mm
	Bracket and sun shield fitted)	Overall width: 230mm
		Overall depth: 342mm