Notice:

1. Please read instructions completely before installing or operating the unit.

2. Operating Conditions:
   (1) Please do not use this unit near water and damp environments.
   (2) Avoid using in direct sunlight and ensure good ventilation around unit.
   (3) Do not place this unit on an unstable surface. It may overturn causing serious damage to people and the unit itself.
   (4) To avoid interference keep away from magnets, radio and cellular phones.

3. Please follow all electrical safety standards and only use the power supply designed for the device. Please do not power the until all connections are secure and installation is complete.

4. Use a piece of dry cloth to clean the unit. If it is dirty, use a soft non-ionic (non-electrostatic) cloth to clean it. Do not use chemicals like alcohol, benzene and thinner which may permanently damage the shell of the unit.
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I. Keyboard Overview
The keyboard is used for controlling the intelligent speed dome and is the main interface between operator and device in the monitoring system.
Main Characteristics:
(1) LCD: 5.8 inch with touch screen display, for showing all operation interface. Direct, convenient, and easy to follow it conveys large amounts of information.
(2) 3-Dimensional Joystick. Used for operating high-speed dome. It can be handled easily with flexible maneuvering.
(3) Provides RS-485 control output signal as well as offer the standard RS-232 control signal thus convenient to operate the equipment for both short and long distance.

II. Intelligent Keyboard Parameters
2.1 Technical Parameter
(1) Power input: DC 12V
(2) Power consumption: 6W
(3) Working temperature: -10 ~ 50℃
(4) Protocols: XTS, PELCO_D, PELCO_P, SAMSUNG, KALATEL
(5) Communication baud rate: 2400 bps ~ 19200 bps
(6) Data format: N,8,1

2.2 Function Parameter
(1) Maximum control camera number: 1024
(2) Maximum control monitor number: 64

III. Intelligent Keyboard Drawing
3.1 Front Panel Chart and Function Key Description
3.1.1 Number Area: Data Input, Clear And Confirmation

(1) CLR key: Clear the inputted number on the DATA display area. Press CLR to delete when inputted number is wrong or needs to be inputted again.
(2) ENTER key: When you press the ENTER key, the inputted number in the DATA area selects the function or step through ladder functions.
(3) 0~9 Number key: Number input.

3.1.2 DVR Control Key Area

<table>
<thead>
<tr>
<th>key</th>
<th>function</th>
</tr>
</thead>
<tbody>
<tr>
<td>▶</td>
<td>forward</td>
</tr>
<tr>
<td>■</td>
<td>stop</td>
</tr>
<tr>
<td>◀</td>
<td>play</td>
</tr>
<tr>
<td>◀</td>
<td>backward</td>
</tr>
<tr>
<td>●</td>
<td>recording</td>
</tr>
</tbody>
</table>

3.1.3 Matrix Assistant Control Area

<table>
<thead>
<tr>
<th>key</th>
<th>function</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACK</td>
<td>Alarm state check</td>
</tr>
<tr>
<td>ENABLE</td>
<td>Dispose defense</td>
</tr>
<tr>
<td>DISABLE</td>
<td>Cancel defense</td>
</tr>
<tr>
<td>ON</td>
<td>Turn “Assistant ON/OFF” on</td>
</tr>
<tr>
<td>OFF</td>
<td>Turn “Assistant ON/OFF” off</td>
</tr>
</tbody>
</table>

3.1.4 Lens Control Key Area

<table>
<thead>
<tr>
<th>key</th>
<th>function</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRIS OPEN</td>
<td>Adjust the aperture to big</td>
</tr>
<tr>
<td>IRIS CLOSE</td>
<td>Adjust the aperture to small</td>
</tr>
<tr>
<td>FOCUS FAR</td>
<td>Focus on far distant</td>
</tr>
<tr>
<td>FOCUS NEAR</td>
<td>Focus on near distance</td>
</tr>
<tr>
<td>ZOOM IN</td>
<td>Adjust the zoom ratio to big</td>
</tr>
<tr>
<td>ZOOM OUT</td>
<td>Adjust the zoom ratio to small</td>
</tr>
</tbody>
</table>

3.1.5 F1～F8 Function Keys

the function of each key is corresponding with the function display on OSD menu.
3.2 Intelligent Keyboard Connection

3.2.1 The Connection Sketch Of Keyboard With Matrix

![Connection Sketch Of Keyboard With Matrix](image)

3.2.2 The Connection Sketch Of Keyboard With DVR

a.) Through RS-232 connection mode:
NB: Only one keyboard can connect and control one DVR by using RS-232 connection mode.
Connect the RS-232 port on the rear of the keyboard directly to DVR’s RS-232 port.

![Connection Sketch Of Keyboard With DVR](image)
b) Through RS-485 connection mode:
By using RS-485 connection mode, the keyboard can connect and control more than one DVR.
Connect the RS-485 port on the rear of the keyboard with the RS-485 to RS-232 converter. Then connect each RS-485 to RS-232 converter to each DVR in the system. Please refer to the user's manual of DVR to get further information.

IV. Keyboard Operation
The following operation is based on the XTS protocol, it will be different while using other protocols.

4.1 Keyboard Operation
The interface is as following,

This is the main interface of keyboard, users can select the object (such as speed dome, matrix, DVR etc.) for setting.
Select the object for controlling, press F1 or “SPEED DOME”, enter into the interface of speed dome control and page setup.
press F2 or KEYBOARD, enter into the setup page of keyboard.
press F3 or MATRIX, enter into the control page of matrix.
press F4 or DVR, enter into the control page of DVR.
Monitor selection, press F5 or “MON”, and then press figure key to input the No. of monitor (1~64), press CLEAR to clear away, press ENTER to confirm.
Camera, decoder or speed dome selection, press F6 or “CAM”, and then press figure to input the address of the speed dome (1~1024), or camera, or decoder. Press CLEAR to clear away, press ENTER to confirm.

4.2 Speed Dome

On the main page, press F1 to enter into the speed dome control page.

4.2.1 Speed Dome Control

(1) Call preset, press FIGURE key to input number (1~256) on DATA area, and then press F1 or CALL PRESET to set-up the preset position, then the figure in the DATA area will be the preset position NO..
(2) Start-up cruise, press FIGURE key to input number to DATA area, and then press F2 or CRUISE to set Start-up pattern tours, then the figure in the DATA area will be pattern tours NO..
(3) Start-up A-B scan, press FIGURE key to input number to DATA area, and then press F2 or AUTO CIRCLE to set start-up A-B scan, then the figure in the DATA area will be pattern shows NO.
(4) Start-up auto circle, press FIGURE key to input number (1~64) to DATA area, and then press F6 or AB CIRCLE to start route scan, then the figure in the DATA area will be the speed of route scan (1~64 grade).
(5) Start-up frame scan, press figure key to input number (1~64) to DATA area, and then press F7 or FRAME SCAN to set start-up frame scan, then the figure in the DATA area will be the speed of frame scan (1~64 grade).

(6) Pattern scan, press F4 or PATTERN to start-up trace scan.

4.2.2 Speed Dome Setting

4.2.2.1 Preset position setting

The interface of the preset position is the following.

![Preset Position Interface]

a. Add the preset position, press F1 or ADD and input number as the preset position No. (1~256), press F7 or DELETE, then input number for the preset position. Press F7 to clear.

4.2.2.2 Group setup

![Group Setup Interface]

a. The group parameter setup: press F1 or PRESET, input the group setup No., press ENTER key to move to the next line and set the dwell time (1~60), press ENTER key to confirm. Then move to third line automatically and set the speed (1~64 grade). Press enter key to confirm and finish the set.
b. Press F2 or ADD GROUP, then the arrowhead points to the group No., input No., press ENTER key to confirm.

c. Press F3 or ADD GROUP, the arrowhead points to the group No, Input the No. press ENTER to confirm, It can be easily seen at the end of the screen, The Max. preset point for the cruise group is 16.

d. Press F4 or CONFIRM to finish the set up.

4.2.2.3 Watch position setup

Adjust the watch position of the camera, press F1 or TIME, The arrowhead points to the waiting time, then press the DATA, press ENTER to finish the watch position set, Press F3 or TURN ON to open the watch position. Press F4 or TURN OFF to close the watch position.

4.2.2.4 A-B scanning setup

Adjust the PAN A, then input the time ((1～60).Press F1 or PAN A to finish the setup. Adjust the PAN B, then input the time ((1～60s). Press F4 or PAN B to finish the setup.
4.2.2.5 Subsidiary settings

This page is the subsidiary control switch
Press F1 or WASH BURSH to control the “wash brush” switch
Press F2 or HEATER to control the “heater” state
Press F3 or AUX 1 to control the subsidiary switch 1
Press F4 or AUX 2 to control the subsidiary switch 2

4.2.2.6 Speed dome OSD menu

Users can operate the OSD menu in this page, The functions are in the following,
F1  Dome menu up or press UP
F2  Dome menu down or press DOWN
F3  Menu left or press LEFT
F4  Menu right or press RIGHT
F5  Menu change or press CHANGE
F6  Menu select or press SELECT
F7  Confirm menu or press CONFIRM
4.3 Keyboard

4.3.1 Set The ID No.

Press F1 or KEYBOARD, then input the ID No., press “ENTER” for confirmation, Press CLEAR to clear.

4.3.2 Set The Baud Rate

Press F2 or BAUDRATE to set the Baud Rate, press F2 or BAUDRATE every time in the page, the Baud rate will be changed, The default Baud Rate is 9600bps, Support 1200bps, 2400bps, 4800bps, 9600 19200bps.

4.3.3 The Protocol Setting

Press F3 or PROTOCOL to set the Protocol, press F3 or PROTOCOL every time in the page, the protocol will be changed, The default protocol is XTS, support XTS, Pelco-D, Pelco-P, Samsung, Karate protocol.

4.3.4 The Keyboard Sound Setting

Press F6 or SOUND to set the Keyboard Sound, the default Keyboard Sound is on, press F6 or SOUND every time, the Keyboard Sound will be changed.
4.3.5 Match Resister Setting

Press F7 or MATCHER RESISTER to set the Matching Resistance, the default Matching Resistance is off, press F7 or MATER RESISTER every time, the match resister will be changed.

Press F4 or NEXT to set the next page.

4.3.6 The Keyboard Test

Press F1 or KEYBOARD TEST, then enter into the test page, all the key on the keyboard can be tested in this page. Press F8 or EXIT to exit.

4.3.7 Joystick Setup

Press F2 or JOYSTICK to enter into keyboard setting page

a. To set the joystick dwell time.
   Press F7 or CENTER to set the dwell time when the joystick is in the middle.

b. To set the Maximum leftward movement data setting
   Press F1 or PAN L to set the maximum movement data when the joystick is in the left.
c. To set the Maximum rightward Movement data setting
   Press F2 or PAN R to set the Maximum movement data when the joystick is in the right.

d. To set the Maximum upward movement data setting
   Press F3 or TILT U to set the Maximum movement data when the joystick is up.

e. To set the Maximum downward movement data setting
   Press F4 or TILT D to set the maximum movement data when the joystick is down.

f. Maximum Counter-clockwise Data Setting
   Turn joystick all the way Counter-clockwise and press F5 or ZOOM WIDE to enter the relevant maximum data setting.

g. Maximum Clockwise Data Setting
   Screw clockwise the middle pillar to its maximum and press F6 or ZOOM TELE to enter the relevant maximum data setting.

4.3.8 Max Sub Control No. set

   Press F6 or MAX SLAVE, the arrowhead points to the Max. sub control. Then input number (the Max. sun control is 16), press ENTER to confirmation.

4.3.9 Max. Alarm No. set

   Press F7 or MAX ALARM, the cursor points to the Max. alarm No. then input number (the largest alarm number is 239), press ENTER to confirmation.

4.4 Matrix

   Press F3 or NEXT to enter into the Matrix control page
4.4.1 Matrix Basic Operation

a. Monitor select, press No. to select the monitor No., then press F1 or MONITOR, the monitor will display the current picture.

b. Camera select, press No. to select the camera No., then press F2 or CAMERA, the monitor will display the current camera picture.

c. Group Switch
   Input number (1-99) in DATA area, press F2 or GROUP SWITCH to Auto-switch.

d. Start sequence
   Press F3 or START SEQUENCE, if showing 0 in DATA area, order-switch parameter (1-99) is in monitor area. Stop the sequence when in the monitor select or camera select.

e. Manual switch, press F5 or UP to up switch, press F6 to down switch.

f. Press F5 or MATRIX MENU to enter into the menu Operation.

4.4.2 Matrix Menu Operation

<table>
<thead>
<tr>
<th>Operation Key</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>Up</td>
</tr>
<tr>
<td>F2</td>
<td>Down</td>
</tr>
<tr>
<td>F4</td>
<td>Return to the Previous Menu to exit</td>
</tr>
<tr>
<td>F8</td>
<td>Return to the Previous Menu of Keyboard</td>
</tr>
</tbody>
</table>

The data in the manual can be changed through the keyboard, Operations are as follows:
Choose the item you need to change, Input the data in the Data area, then press ENTER key to confirmation, the item in the manual will be changed.
V. Trouble Shooting

<table>
<thead>
<tr>
<th>Exception phenomena</th>
<th>Possible reason</th>
<th>Relative solution</th>
</tr>
</thead>
</table>
| No display on the screen when the power on | Power supply is not connected properly | 1. Check connection of power line  
2. See if power supply is AC/DC12V |
| No way to control designated dome or high speed dome | 1. Protocol is not correct  
2. Baud rate is not correct  
3. Controlled address is not correct | 1. Check if the keyboard protocol accords with that of dome or high-speed dome or not.  
2. Check if the baud rate of the keyboard accord with that of dome or high-speed dome or not.  
3. The number in CAM or DATA area can’t accord with the object address |
| No Beep sound when pressing key | Key-press sound is closed | Start up key-press sound in the keyboard set |
| Other phenomena | | Return to manufacturer for service |

⚠️ After establishing the address, please restart the unit to save changes.