Before attempting to install or operate on this produce,
Please read this manual carefully and keep it for future use.
Chapter One Product Overview
   I. Performance instruction..............................................................................................................2
   II. Notice.....................................................................................................................................3
   III Installation steps of shield dome..........................................................................................4
   IV. Installation Instruction of the Acrylic Demo Shield.................................................................6
   V. Install Bend-Tube-Style Bracket.............................................................................................7

Chapter Two Wiring and Setup of Dome System
   I. Wiring of Dome System...........................................................................................................8
      1. Minimum system connection..............................................................................................8
      2. Multi-dome device connection.........................................................................................8
   II. Setting of Dome Device communication .............................................................................9
      1. Setting protocol and baud rate of dome device.................................................................9
      2. Address setting of dome device.....................................................................................10
      3. Setting of dome device ID.............................................................................................11

Chapter Three Fast Operation Guide of Dome Device
   I. Wiring.....................................................................................................................................12
   II. Setting protocol and baud rate............................................................................................12
   III. Setting dome device address............................................................................................13
   IV. Install camera.....................................................................................................................13
   V. Connect the power of dome device......................................................................................13
   VI. Controller setting...............................................................................................................13
   VII. Start testing.....................................................................................................................13
   VIII. Complete the test (Summary)..........................................................................................13

Chapter Four English Operation Menu of Dome Device
   I. Main menu............................................................................................................................14
   II. Tree Menu List....................................................................................................................14
      1. Language Options............................................................................................................14
      2. Display options...............................................................................................................15
      3. Control options...............................................................................................................16
      4. Diagnostic Options.........................................................................................................17
      5. Camera Options.............................................................................................................18
      6. Function Programming.....................................................................................................19

Chapter Five Short-cut Operations and Specification of Dome Device
   1. Coding description of protocol and serial transmission rate:.............................................22

Chapter Six Trouble Shooting of Dome Device
   1. Trouble shooting table........................................................................................................24
Chapter One Product Overview

I. Performance instruction:

1. **Address of Dome device is from 0~255.** The number (address) of dome device in the control system is setup by the hardware (8-digit on and off switch) of dome device.

2. **Integrate multi-protocol and auto protocol differentiation.** Note: The dome device only auto differentiate controller of the first communication.

3. **Pan 360 degree continuous rotation.**

4. **Tilt 90 degree action plus 2 degree angle adjustment.**
   
   Plus the 2 degree adjustment, the view angle can be 90 or 92 degree.

5. **Pan manual operation speed can be 0.1 to 280 degree per second**

6. **Tilt manual operation speed can be 0.1 to 120 degree per second**

7. **128 pershot positions.** (A fixed position that aimed by the dome camera, which can be set and revised by user arbitrarily)

8. **The maximum running speed when preshot is being called can reach 360 degree per second with accuracy of ±0.1 degree.**

9. **Easy installation interface.**

10. **Pass environmental protection grade IP66 (outdoor type)**

11. **Adopts long distance RS-485 transmission mode**

12. **Transmission speed, i.e. Baud rate is selectable.** (Set by the fifth and sixth bit of the on and off switch of the dome device. 2400bps~19200bps)
II. Notice:

Signal Communications Limited reserves the right to make improvements to the product described in this manual at any time and without prior notice.

This manual is copyrighted. All rights are reserved. This manual may not be copied, reproduced or translated in whole or part without prior consent from Signal Communications Limited.

Tele Eye is a trademark of Signal Communications Limited and is registered in China, Hong Kong, US and other countries.

TeleEye's products are sold under the brand name of CAMERIO in Australia, Japan, Korea, New Zealand, Taiwan and Argentina.

CAMERIO is a trademark of Signal Communications Limited and is registered in Australia, Japan, Korea, New Zealand, Taiwan and Argentina.

All other trademarks are the property of their respective owners
Copyright (c) 2007 Signal Communications Limited (A Member of TeleEye Group). All rights reserved.

Version 1.1

Limits of Liability and Disclaimer of Warranty
Signal Communications Limited has taken care in preparation of this manual, but makes no expressed or implied warranty of any kind and assumes no responsibility for errors or omissions.

No liability is assumed for incidental or consequential damages in connection with or arising out of the use of the information or accessories contained herein.

Features and specifications are subject to change without prior notice.
1. Before installing the full-view High-Speed Dome Video Camera, please read this user’s manual first.

2. This unit should be operated only from the type of power source indicated on the marking label found at the power adapter. If you are not sure of the type of power supply you plan to use, consult your appliance dealer or local power company. For units intended to operate from battery power or other sources, refer to operating instructions.

3. Inside the Dome device are precise optical and electrical instruments. Heavy pressure, shock and other incorrect operations should be prevented during the processes of delivery, storage and installation. Otherwise, it may cause damage on the product.

4. Please do not remove and disassemble any internal components from the Dome video camera by yourself in order to avoid normal usage being impacted. There is no parts inside the device which can be repaired by the user himself.

5. Always conform to national and local safety codes during installation. Adopt the special power provided with the Dome video camera. During transmission, RS-485 and video signal should be retained enough distance with high-voltage equipments or cables. When necessary, thunder-proof, surge-proof and other protecting measures should be carried out.

6. Please avoid exposing the Dome video camera to rain or the humidity, etc. Please do not use the product in humid place. If the video camera is installed in outdoor area, please ensure the device being protected by a weather-proof, sealed shield. Exposure to open area should be avoided.

7. Do not install this dome camera in a place exceeding the required environment conditions such as temperature, humidity and power supply specifications.

8. Whether the high-speed Dome video camera is powered on or not, avoid the video camera aiming at the sun or glary object. Lengthy exposure to static bright object is also not recommended.

9. Please do not use strong or caustic washing lotion to clean the main body of the high-speed Dome video camera. After dirt is cleaned up, please use cotton fabric to clean the product. Stubborn dirt should be cleaned up with neutral washing lotion, and then dried gently with soft cotton fabric.

10. Shall use the high-speed Dome video camera carefully and avoid being stroked or shocked. If operating is improper, the product may be damaged.

11. Install the High-Speed Dome Video Camera in a place with enough holding force.

12. If camera lens adheres with dust, please use special lens paper to clean up.

13. When disassemble the Acrylic DOME shield, please wear cotton gloves to process in order to avoid surface of the product being scraped.
III. Installation steps of shield dome.

Figure III.1 indicates the fixing holes of acrylic shield, i.e. four M3 screw holes.

Step one: Aim the open end of shield dome at the lens of camera. Aim the 4 holes on the shield to the 4 M3 screw holes on the dome device, as indicated in figure III.2.

Step two: screw the four M3 bolt up, as indicated in figure III.3.
IV. Installation Instruction of the Acrylic Dome Shield

1. Remove Acrylic DOME shield (Please do not scrape the Acrylic shield. It is recommended to wear cotton gloves when operate).

2. As shown in the figure below, first take the flexible flat cable through connector above the base plate and buckle it on the connector. Then buckle the cable on the connection below the CAMERA.

3. Lock the CAMERA up and fix the screws.

4. Install Acrylic shield

Fig IV.1 Installation of the Acrylic Dome Shield
V. Install Bend-Tube-Style Bracket

Fig V.1 Connecting the dome to the wall mount with the bracket.

Fig V.2 Wall mount bracket installation
I. Wiring of Dome System

1. Basic system connection. (One dome device)

From the basic system connection, user can understand the electric wiring attribute of the dome device and bring great operation convenience of installation, testing and demo. When using this product for the first time, please read carefully and follow this electric wiring drawing as any wrong wiring may lead to permanent damage of the dome device or damage of other equipment.

In the drawing, JMP-120R is the impedance matching selection of control signal and noise restrain of RS-485, when there is long distance transmission or noise-control, it can short jumper.

Attention: No operation when the dome device is power on.


When connecting many dome devices together, the user can embed multi-device system with auxiliaries such as arrester device, video matrix, DVR and alarm box for system integration.

AC24V: Power supply of dome device, which will convert 110V/60Hz or 220V/50Hz input to AC 24V output and supply to the dome device.

RS-485 Bus: It is for the control signal (RS-485 signal) output of controller, connecting to the communication input terminals of control cable of each dome device.

Video: It is for image signal output of dome device, (can directly output to video equipment such as monitor or video matrix. Take care of the match up of impedance.)
II. Setting of Dome Device communication

Before installation and use, the setting of communication protocol and transmission speed (baud rate) should comply with the control system.

1. Setting protocol and baud rate of dome device.

<table>
<thead>
<tr>
<th>Protocol type</th>
<th>1st digit</th>
<th>2nd digit</th>
<th>3rd digit</th>
<th>4th digit</th>
<th>5th digit</th>
<th>6th digit</th>
</tr>
</thead>
<tbody>
<tr>
<td>PELCO-D</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>PELCO-P</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>TeleEye DM2</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>**</td>
<td>**</td>
</tr>
</tbody>
</table>


**Attention:** the protocol and baud rate of dome device should comply with those of controller, which need to be restarted after revision.

- **On/Off status and Baud rate**
  - Baud rate: 2400, 4800, 9600, 19200
  - 5th digit: OFF, ON
  - 6th digit: OFF, ON

<table>
<thead>
<tr>
<th>Baud rate</th>
<th>5th digit</th>
<th>6th digit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2400</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>4800</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>9600</td>
<td>ON</td>
<td>OFF</td>
</tr>
<tr>
<td>19200</td>
<td>ON</td>
<td>ON</td>
</tr>
</tbody>
</table>

---

2. **Address setting of dome device.**

**Setting method:** The sum of switch numbers when it is at ON position is the address of dome device.

Calculation example of dome device address:

\[(2 + 4 + 16 = 22)\] the address is **22**.

Dome device range: 0~255.
<table>
<thead>
<tr>
<th>Dome Address (ID Number)</th>
<th>switch state</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>1</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>2</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>3</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>4</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>5</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>6</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>7</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>8</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>9</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>10</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>11</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>12</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>13</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>14</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>15</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>16</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>17</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>18</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>19</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>20</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>...</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>255</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
</tbody>
</table>
Chapter Three Fast Operation Guide of Dome Device

I. Wiring (Please do not turn the power on).

II. Setting protocol and baud rate. (Turn the power off when setting, and restart the device after revision).

The figure shows: Protocol: **PELCO-D**
Baud rate: **2400 bps**

(Please refer to detailed parameter in next chapter)

*This dip switch located on PCB in the dome device*
III. Setting dome device address. (Turn the power off when setting, and restart the device after revision).

![Dip switch diagram]

The figure shows: Address of the dome device: No. 1

(Please refer to detailed parameter in next chapter)

This dip switch located on PCB in the dome device

IV. Install camera. (Please refer to camera installation for details).

Attention: 1. Do not connect the camera and dome device with FFC in a wrong way.

2. The installation holes of different camera differ.

V. Connect the power of dome device.

At this moment, the self-test (rotation) of dome device and self-test (there will be image on the monitor) of camera can be seen.

Attention: When the dome device is self-testing, it is normal when sound is issued caused by the block of dome device after 2~5 seconds of vertical movement, which is the tilt orientation of the dome itself.

VI. Controller setting.

Set the protocol, baud rate and address of the keyboard controller identical with those of dome device. (Please refer to keyboard controller instruction manual).

Attention: If the setting of protocol of dome device is auto detection, the protocol of keyboard controller can be set arbitrarily. But its baud rate should be set identical with that of the dome device.

VII. Start testing.

When all the above are ready, the testing to dome device can be started.

1. Direction control test of dome device

2. Zooming control test of camera

The directions (up, down, left and right) of the dome device can be controlled by using the keyboard controller, as indicated in the figure.

Note: the working of dome device is normal

Zooming of the camera can be controlled by zooming function Joystick or by using TELE (zoom in) and WIDE (zoom out) on the keyboard button.

Note: The camera and dome device are normal

(Please refer to the next section for demonstration of menu operation and control of dome device.)

VIII. Complete the test. (Summary).

1. If the performance of item 7 is normal, it indicates the system is basically normal. Please do not change the wiring and various setting to avoid fault and unnecessary damage and loss.

2. If the performance of item 7 is abnormal, or only one item works normally, please check the wiring (item 1 and 4) and setting (item 2, 3 and 6) carefully.
Chapter Four - English Operation Menu of Dome Device

I. Main menu

<1>. Press CALL+90+ENTER on the keyboard to enter the main menu of dome device (fig.1).

<2>. Select options Joy stick only between up and down, the arrow points to the current selected option. Press OPEN or left or right of Joystick to command entering the submenu of that option or change the value or setting of that option.

<3>. Press CLOSE to exit menu or return to upper stage menu.

II. Tree Menu List.

<1>. All sub-menus can be seen clearly in this tree list.

1. Language English
   ▶ Language options
   2. Display options
      ▶ Display options
   3. Control Options
      ▶ Control options
   4. Diagnostic Options
      ▶ Diagnostic options
   5. Camera Options
      ▶ Camera options
   6. Function Programming
      ▶ Functions programming

IRIS CLOSE to Exit

1. Language
   English
   ▶ Language options

2. Display options
   ▶ Display options
   1. Preshot setup
      1. Number 1

   1~165
   001
   ▲
   0 1 2 3 4 5 6 7 8 9
   IRIS CLOSE When Done

Joystick left or right to select

Press OPEN or Joy stick left or right to enter

Press CLOSE to exit or return to upper stage menu when programming is done.
2. Set Preshot

Set preshot and press CLOSE to confirm the programming when done and auto exit and return to the upper stage menu.

3. Call Preshot

Call out

Call preshot. The action of the dome device can be seen and return to corresponding preshot point.

4. Delete Preshot

Delete preshot. Press OPEN to confirm and auto exit and return to the upper stage menu.

5. Name

Edit the name of preshot.

6. Name Display

Name display On/Off

Sector setup

Number selection

Name editing

Pan start point

Pan end point

IRIS CLOSE When Done

Press OPEN or joystick left or right to enter. Press OPEN or joystick left or right when programming to select preshot and press OPEN to confirm. Joystick left or right to select (0~9 or A~Z). Press OPEN to confirm selection. Press CLOSE to exit or return to upper stage menu when programming is done.
3. Control options

1. Set pan and Tilt
   1. Pan Reverse
      ON/OFF
      << Pan Reverse ON/OFF Joy stick left or right to select
   2. Tilt Reverse
      ON/OFF
      << Tilt Reverse ON/OFF Joy stick left or right to select
   3. +2 Tilt Limit
      ON/OFF
      << +2 Tilt Limit ON/OFF Joy stick left or right to select
   4. Find Home on STA
      ON/OFF
      << Find Home on start ON/OFF Joy stick left or right to select

2. Set Default Function
   1. Default Function
      P/V/T
      << Select default function (Preshot/Tour/PTZ) Joy stick left or right to select
   2. Number
      1
      << Function number selection Joy stick left or right to select

3. Delay
   001
   << Time delay setting (second) Joy stick left or right to select
<table>
<thead>
<tr>
<th>Feature</th>
<th>Options</th>
<th>Description</th>
<th>Control Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation</td>
<td>ON/OFF</td>
<td>Default function On/Off</td>
<td>Joy stick left or right to select</td>
</tr>
<tr>
<td>IRIS CLOSE Exit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speed Limit</td>
<td>ON/OFF</td>
<td>Operation speed limit On/Off</td>
<td>Joy stick left or right to select</td>
</tr>
<tr>
<td>Auto Flip</td>
<td>ON/OFF</td>
<td>Auto flip On/Off</td>
<td>Joy stick left or right to select</td>
</tr>
<tr>
<td>Auto Focus</td>
<td>PTZ/OFF/Z</td>
<td>Auto focus options</td>
<td>Joy stick left or right to select</td>
</tr>
<tr>
<td>Auto AE</td>
<td>PTZ/OFF/Z</td>
<td>Auto AE options</td>
<td>Joy stick left or right to select</td>
</tr>
<tr>
<td>Vector scan AF</td>
<td>ON/OFF</td>
<td>Vector scan auto focus control</td>
<td>Joy stick left or right to select</td>
</tr>
<tr>
<td>IRIS CLOSE to Exit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diagnostic Options</td>
<td></td>
<td>Diagnostic options</td>
<td>Press OPEN or Joy stick left or right to enter</td>
</tr>
<tr>
<td>Clear Memory</td>
<td></td>
<td>Clear data in the memory</td>
<td>Press OPEN or Joy stick left or right to enter</td>
</tr>
<tr>
<td>Are you sure to do this?</td>
<td></td>
<td>Reminder: are you sure to do this.</td>
<td>Press OPEN or Joy stick left or right to enter</td>
</tr>
<tr>
<td>IRIS OPEN to Confirm</td>
<td></td>
<td>Press OPEN to confirm</td>
<td></td>
</tr>
<tr>
<td>IRIS CLOSE to Cancel</td>
<td></td>
<td>Press CLOSE to exit and return to upper stage menu.</td>
<td></td>
</tr>
<tr>
<td>Restore Def Setting</td>
<td></td>
<td>Restore default setting</td>
<td>Press OPEN or Joy stick left or right to enter</td>
</tr>
<tr>
<td>Are you sure to do this?</td>
<td></td>
<td>Reminder: are you sure to do this.</td>
<td>Press OPEN or Joy stick left or right to enter</td>
</tr>
<tr>
<td>IRIS OPEN to Confirm</td>
<td></td>
<td>Press OPEN to confirm</td>
<td></td>
</tr>
<tr>
<td>IRIS CLOSE to Cancel</td>
<td></td>
<td>Press CLOSE to exit and return to upper stage menu.</td>
<td></td>
</tr>
<tr>
<td>Color system</td>
<td>PAL/NTSC</td>
<td>PAL/NTSC switch</td>
<td>Joy stick left or right to select</td>
</tr>
<tr>
<td>Scan &amp; Camera Reset(Null)</td>
<td></td>
<td>Restart dome camera</td>
<td>Press OPEN or Joy stick left or right to enter</td>
</tr>
<tr>
<td>Dome Information</td>
<td></td>
<td>Dome information</td>
<td>Press OPEN or Joy stick left or right to enter</td>
</tr>
<tr>
<td>Name of dome</td>
<td></td>
<td>Name of dome</td>
<td></td>
</tr>
<tr>
<td>Type of camera</td>
<td></td>
<td>Type of camera</td>
<td></td>
</tr>
<tr>
<td>Control protocol</td>
<td></td>
<td>Control protocol</td>
<td></td>
</tr>
<tr>
<td>Baud rate</td>
<td></td>
<td>Baud rate</td>
<td></td>
</tr>
<tr>
<td>Dome No.</td>
<td></td>
<td>Dome number</td>
<td></td>
</tr>
<tr>
<td>IRIS CLOSE to Exit</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5. Camera Options  << Camera options  Press OPEN or Joy stick left or right to enter

1. Zoom and Focus  << Zoom and focus setting  Press OPEN or Joy stick left or right to enter
   1. Zoom Speed  (0~8)  << Zoom speed setting.  Joystick left or right to select
   2. Digital Zoom  ON/OFF  << Digital zoom in On/Off  Joystick left or right to select
   3. AF Sensitivity  High/Low  << Auto focus sensitivity setting. High/Low  Joystick left or right to select

IRIS CLOSE to Exit

2. Auto Exposure  << Auto exposure setting.  Press OPEN or Joy stick left or right to enter
   1. AE Mode  Auto/Manual/shutter/Iris  << Auto exposure mode selection.  Joystick left or right to select
   2. Shutter Speed  xx  << Shutter speed setting.  Joystick left or right to select
   3. Iris  Fxx  << Iris setting.  Joystick left or right to select
   4. Gain  x  << Gain setting.  Joystick left or right to select

IRIS CLOSE to Exit

3. Camera Name  << Camera name setting  Press OPEN or Joy stick left or right to enter
   1. Name  _ _ _ _ _ _ _  << Edit camera name  Press OPEN or Joy stick left or right to enter
      << Joy stick left or right when programming to select preshot and press OPEN to confirm.
      Joystick left or right to select (0~~9 or A~~Z).
      Press OPEN to confirm selection.
      Press CLOSE to exit or return to upper stage menu when programming is done.

2. Change Name Loc  << Change display location of name.  Press OPEN or Joy stick left or right to enter
   IRIS CLOSE to Exit  << Joy stick arbitrarily and the display will be changed on the screen.

3. Name Display  ON/OFF  << Name display On/Off  Joystick left or right to select

IRIS CLOSE to Exit

4. Mask Setting  << Mask sector setting  Press OPEN or Joy stick left or right to enter
   1. Number  (1~~8)  << Mask sector number selection.  Joystick left or right to select
   2. Mask Edit  << Mask editing  Press OPEN or Joy stick left or right to enter

   IRIS CLOSE When Done  << Capture the masking point, press CLOSE to confirm. The system will auto
   exit and return to upper stage menu.

3. Mask Display  ON/OFF  << Mask Display  ON/OFF  Joystick left or right to select

IRIS CLOSE to Exit

5. WB Mode  Auto/Manual/Indoor/Outdoor/Onepush/Taw  << White balance mode options
   Press OPEN or Joy stick left or right to
6. Back Light  ON/OFF  <<Back light  On/Off  Joystick left or right to select
7. Picture Flip ON/OFF  <<Picture flip  On/Off  Joystick left or right to select
8. Picture LR Rev ON/OFF  <<Picture left and right reverse On/Off  Joystick left or right to select
9. Picture Stable ON/OFF  <<Picture stabilized On/Off  Joystick left or right to select
10. Day/Night ON/OFF  <<Black/white and color switch On/Off  Joystick left or right to select
11. F-OSD ON/OFF  <<Camera function display On/Off  Joystick left or right to select

IRIS CLOSE to Exit

6. Function Programming <<Special function programming  Press OPEN or Joystick left or right to enter

1. PTZ Tour (Pattern)  <<Pan/Tilt/Zoom tour programming  Press OPEN or Joystick left or right to enter
   1. Number ( 1 ~ 3 )  <<PTZ tour number  Joystick left or right to select
   2. Name _ _ _ _ _ _ _ _  <<Edit PTZ name  Press OPEN or Joystick left or right to enter

   Press OPEN or Joystick left or right when programming to select preshot and press OPEN to confirm.
   Joystick left or right to select (0~9 or A~Z).
   Press OPEN to confirm selection.
   Press CLOSE to exit or return to upper stage menu when programming is done.

3. Program a Tour  <<Enter PTZ tour programming  Press OPEN or Joystick left or right to enter
   IRIS OPEN to Begin  <<Press OPEN to confirm and start programming.
   IRIS CLOSE to Exit  <<Press CLOSE to exit the programming and return to upper stage menu.

4. Run a Tour  <<Run Pan/Tilt/Zoom tour (pattern)  Press OPEN or Joystick left or right to enter
   Call out

5. Delete a Tour  <<Delete PTZ tour.  Press OPEN or Joystick left or right to enter
   Are you sure to do this?  << Reminder: are you sure to do this. Press OPEN to confirm.
   IRIS OPEN to Confirm
   IRIS CLOSE to Cancel
   Press CLOSE to exit and return to upper stage menu.

6. Name Display  ON/OFF  <<PTZ tour name display On/Off  Joystick left or right to select
   IRIS CLOSE to Exit
2. Program Vector Scan  

1. Number (1 ~ 6)  

2. Program a Vector Scan  

3. Run a Vector Scan  

4. Delete a Vector Scan  

Function name

Name → P/T/V  

Function number

Num → 1~128  

001  

↑  

0 1 2 3 4 5 6 7 8 9  
IRIS CLOSE When Done  

Velocity selection

V → 1~9  

Dwell time

Dwell → 1~99  

001  

↑  

0 1 2 3 4 5 6 7 8 9  
IRIS CLOSE When Done  

Are you sure to do this?  

IRIS OPEN to Confirm  

IRIS CLOSE to Cancel  

IRIS CLOSE to Exit
3. Program Alarms

<<Program alarms.
Press OPEN or Joystick left or right to enter

<<This function is not available at the moment.

<table>
<thead>
<tr>
<th>Name</th>
<th>Num</th>
<th>E/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>_</td>
<td>_</td>
</tr>
<tr>
<td>2</td>
<td>_</td>
<td>_</td>
</tr>
<tr>
<td>3</td>
<td>_</td>
<td>_</td>
</tr>
<tr>
<td>4</td>
<td>_</td>
<td>_</td>
</tr>
</tbody>
</table>

IRIS CLOSE to Exit

Name ➞ P/V/T

Num ➞ 1~128

0

0 1 2 3 4 5 6 7 8 9
IRIS CLOSE When Done

E/N ➞ N/Y
Chapter Five Coding description of protocol and serial transmission rate

When setting communication protocol of the Dome device (first 4 bits of SW2) and default serial transmission rate of the protocol (last 2 bits of SW2), if default serial transmission rate of the protocol does not match with serial transmission rate of host, please set the default serial transmission rate of the protocol consistent with the default serial transmission rate of host according to Chapter two II.

<table>
<thead>
<tr>
<th>Operation</th>
<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Set Preset Point</strong></td>
<td><strong>PRESET(hold 2 sec) + N + ENTER(+N+Enter+N+Enter+…)+SET</strong></td>
</tr>
<tr>
<td></td>
<td>1) Press and hold PRESET key for 2 seconds.</td>
</tr>
<tr>
<td></td>
<td>2) Adjust the camera to the desired direction and focus.</td>
</tr>
<tr>
<td></td>
<td>3) Input the preset number.</td>
</tr>
<tr>
<td></td>
<td>4) Press ENTER.</td>
</tr>
<tr>
<td></td>
<td>5) Repeat step 2 to step 4 if you want to set more preset point.</td>
</tr>
<tr>
<td></td>
<td>6) Press set key to exit.</td>
</tr>
<tr>
<td><strong>Call Preset</strong></td>
<td><strong>N + PRESET</strong></td>
</tr>
<tr>
<td></td>
<td>1) Input the preset number</td>
</tr>
<tr>
<td></td>
<td>2) Press ENTER.</td>
</tr>
<tr>
<td><strong>Set Home Position</strong></td>
<td><strong>T + DWELL + N + PRESET</strong></td>
</tr>
<tr>
<td></td>
<td>1) Input a number T (a value between 1 and 255). T represents the time between stoping operation to the camera and the camera’s automatically turning back to the home position.</td>
</tr>
<tr>
<td></td>
<td>2) Press DWELL.</td>
</tr>
<tr>
<td></td>
<td>3) Input a preset number which you want to be your home position.</td>
</tr>
<tr>
<td></td>
<td>4) Press PRESET.</td>
</tr>
<tr>
<td><strong>Delete Home Position</strong></td>
<td><strong>0 + DWELL + 0 + PRESET</strong></td>
</tr>
<tr>
<td><strong>Set Preset Tour Sequence</strong></td>
<td><strong>TOUR(hold 2 sec) + S + Enter + N + Enter(+N+Enter+N+Enter+…) + SET</strong></td>
</tr>
<tr>
<td></td>
<td>1) Press and hold TOUR for 2 seconds.</td>
</tr>
<tr>
<td></td>
<td>2) Input the sequence number (from 1 to 4)</td>
</tr>
<tr>
<td></td>
<td>3) Press ENTER.</td>
</tr>
<tr>
<td></td>
<td>4) Input the preset number representing the first tour point.</td>
</tr>
<tr>
<td></td>
<td>5) Press ENTER.</td>
</tr>
<tr>
<td></td>
<td>6) Repeat step 2 and step 3 for other tour point.</td>
</tr>
<tr>
<td></td>
<td>7) Press SET to exit.</td>
</tr>
</tbody>
</table>
| **Activate Preset Tour** | **T + DWELL + S + TOUR**  
1) Input a number T, where T represent how much second the camera rest on one tour point before it move to another tour point.  
2) Press DWELL.  
3) Input S where S is the tour sequence number  
4) Press TOUR.  |
| **Delete Preset Tour** | **TOUR + S + DEL**  
1) Press TOUR.  
2) Input the number S where S represents the tour sequence number.  
3) Press DELETE.  |
| **Auto Pan** | **SCAN + 0 + ENTER** : Set auto pan left limit  
**SCAN + 1 + ENTER** : Set auto pan right limit  
**S + SCAN** : Activate auto pan.  
If S is within 1 – 80, the scan rate is slow.  
If S is within 81-160, the scan rate is medium.  
If S is within 161-250, the scan rate is high.  |
| **Focus Control** | Generally the camera will automatically adjust the focus to get clearer image based on the distance of the camera.  
But you can manually adjust the focus by pressing FAR, NEAR as you wish.  
The camera will switch back to automatically when you conduct other operations such as moving the joystick.  |
| **Iris Control** | Generally the camera will automatically adjust the iris to get clearer image based on the illumination.  
But you can manually adjust the iris by pressing OPEN, CLOSE as you wish.  
The camera will switch back to automatically when you conduct other operations such as moving the joystick.  |
### Chapter Six Trouble Shooting of Dome Device

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Problem Description</th>
<th>Possible Reason</th>
<th>Troubleshooting</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>After power on, no motion and no image.</td>
<td>Power cable is connected improperly.</td>
<td>Check if the power cable is connected to power of AC24V</td>
<td>Please follow the above basic system wiring strictly</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fault of power PCB of dome device</td>
<td>Change the power PCB</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>slip ring power wires disconnected</td>
<td>Change slip ring</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fault of main control board</td>
<td>Change main control board</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>After power on, the dome device rotate normally, but no character nor image display</td>
<td>Character monitor switch is off</td>
<td>Switch on the character monitor according to the menu instruction</td>
<td>About 45 second after the dome device is power on.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improper connection between camera and dome device</td>
<td>Replace a FFC cable or a camera</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>After self-test of the dome device, menu cannot be displayed</td>
<td>wrong operation</td>
<td>CALL+90+ENTER open</td>
<td>After self-test, the menu can only be displayed when there is image display of the dome device</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fault of OSD control board</td>
<td>Change OSD board</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Distorted character or image</td>
<td>Interfered by exterior electronic signal (noise) or the camera is directed to the monitor screen</td>
<td>Grounding the dome device or shut off the surrounding big electronic devices(electric, HF, signal generating) equipment, or rotate the camera</td>
<td>Shielded cable should be adopted for video cable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>System wrong function</td>
<td>Restart the dome device</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>After power on, no self-test and motor is locked</td>
<td>The system setting is start self-test after receiving command and you can see the video on the screen</td>
<td>Connect the controller and set correct transmission protocol and baud rate as well as dome device address</td>
<td>There is character display in normal circumstance</td>
</tr>
<tr>
<td>6</td>
<td>Cannot stop pan rotation (rotate and stop alternatively)</td>
<td>OSD board is not properly connected with main control board or the photoelectric switch is broken</td>
<td>fix OSD board again, if the problem still exits, then replace the OSD board</td>
<td>Pan interupter should be at 2/3 of the central slot within photoelectric switch</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pan interupter is not in due position</td>
<td>Adjust the pan interupter</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>After normal working, it will rotate one circle when being controlled</td>
<td>The system is checking the data again</td>
<td>It is normal event</td>
<td>If this happens frequently, please adjust the pan interupter or check if the connection is too tight.</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vertical range is not within 90-2 degree with large deviation</td>
<td>Fault occurs when the dome device is in tilt movement. It may be caused by obstacle of camera of other object, which lead to early tilt movement</td>
<td>Check and adjust the mechanical installation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-test is normal, but cannot control</td>
<td>Wrong setting</td>
</tr>
<tr>
<td></td>
<td>Improper connection of control cable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insensitive control of dome device</td>
<td>Overload or too long distance transmission</td>
</tr>
<tr>
<td></td>
<td>Improper contact of control cable</td>
</tr>
<tr>
<td></td>
<td>Slip ring is damage</td>
</tr>
<tr>
<td></td>
<td>RS-485 protective discharge arresters broken</td>
</tr>
</tbody>
</table>

|   | Mostly happen in the connection |

<table>
<thead>
<tr>
<th></th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Call out function fails</td>
<td>System failure caused by noise interference</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto action of dome device periodically</td>
<td>No transmission auto “call back” function is set to the dome device</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>13</th>
</tr>
</thead>
<tbody>
<tr>
<td>One dome working well while the other does not under identical operation</td>
<td>Something wrong with the setting or wiring</td>
</tr>
</tbody>
</table>