MINI HIGH SPEED DOME CAMERA

Factory Configuration: PELCO-D protocol, Baud rate 2400, Address code 1
※Please read carefully before using this manual
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## Chapter 1 Product Summarize

### 1.1 Technical Parameters (standard)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model number</td>
<td>4 INCH MINI HIGH SPEED DOME CAMERA</td>
</tr>
<tr>
<td>Optical focus</td>
<td>10X</td>
</tr>
<tr>
<td>Image sensor</td>
<td>1/4&quot;CCD</td>
</tr>
<tr>
<td>Signal mode</td>
<td>PAL / NTSC</td>
</tr>
<tr>
<td>Resolution</td>
<td>480TVL / 540TVL / 650TVL...</td>
</tr>
<tr>
<td>Optical focus</td>
<td>Manual/Auto, adapt high performance DSP to realize full digital high continuous focusing function.</td>
</tr>
<tr>
<td>Presets</td>
<td>256</td>
</tr>
<tr>
<td>Pattern scan</td>
<td>4 groups, each can record 100 actions</td>
</tr>
<tr>
<td>Cruise scan</td>
<td>30 presets can join cruise, can setting the presets’ residence time.</td>
</tr>
<tr>
<td>Other scan</td>
<td>Support Horizontal scan, deuce area scan, scan random</td>
</tr>
<tr>
<td>Rotation range</td>
<td>Horizontal 360° unlimted rotation, Vertical 180°, auto reversal</td>
</tr>
<tr>
<td>Rotation speed</td>
<td>Horizontal &amp; Vertical Min 0.01° Max 300°/s.</td>
</tr>
<tr>
<td>Communications</td>
<td>PELCO-D and PELCO-P</td>
</tr>
<tr>
<td>OSD</td>
<td>Full screen menu</td>
</tr>
<tr>
<td>Temperature control system</td>
<td>Optional</td>
</tr>
<tr>
<td>Power supply</td>
<td>DC12V</td>
</tr>
<tr>
<td>Ball cover dimension</td>
<td>4 inch optical glass cover</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Material</td>
<td>Aluminum shell, waterproof IP66</td>
</tr>
<tr>
<td>Work environment</td>
<td>-20°C~+50°C (select temperature control accessories), &lt;95%RH</td>
</tr>
</tbody>
</table>

1.2 Function description

1. Set address coding, baud rate, control protocol

Any operation commands the camera has its own objectives address coding, baud rate, control protocol, a single camera only to respond with its own address coding, baud rate, control agreement under the operation of the command. Camera address coding, baud rate, control protocol specific settings please refer to the DIP settings.

2. Target tracking

Users can use the controls on the keyboard joystick control of the upper and lower turning left and right cameras can be used to track moving targets or moving horizon, while the focal length can be adjusted to change the perspective of the size or the target image size. In the auto-focus of the state, with the lens rotation, the camera will automatically adjust according to a rapid scene changes, instantly get a clear picture.

3. Focal length / speed automatic matching technique

Manual adjustment, the longer the focal length of the case, a reflection of high-speed ball machine makes a slight touch screen joystick may move back, resulting in data loss. Based on user-friendly design, intelligent ball according to the proximity of the focal length of the camera automatically adjusts the horizontal and vertical speed, so that manual operation is more simple and easy to track targets.

4. Auto turn over

The operator will pull the bottom of the lens (vertical) after it is still holding down the joystick, this time the level of the lens auto-rotated 180 ° turning up immediately after the 90 °, can directly watch the back of the scene in order to
achieve the full 180 ° continuous vertical surveillance.

5. Set and call preset position
Preset function is the current state of the ball under the PTZ function of the horizontal angle, tilt angle and camera lens focal length, etc. position parameters stored in memory, you need to call these parameters can be quickly and PTZ cameras will be adjusted to that location. The operator can quickly and easily by controlling the keyboard, infrared controller, control equipment such as storage and call the preset point, the ball machine to support 256 preset points.

6. Lens Control
(1) Zoom control
Users can control the keyboard or through the ball machine to adjust the focus of the distance matrix of the host, receive the necessary panoramic images, or is a fine view.
(2) Focus Control
System default auto-focus, zoom, the camera lens will be the center of the screen features auto-focus, to maintain a clear picture; in exceptional circumstances, the user can manually focus, achieve the desired image effect. When in manual focus state, to restore the auto-focus, as long as the sway bar can be restored remotely auto-focus. There is also a dedicated control commands can be issued or to call an arbitrary way of restoring a preset bit auto-focus.

The camera lens in the following situations will not autofocus on the camera objectives:
  a. Target is not to screen center;
  b. Targets the same time in the far and near the place;
  c. Target light objects, such as neon lighting, spotlights and other luminous objects;
  d. Target with droplets or dust behind the glass;
e. Targets moving too fast;
f. Large area targets, such as walls;
g. Objectives are too dark or inherently ambiguous.

7. Aperture Control
Users can control the keyboard to manually adjust the aperture size to get the required picture brightness.

8. Auto Backlight Compensation
When the backlight compensation function is open, the camera lens in the light background can be automatically targets the more the dark luminance compensation. On the bright background light adjustment, to avoid the background brightness caused by a mass of light throughout the picture, goals and not identifiable because of the darkness to gain a clear image.

9. Auto White Balance
According to the changes in ambient light, automatic adjustment, the true color reproduction.

10. Night vision function (color / monochrome conversion)
Cameras with night vision function, automatic color / monochrome conversion mode, in accordance with changes in ambient light automatic conversion CCD illumination. Such as: adequate lighting during the day due to the use of general illumination to ensure colorful images. In the night illumination can be automatically changed to black and white images show a clear interest.

11. Cruise
Can be pre-set cruise preset point, certain preset points, organized in the order required to auto-cruise in the queue, only an external command can be in an indoor speed ball set automatically according to preset points in order to provide the time interval constant movement back and forth.

12. Pattern scanning
Pattern scanning machines to run the ball through the menu, the trajectory is stored down by power-on action, free movement, alarm linkage, etc. to call the stored scan line.

13. Continuous scan
Just an external command or through a power-on action, free movement, alarm linkage, etc. to call, can make the ball machine horizontal direction to a certain speed the cycle of continuous scanning.

14. Batch Scanning
Just an external command or through a power-on action, free movement, alarm linkage, etc. to call, can make the horizontal direction the ball machine cycle of a certain speed intermittent scan.

15. Area scan
Just an external command or through a power-on action, free movement, alarm linkage, etc. to call, can make the ball machine horizontal direction to a certain speed, within the limits set by the community and from scanning.

Chapter 2 Equipment installation

2.1 DIP switch setting
Four DIP switch is the baud rate and the control protocol switch.
Eight DIP switch is the address code setting switch
DIP switch to “ON” means to “1”, DIP switch to "OFF" means "0".
The baud rate and control protocol as the following table:

<table>
<thead>
<tr>
<th>NO.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Baud rate</td>
<td>OFF</td>
<td>OFF</td>
<td></td>
<td></td>
<td>PELCO-P</td>
</tr>
<tr>
<td>(BPS)</td>
<td>ON</td>
<td>OFF</td>
<td>PELCO-D</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>-------</td>
<td>----</td>
<td>-----</td>
<td>---------</td>
<td>-----</td>
<td>----</td>
</tr>
<tr>
<td>Control protocol</td>
<td>OFF</td>
<td>OFF</td>
<td>9600</td>
<td>ON</td>
<td>ON</td>
</tr>
</tbody>
</table>

8-bit DIP switch is used to set the dome camera address coding. Address set binary mode can be set to a total of 256 different dome camera address coding, see coding table address.

<table>
<thead>
<tr>
<th>Camera address</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>OFF</td>
<td>OFF</td>
<td>OFF</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>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>2</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>3</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>4</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</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>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>6</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>7</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>8</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>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
</tbody>
</table>

8-bit DIP switch is used to set the dome camera address coding. Address set binary mode can be set to a total of 256 different dome camera address coding, see coding table address.
<table>
<thead>
<tr>
<th></th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>...</th>
<th>246</th>
<th>247</th>
<th>248</th>
<th>249</th>
<th>250</th>
<th>251</th>
<th>252</th>
<th>253</th>
<th>254</th>
<th>255</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td></td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td></td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td></td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td></td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td></td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td></td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
</tbody>
</table>
2.2 Dome camera structure diagram

Figure 1

Figure 2

Figure 3

Figure 4

Figure 5

Figure 6
2.3 Bracket installation diagram

Figure 7

Figure 8

Figure 9
Chapter 3 System OSD menu settings

3.1 Power-On Self-Test
When power is connected to the dome camera, the camera in horizontal and vertical direction movement, the screen will appear system-related information, the dome camera self-test to complete the following diagram.

PTOL: PELOCO-D
COMM: 2400, N, 8, 1
ADDR: 1

Display: PELCO-D protocol, Baud Rate 2400, Address code 1

3.2 Preset point setting and calling

3.2.1 Set Preset points:
(1) selected camera (see manual control of the keyboard);
(2) operation Rocker, zoom button, focus button, buttons adjust the camera aperture screen;
(3) Press the number keys + PRESET (input designated preset) to preserve the scene preset parameters.

3.2.2 Call preset points:
(1) Selected camera;
(2) Press the number keys (inputs the designated preset) + PREVIEW button, the camera immediately move to the preset position, the lens zoom, focus and Iris is also automatically change to the preset parameters; if the input is a special function preset point (see "Preset Point menu"), the dome camera will perform with special features preset point of the corresponding functions (such as: Enter the 80th presets, the camera will perform auto-tracking feature).
### 3.3 Preset point function table:

<table>
<thead>
<tr>
<th>Preset Point</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>95&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Enter Main menu.</td>
</tr>
<tr>
<td>82&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>Auto Cruise</td>
</tr>
<tr>
<td>83&lt;sup&gt;rd&lt;/sup&gt;</td>
<td>Clear all presets</td>
</tr>
<tr>
<td>84&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Use Pattern scan 1</td>
</tr>
<tr>
<td>85&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Use Pattern scan 2</td>
</tr>
<tr>
<td>86&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Use Pattern scan 3</td>
</tr>
<tr>
<td>87&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Use Pattern scan 4</td>
</tr>
<tr>
<td>96&lt;sup&gt;th&lt;/sup&gt;</td>
<td>360-degree gap scan</td>
</tr>
<tr>
<td>97&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Scan between two presets</td>
</tr>
<tr>
<td>98&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Presets cruise</td>
</tr>
<tr>
<td>99&lt;sup&gt;th&lt;/sup&gt;</td>
<td>360 degree continuing scan</td>
</tr>
</tbody>
</table>

### 3.4 <MAIN MENU>

The dome camera power on and working properly, call the 95 preset points into the main menu, screen display as shown in the Table 3-1. (Note: <IR SETTING> is for intelligent infrared dome camera special function)

<table>
<thead>
<tr>
<th>MAIN MENU</th>
<th>Menu function descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYSTEM INFORMATION</td>
<td>Displays camera basic information. In the table 3-2.</td>
</tr>
<tr>
<td>ADDR SETTING</td>
<td>Used to set the camera address. In the table 3-3.</td>
</tr>
<tr>
<td>MOTION</td>
<td>&quot;PTZ&quot; setup menu. In the table 3-4.</td>
</tr>
<tr>
<td>PATTERNS</td>
<td>Fancy scan setting; In the table 3-5.</td>
</tr>
<tr>
<td>CAMERA</td>
<td>Lens setting; In the table 3-6.</td>
</tr>
<tr>
<td>CRUISE SETTING</td>
<td>Preset point cruise setting; in the table 3-7.</td>
</tr>
<tr>
<td>---------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>IR SETTING</td>
<td>Infrared light setting; in the table 3-8.</td>
</tr>
<tr>
<td>DISPLAY SETUP</td>
<td>Screen display setting; in the table 3-9.</td>
</tr>
<tr>
<td>RESTORE FACTORY DEFAULT</td>
<td>Restore the factory default setting.</td>
</tr>
<tr>
<td>REBOOT SYSTEM</td>
<td>System restart, the dome camera to power on reset.</td>
</tr>
<tr>
<td>EXIT</td>
<td>Exit the OSD menu setting.</td>
</tr>
</tbody>
</table>

**TABLE 3-1 MAINMENU**

3.5 <SYSTEM INFORMATION>

<table>
<thead>
<tr>
<th>SYSTEM INFORMATION</th>
<th>Menu function descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 2400,N,8,1</td>
<td>Serial information, display the dome camera serial port baud rate, parity, data bits, stop bits of information.</td>
</tr>
<tr>
<td>ADDRESS 1</td>
<td>Display the current dome camera address code.</td>
</tr>
<tr>
<td>PROTOCOL PELCO-D</td>
<td>Display the current dome camera communication protocol.</td>
</tr>
<tr>
<td>PRESETS 256</td>
<td>Display the current dome camera preset number.</td>
</tr>
<tr>
<td>SOFTWARE VERSION V5.2</td>
<td>Display the current software version.</td>
</tr>
<tr>
<td>BACK</td>
<td>Return to main menu.</td>
</tr>
<tr>
<td>EXIT</td>
<td>Exit the menu setting.</td>
</tr>
</tbody>
</table>

Note: The system information menu items under this menu cannot be changed.

**TABLE 3-2 SYSTEM INFORMATION**

3.6 <ADDR SETTING>
### ADDR SETTING

<table>
<thead>
<tr>
<th>ADDR TYPE</th>
<th>HARD</th>
<th>Menu function descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADDR SOFT</td>
<td>1</td>
<td>Within 1~254.</td>
</tr>
<tr>
<td>ADDR HARD</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>BACK</td>
<td></td>
<td>Returns to main menu.</td>
</tr>
<tr>
<td>RESET</td>
<td></td>
<td>To restore the default.</td>
</tr>
<tr>
<td>EXIT</td>
<td></td>
<td>Exit the menu setting.</td>
</tr>
</tbody>
</table>

**Note:** Can’t mix up the soft and hard address settings, would create the dome camera out of control, setting reboot to be valid.

### TABLE 3-3 ADDR SETTING

3.7 <MOTION> (PTZ settings)

Menu is used to set PTZ parameters such as movement and orientation angles. As shown in the following table:

<table>
<thead>
<tr>
<th>MOTION</th>
<th>Menu function descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>SET FRAME SCAN</td>
<td>Set the area scan to the left and right limit. In the table 3-4-1.</td>
</tr>
<tr>
<td>POWER UP NONE</td>
<td>Power on setting menu. In the table 3-4-5.</td>
</tr>
<tr>
<td>PARK TIME 15S</td>
<td>How long to perform an action when the dome camera is idle.</td>
</tr>
<tr>
<td>PARK ACTION NONE</td>
<td>Perform an action when the dome camera is idle. In the Table 3-4-6.</td>
</tr>
<tr>
<td>FRAME SCAN SPEED</td>
<td>Set the area scan speed of the dome camera. Within 1 (Slowest) ~32 (Fastest).</td>
</tr>
<tr>
<td>16</td>
<td></td>
</tr>
<tr>
<td>RANDOM SCAN SPEED</td>
<td>16</td>
</tr>
<tr>
<td>-------------------</td>
<td>----</td>
</tr>
<tr>
<td>BACK</td>
<td></td>
</tr>
<tr>
<td>EXIT</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE 3-4(MOTION)**

3.7.1 <SET FRAME SCAN> (setting area scan)

Setting area scanning range, specific operations as shown in the following table:

<table>
<thead>
<tr>
<th>FRAME SCAN</th>
<th>Menu function descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>SET SCAN POSITION</td>
<td>Set area scan position. In the table 3-4-2.</td>
</tr>
<tr>
<td>CLEAR FRAME SCAN</td>
<td>Clear area scanning setting. (Clear left and right limit position). In the table 3-4-4.</td>
</tr>
<tr>
<td>BACK</td>
<td>Return to the previous menu.</td>
</tr>
<tr>
<td>EXIT</td>
<td>Exit the menu setting.</td>
</tr>
</tbody>
</table>

**TABLE 3-4-1 SCAN SETTING AREA SCAN**

3.7.2 SET SCAN POSITION

<table>
<thead>
<tr>
<th>SET FRAME SCAN</th>
<th>Menu function descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEFT LIMIT POSITION</td>
<td>Shake the joystick to select the left limit position; Press IRIS+ button to confirm the current position of the left limit position, and enter the following table 3-4-3.</td>
</tr>
<tr>
<td>IRIS OPEN TO CONTINUE</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE 3-4-2 SET THE LEFT LIMIT POSITION**

<table>
<thead>
<tr>
<th>SET FRAME SCAN</th>
<th>Menu function descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15
**RIGHT LIMIT POSITION**
Shake the joystick to select the right limit position; Press **IRIS+** button to confirm and return to the table 3-4.

**IRIS OPEN TO CONTINUE**

---

**TABLE 3-4-3 SET THE RIGHT LIMIT POSITION**

**3.7.3 CLEAR FRAME SCAN** (Clear area scan location)

| CLEAR FRAME SCAN IRIS OPEN TO CONTINUE | Press **IRIS+** to clear the left and right limit position and return to the table 3-4. |

---

**TABLE 3-4-4 CAMERA SETTINGS MENU**

**3.7.4 <POWER UP>**
The dome camera is powered on, didn’t receive any instructions to perform action. Parameters in the following table:

<table>
<thead>
<tr>
<th>POWER UP</th>
<th>Menu function descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td>Don’t perform any actions.</td>
</tr>
<tr>
<td>AUTO SCAN</td>
<td>Perform continuous scanning action.</td>
</tr>
<tr>
<td>RANDOM SCAN</td>
<td>Perform intermittent scanning action.</td>
</tr>
<tr>
<td>FRAME SCAN</td>
<td>Perform area scanning action.</td>
</tr>
<tr>
<td>PRESET 1</td>
<td>To reach the NO.1 preset point.</td>
</tr>
<tr>
<td>PRESET 8</td>
<td>To reach the NO.8 preset point.</td>
</tr>
<tr>
<td>PATTERN 1</td>
<td>Perform the pattern scan line 1</td>
</tr>
<tr>
<td>PATTERN 2</td>
<td>Perform the pattern scan line 2</td>
</tr>
<tr>
<td>PATTERN 3</td>
<td>Perform the pattern scan line 3</td>
</tr>
<tr>
<td>PATTERN 4</td>
<td>Perform the pattern scan line 4</td>
</tr>
<tr>
<td>CRUISE</td>
<td>Perform the cruise action of preset point.</td>
</tr>
</tbody>
</table>

16
3.7.5 <PARK ACTION>

In the idle time, the dome camera doesn’t receive any instructions to perform an action. Idle movement parameters as shown in the following table:

<table>
<thead>
<tr>
<th>PARK ACTION</th>
<th>Menu function descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td>Do not perform any action.</td>
</tr>
<tr>
<td>AUTO SCAN</td>
<td>Perform continuous scanning action.</td>
</tr>
<tr>
<td>RANDOM SCAN</td>
<td>Perform intermittent scanning action.</td>
</tr>
<tr>
<td>FRAME SCAN</td>
<td>Perform area scanning action. (It will come into effect after the SET FRAME SCAN is set).</td>
</tr>
<tr>
<td>FRESET 1</td>
<td>Arrive the First preset point.</td>
</tr>
<tr>
<td>PRESET 8</td>
<td>Arrive the Eighth preset point.</td>
</tr>
<tr>
<td>PATTERN 1</td>
<td>Perform the pattern scan line 1</td>
</tr>
<tr>
<td>PATTERN 2</td>
<td>Perform the pattern scan line 2</td>
</tr>
<tr>
<td>PATTERN 3</td>
<td>Perform the pattern scan line 3</td>
</tr>
<tr>
<td>PATTERN 4</td>
<td>Perform the pattern scan line 4</td>
</tr>
<tr>
<td>REPEAT LAST</td>
<td>Automatic recovery to the previous action.</td>
</tr>
<tr>
<td>CRUISE</td>
<td>Perform the cruise scanning action.</td>
</tr>
</tbody>
</table>

3.8 <PATTERNS>

<table>
<thead>
<tr>
<th>PATTERNS</th>
<th>Menu function descriptions</th>
</tr>
</thead>
</table>

17
<table>
<thead>
<tr>
<th>PATTERN NUMBER</th>
<th>1</th>
<th>Select pattern number, within 1~4.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROGRAM PATTERN</td>
<td></td>
<td>To select pattern scan line; Operations shown in the table 3-5-1.</td>
</tr>
<tr>
<td>CLEAR CURRENT PATTERN</td>
<td></td>
<td>Clear current pattern scan line.</td>
</tr>
<tr>
<td>CLEAR ALL PATTERN</td>
<td></td>
<td>Clear all the pattern line.</td>
</tr>
<tr>
<td>BACK</td>
<td></td>
<td>Return to the previous menu.</td>
</tr>
<tr>
<td>EXIT</td>
<td></td>
<td>Exit the menu setting.</td>
</tr>
</tbody>
</table>

**TABLE 3-5 PATTERNS**

### 3.8.1 <PROGRAM PATTERN>

**PROGRAM PATTERN**

<table>
<thead>
<tr>
<th>Menu function descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>USE THE JOYSTICK OR KEYBOARD TO MOVE THE CAMERA TO THE STARTING POSITION IRIS OPEN TO CONTINUE</td>
</tr>
</tbody>
</table>

Use the joystick or keyboard to move the camera to the starting position, and press the IRIS+ key to continue, and go to the table 3-5-2.

**TABLE 3-5-1 PROGRAM PATTERN SCAN SETTINGS**

<table>
<thead>
<tr>
<th>PATTERN</th>
<th>Menu function descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>STORAGE USED 1</td>
<td>Shake the joystick to editing the scanning line and action, from the movement 1 began to record, up to 100 movements. Press IRIS+ key to save the settings and return to table 3-5.</td>
</tr>
</tbody>
</table>

**TABLE 3-5-2 PATTERN SCAN SETTINGS**

### 3.9 <CAMERA> (Lens settings)
<table>
<thead>
<tr>
<th><strong>Languages</strong></th>
<th><strong>Chinese/English</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Multiples Display</strong></td>
<td>ON/OFF</td>
</tr>
<tr>
<td><strong>AGC</strong></td>
<td>180</td>
</tr>
<tr>
<td><strong>Backlight compensation</strong></td>
<td>ON/OFF</td>
</tr>
<tr>
<td><strong>Shutter setting</strong></td>
<td>AUTO</td>
</tr>
<tr>
<td><strong>Focus setting</strong></td>
<td>AUTO</td>
</tr>
<tr>
<td><strong>Brightness setting</strong></td>
<td>110</td>
</tr>
<tr>
<td><strong>Sharpness Setting</strong></td>
<td>013</td>
</tr>
<tr>
<td><strong>Day&amp; night switch</strong></td>
<td>AUTO</td>
</tr>
<tr>
<td><strong>Negative Set</strong></td>
<td>OFF</td>
</tr>
<tr>
<td><strong>Lens Set</strong></td>
<td>OFF</td>
</tr>
<tr>
<td><strong>Default setting</strong></td>
<td>OFF</td>
</tr>
</tbody>
</table>

**TABLE 3-6 CAMERA SETTINGS**

### 3.10 <CRUISE> (Preset points, cruise settings)

<table>
<thead>
<tr>
<th>CRUISE</th>
<th>Menu function descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>DWELL TIME[SECS] 6</td>
<td>Cruise waiting time between preset points.</td>
</tr>
<tr>
<td>PRESET LIST 1</td>
<td>Cruise list of preset points. Total 3 pages, each page can be selected 10 preset points.</td>
</tr>
<tr>
<td>1 ON 0 OFF</td>
<td>Select preset points need to be involved in cruise scan. The corresponding parameter is 0 and 1. Press IRIS+ key to change, 1 is selected, 0 is skipped.</td>
</tr>
<tr>
<td>1234567890 PRESET</td>
<td></td>
</tr>
<tr>
<td>1111111111 [1-10]</td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 3-7 CRUISE SETTING MENU

3.11 <IR SETTING> (IR speed dome Special function)

<table>
<thead>
<tr>
<th>IR SETTING</th>
<th>Menu function descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>IR MODE AUTO</td>
<td>ON: IR light is forced to open; OFF: Infrared light is forced to close; AUTO: IR light is switch automatically.</td>
</tr>
<tr>
<td>IR ON SENS 250</td>
<td>Light intensity of IR light is open, within 81~254.</td>
</tr>
<tr>
<td>IR OFF SENS 230</td>
<td>Light intensity of IR light is close, within 81~254.</td>
</tr>
<tr>
<td>BACK</td>
<td>Return to the previous menu.</td>
</tr>
<tr>
<td>EXIT</td>
<td>Exit the menu setting.</td>
</tr>
</tbody>
</table>

### TABLE 3-8 IR SETTING MENU

3.12 <DISPLAY SETUP>

<table>
<thead>
<tr>
<th>DISPLAY SETUP</th>
<th>Menu function descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZOOM ON/OFF</td>
<td>Zoom display ON/OFF.</td>
</tr>
<tr>
<td>P/T DEG ON/OFF</td>
<td>Horizontal/Vertical angular coordinate display ON/OFF.</td>
</tr>
<tr>
<td>BRIGHT DATA ON/OFF</td>
<td>Light source data display ON/OFF.</td>
</tr>
<tr>
<td>IR DATA ON/OFF</td>
<td>IR light data display ON/OFF.</td>
</tr>
<tr>
<td>BACK</td>
<td>Return to the previous menu.</td>
</tr>
<tr>
<td>EXIT</td>
<td>Exit the menu setting.</td>
</tr>
</tbody>
</table>

### TABLE 3-9 SCREEN DISPLAY SETTINGS
## Chapter 4  Simple troubleshooting and maintenance

### 4.1 Simple Troubleshooting Table

<table>
<thead>
<tr>
<th>Failure</th>
<th>Possible Cause</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity without action, no images, light does not shine.</td>
<td>Connected the wrong power cord</td>
<td>Corrections</td>
</tr>
<tr>
<td></td>
<td>Power supply is damaged</td>
<td>replace</td>
</tr>
<tr>
<td></td>
<td>Bad fuse</td>
<td>replace</td>
</tr>
<tr>
<td></td>
<td>Power cord connection is bad</td>
<td>Exclusion</td>
</tr>
<tr>
<td>Power are self-test, there are images, not control</td>
<td>IR uniform dome camera address code, the baud rate setting does not</td>
<td>To re-set the high-speed dome address code and baud rate corrections</td>
</tr>
<tr>
<td></td>
<td>Wrong protocol</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RS485 line reversed or open</td>
<td>Check wiring RS485 control line</td>
</tr>
<tr>
<td>Unable to complete self-test, there are images associated with motor tweet sound</td>
<td>Mechanical failure</td>
<td>Maintenance</td>
</tr>
<tr>
<td></td>
<td>Camera Tilt</td>
<td>Straightened</td>
</tr>
<tr>
<td></td>
<td>Power is not enough</td>
<td>Replacement to meet the requirements of the power supply, it is best to power the camera on the near-infrared uniform</td>
</tr>
<tr>
<td>Image instability</td>
<td>Video line connection is bad</td>
<td>Exclusion</td>
</tr>
<tr>
<td>IR control of a high-speed dome camera non-stop or delay</td>
<td>Power is not enough</td>
<td>Replace</td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td>---------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Blur</td>
<td>Manual focus on the state</td>
<td>Operation of any infrared high speed dome camera or call a preset point</td>
</tr>
<tr>
<td></td>
<td>Power is not enough high-speed Dome</td>
<td>Replacement to meet the requirements of the power supply, it is best to power on the high-speed dome camera in the vicinity</td>
</tr>
<tr>
<td></td>
<td>Check control of the most distant high-speed dome camera match whether to join the resistance</td>
<td>The most far away from the control of the ball-type cameras by adding matching resistor</td>
</tr>
<tr>
<td></td>
<td>Far from 485 the signal attenuation</td>
<td>Bold Line of Control</td>
</tr>
<tr>
<td></td>
<td>Converter 485 is not enough driving force</td>
<td>Replacement of a source converter</td>
</tr>
</tbody>
</table>

### 4.2 After Service

Dear users, in order to ensure the full enjoyment of your camera services, please read the following products and services charter.

(A): IR dome camera company limited warranty and lifetime maintenance services

1. The limited warranty period from the date of sale for 12 months, in the limited warranty period, you will enjoy the products fault free service, delivered or sent by the user's maintenance (improper use of man-made causes of failure or an irresistible. The fault does not belong to the scope of the warranty).

2. In more than 12 months limited warranty from the date of the product life-long failure of the implementation of
paid maintenance services.

(B): The dome camera repair response time
1. Users will be sent to the company from the date of product, 24-hour response service.
2. Customers return products to our company, please advance with my company-related contact, and then returned to our company products. Otherwise, the situation appears not timely maintenance by the user themselves.

Product Warranty Cards

Under this warranty cards note that every case of normal use the product itself due to quality problems caused by failures in the warranty period will be given free maintenance.

Warranty Description:
1. This product is free of charge warranty period of one year, during the warranty period any product quality problems occur, so doing the warranty card for free (non-human damage), life-long maintenance.
2. A result of improper use or other reasons as well as the failure of products outside the warranty period can be so doing card repair, free of maintenance, only the income component costs.
3. Product required maintenance should be a copy of this card and the invoice with the product delivery of the Company or the local special maintenance department.
4. Secretly open the dome camera casing, tearing up letters labeling, according to the provisions of collecting maintenance fees and components and other expenses.
5. Does not accept any modification or installation of other functions due to failure after the dome camera.
The following conditions will not be free of charge Warranty:
1. Due to normal wear and tear caused by periodic inspection, maintenance, repair or replacement parts.
2. As the fall, extrusion, soaking, damp, and other man-made damage.
3. Because of flood, fire, lightning and other natural disasters or force majeure of the factors that damage.
4. By non-authorized repair centers repair the machine off.
5. Listed above, if changes to the relevant provisions shall prevail.

<table>
<thead>
<tr>
<th>Model Number</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Factory Number</td>
<td></td>
</tr>
<tr>
<td>Date of manufacture</td>
<td></td>
</tr>
<tr>
<td>Customer Unit</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td></td>
</tr>
<tr>
<td>Address</td>
<td></td>
</tr>
<tr>
<td>Telephone</td>
<td></td>
</tr>
<tr>
<td>Maintenance date</td>
<td>Failure condition</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Remark:</td>
<td></td>
</tr>
</tbody>
</table>

Remark: ____________________________

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