SECURITY TRONIX

THE IMAGE OF QUALITY

USER MANUAL

ST-PTZMINI-KB

PTZ Keyboard Controller

TABLE OF CONTENTS

PACKAGE CONTENTS

This package contains:

One ST-PTZMINI-KB keyboard controller
One connection block
One 12VDC 2A power supply
One user manual

PRODUCT DESCRIPTION

The ST-PTZMINI-KB is a professional grade pan, tilt, zoom (PTZ) controller for up to 31 PTZ-enabled CCTV cameras and other devices. The unit uses RS-485 communications, includes an LCD display and a 3-axis joystick.

Important Note

PTZ controllers are designed to perform a wide variety of PTZ camera control functions. However, the utility of any PTZ controller is highly dependant upon the particular PTZ camera to be controlled as each camera has not only its own functions but specific methods of how those native functions are accessed and managed. Further, a particular PTZ controller's terminology may differ from that used by a particular PTZ camera. Therefore, it will be necessary for the installer and/or user to consult BOTH the PTZ controller and PTZ camera's user manuals to ensure proper set-up, configuration and application.

SPECIFICATIONS

ST-PTZMINI-KB

Specifications (Typical)

1. Communications Protocol	RS-485
2. Baud Rate	2400, 4800, 9600, and 19200 Bits/S
3. Transmitting Distance	3900 feet using 24AWG twisted pair cable
4. Operating Temperature	32°F - 122°F
5. Relative Humidity	<90%
6. Power Supply	12VDC 2A
7. Dimensions	6.6"x5.4"x4.1"
8. Weight	14 oz.

INSTALLATION AND OPERATION

1. UNPACKING and HANDLING

Each unit is shipped assembled and factory tested.

Ensure that all accessories are removed from the container before discarding packing material

2. MECHANICAL INSPECTION

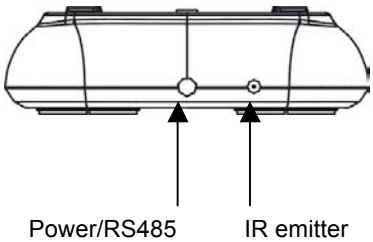
Inspect the front and rear of the equipment for shipping damage. Make sure the equipment is clean, and no connectors are broken, damaged, or loose. If equipment appears to be damaged or defective please contact your distributor or Securitytronix at 1-610-429-1511 for assistance.

3. SPECIAL ATTENTION

a. The installer must comply with electrical safety standards. There must be sufficient space between the ST-PTZMINI-KB's communication and power lines and camera's and DVR's power supplies and video lines and any high voltage equipment and/or cables.
b. Do not open up or dismantle the ST-PTZMINI-KB's case. There are no serviceable parts inside the unit.
c. Do not install ST-PTZMINI-KB in an environment where the temperature is below 32ºF or above 122° F.
d. Do not install the ST-PTZMINI-KB in a damp environment.
e. Only use a dry cloth to clean the unit. If there is dirt that is difficult to remove wipe gently with a mild detergent. Never use strong or abrasive detergents.
f. A minimum 12VDC 2A power supply must be used. AC power cannot be applied. Using an AC or other incorrect power supply will damage the unit.
g. Only qualified installers are allowed to install and test the ST-PTZMINI-KB.
h. As the ST-PTZMINI-KB is a sensitive device any shock or collision to the unit or shaking of the unit will cause damage and void the warranty.

4. WIRING CONNECTIONS

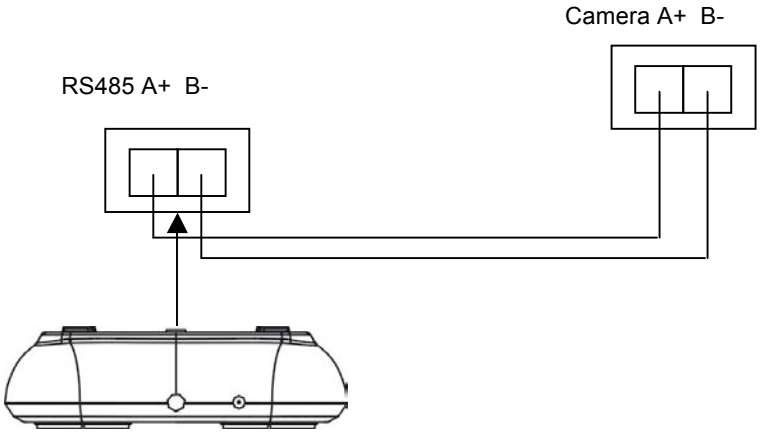
a. The ST-PTZMINI-KB has an RS485 interface and an infrared interface for connection to PTZ cameras or other peripheral devices (e.g., DVRs). The infrared interface is not supported at this time.



The ST-PTZMINI-KB's RS485 interface and power connection share a common cable connected directly to the unit as depicted below. A terminal block for wiring UTP (unshielded twisted pair) cable between the PTZ camera or other device and the controller is included.

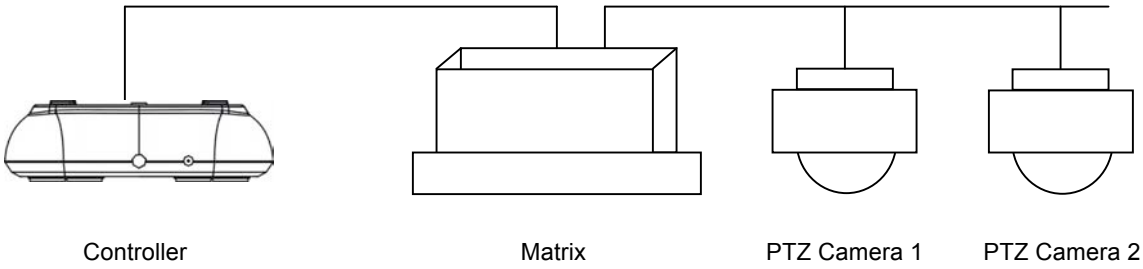
b. Connect the 12VDC 2A power supply to the ST-PTZMINI-KB's female power connector.

c. Using UTP cable connect the ST-PTZMINI-KB's RS485 port to the PTZ camera's RS485 port. Using the terminal block be sure the polarities are correct and consistent with the camera. Always consult the camera's manual regarding PTZ controller connections.



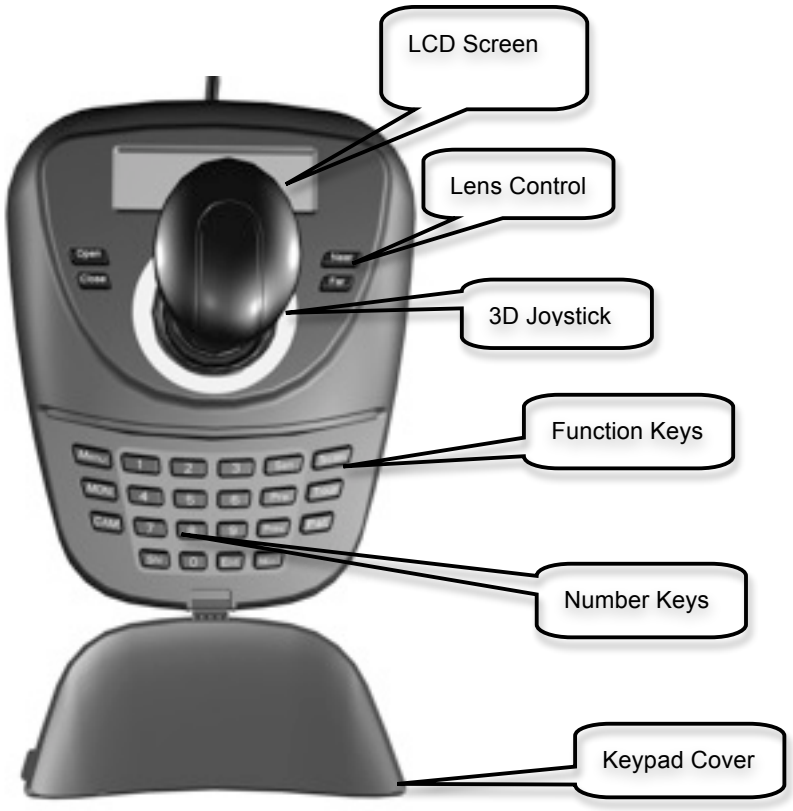
d. Connect power supply's AC plug to a suitable AC power outlet. When power is applied the ST-PTZMINI-KB will automatically display the baud rate and keyboard protocol on the LCD screen. Note: When the controller is initializing the joystick should be in the "nil" (0 or neutral) position.

e. It is also possible for the ST-PTZMINI-KB to control multiple PTZ cameras using a matrix switch in lieu of a DVR per the diagram below. The PTZ controller and cameras are connected in parallel to the matrix's RS485 buss. Be sure to assign each camera a unique address and set the cameras' and controller's communications at 9600bps.



f. Note: If using more than one PTZ controller each controller must have a unique ID. Further, no more than 4 ST-PTZMINI-KBs can be used in one system.

5. KEYBOARD OPERATION



KEYBOARD OPERATION:

LCD Screen: The LCD displays key information including camera address or ID, monitor address or ID, protocol, baud rate and joystick position. When an operation is initiated the LCD will be lit and remain on for 10 seconds after the operation is completed.

Joystick: The joystick controls both camera positioning and camera menu selection and setup.

- **Camera Positioning:** The camera will follow the joystick's direction. The joystick and camera's position will be displayed on the LCD as ← → ↑ ↓
- **Camera Menu Setup:** The joystick is used to selection menu items as follows: ↑ for the upper menu item, ↓ for the next menu item, → for a sub menu or save and ← for cancel, return to submenu or exit.

Camera Address: To choose the camera to operate use **N** + **CAM** where **N** is the camera address (e.g., 1). Enter camera address then press **CAM**.

PTZ Camera Lens Control: Use the ST-PTZMINI-KB to control the camera's Zoom, Focus and Iris lens features.

- **Zoom:** Control the zoom by rotating the joystick – clockwise to zoom far, counter clockwise to zoon wide.
- **Focus:** Press the **FAR** key to focus far objects. Press the **NEAR** key to focus near objects. Normally Zoom and Focus will be adjusted automatically by the camera.
- **Iris:** Press the **OPEN** key to open the iris. Press the **CLOSE** key to close the Iris. Pressing these keys will manually adjust the iris. Note: Many cameras do not support manual iris control.

Setting Camera Presets, Scan, Pattern and Cruise Functions:

- **Preset:**
  - To **create** a preset move the camera to the desired point, press the **SET** key, the **N** key (where **N** is the preset number) and the **PRE** key (**SET** + **N** + **PRE**).
  - To **adjust** the preset press the **N** key and the **PRE** key (**N** + **PRE)**.

- **Scan:**
  - To set the **left** border, press the **SET** key, **1** key and **SCAN** key (**SET** + **1** + **SCAN**).
  - To set the right border, press the **SET** key, **2** key and **SCAN** key (**SET** + **2** + **SCAN**).
  - Start: To start the Left – Right scan press the **1** key and **SCAN** key (**1** + **SCAN**).

- Enter the camera's menu to change the scan speed.

- **Pattern:**
  - To **create** a pattern press the **SET** key, the **N** key (where **N** is the number to designate a pattern scan), the **PATTERN** key *then direct the camera along the path for the pattern* the press the **SET** key, the **0** key then the **PATTERN** key (**SET** + **N** + **PATTERN** + ***camera path*** + **SET** + **0** + **PATTERN**). Note: up to 4 patterns can be created and stored (N will be designated 1, 2, 3, or 4).
  - To **star**t a pattern scan, *input the pattern number 1, 2, 3 or 4* then press the **PATTERN** key to commence scanning. (***enter 1, 2, 3, or 4***, + **PATTERN**).

- **Tour:**
  - To start a cruise press the **N** key, then the **TOUR** key. **N** represents the desired tour number and **TOUR** will start the cruise (**N** + **TOUR**).
  - If only one cruise has been created then simply press the **TOUR** key.

Call The Camera's Main Menu: Press **9** + **5** + **PRESET**. The camera's menu will be displayed on the monitor.

Matrix Control: A matrix can support a specific number of PTZ cameras. The ST-PTZMINI-KB can support up to 16 PTZ cameras in a matrix. All camera information such as address, data, and time will be displayed when switching from one camera to another. Note: the user should refer to the matrix switch's manual regarding the matrix's specific features, functions and limitations.

- **Switch Camera Order:** Press the **PREV** key to switch back to the previous camera. Pressing and holding the **PREV** key for 2 seconds will allow switching backwards through all cameras. Press the **STOP** key to stop switching. Press the **NEXT** key to advance to the next camera. Pressing and holding the **NEXT** key for 2 seconds will allow switching forwards through all cameras. Use the **STOP** key to stop the switching.
- **Call Matrix Main Menu:** To call the matrix switch menu press the **SHIFT** and **SET** keys (**SHIFT** + **SET**). The menu will be displayed on the monitor.
- **Confirm Matrix Programming:** Refer to the matrix switch's manual regarding how to program the matrix. Press the **ENTER** key to confirm a program setting.

Change Monitor: To change image to a different monitor press the **N** key (where **N** is the monitor ID) and the **MON** key (**N** + **MON**).

KEYBOARD MENU CONTROL:

- Parameter Setup
- Joystick Calibration
- Camera Setup
- Camera Scan Setup
- Camera Pattern Setup
- Camera Tour Setup
- Protocol Setup
- Pelco Matrix Model Setup

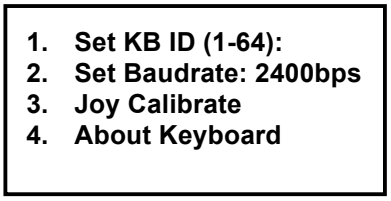
By pressing and holding the **MENU** key for 2 seconds the main menu screen (as above) will appear. The user must enter the main menu and either use the menu item number or joystick to select the desired menu item. Once done, move the joystick right or press **ENTER** to enter that menu.

To move to a previous menu item press the **PREV** key or move the joystick left.

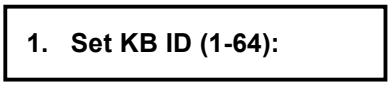
To **save** a menu setting selection press the **ENTER** key. The LCD screen will then display "Success".

Keyboard Parameter Settings: Keyboard Camera ID Setup; Keyboard Baud Rate Setup; Keyboard Information Display.

- **Keyboard Camera ID Setup:**
  - Press the **MENU** key and select **1. Keyboard Setup** from the main menu. The Keyboard Setup Menu screen similar to the one below will appear.

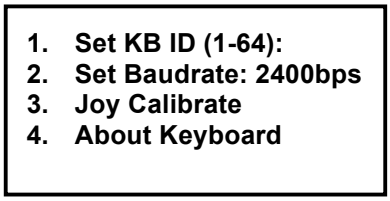


Press the **1** key for **Set KB ID**. Press **1** again and the LCD screen will display:

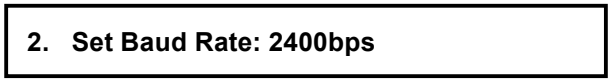


  - Press **1** to select the keyboard ID setting. Use the numeric keys to select the ID from 1 to 64 (if the selected ID is greater than 64 "Error" will be displayed). Then press the **ENTER** key to save. Upon doing so "Success" will appear on the screen.
  - To move to the previous menu press the **PREV** key or move the joystick to the left.
  - NOTE: The keyboard ID default is **1**.

- **Keyboard Baud Rate Setting:**
  - Press the **MENU** key and select **1. Keyboard Setup** from the main menu. The Keyboard Setup Menu screen similar to the one below will appear.



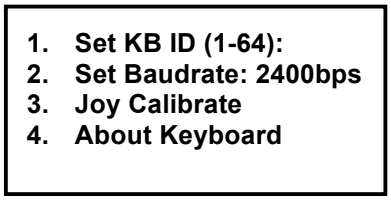
  - Press the 2 key and the select baud rate setting screen similar to the one below will be displayed.



  - Move the joystick right or up/down to select the desired baud rate then press **ENTER** to save. Upon doing so "Success" will appear on the screen.
  - To move to the previous menu press the **PREV** key or move the joystick to the left.
  - NOTE: If the PTZ controller is connected to a matrix switch the baud rate must be 9600bps. If several controllers are to be used together the baud rate must be 9600bps or 19200bps.

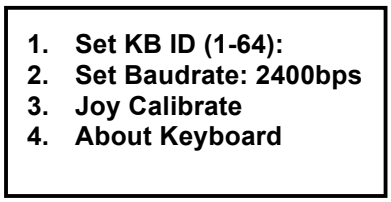
- **About Keyboard:**

  - Press the **MENU** key and select **1. Keyboard Setup** from the main menu. The Keyboard Setup Menu screen similar to the one below will appear.



  - Press the **4** key to display keyboard information.

Joystick Calibration: With the joystick in the center position press the **MENU** key and the **1** key to select keyboard setup. Then select **3. Joy Calibrate** from the Keyboard Setup Menu. Note: the joystick must remain in the center (neutral) position when calibrating.

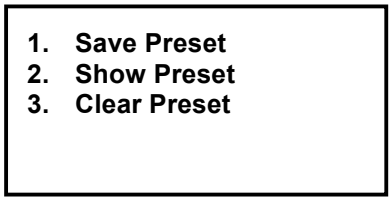


- Press the **3** key. The LCD will display:

- Press **ENTER** and the joystick calibration is completed. The LCD will display "Success".

PTZ Dome Camera Setup: Press **MENU** to enter the main menu then press the **2** key to enter the Dome Setup Menu. This menu will allow the setting of preset, scan, pattern and tour functions.

- **Preset Setup:**
  - Press the **1** key to enter the Preset function. The LCD will then display menu options as shown below.



  - To **create and save a preset**. press the **1** key then input the preset number, aim the camera to the desired target, then press **ENTER** to save and confirm. The LCD will then display "Success".

Preset num:_____
(1-128)

Press PREV to back

- Press PREV to return to the previous menu.

- To **show a preset**, press the **2** key for **Show Preset** under the Dome Setup Menu.

Preset num:_____
(1-128)

Press PREV to back

- Input the preset number and press **ENTER** to call it. The LCD will then display "Success".
- Press **PREV** to return to the previous menu.

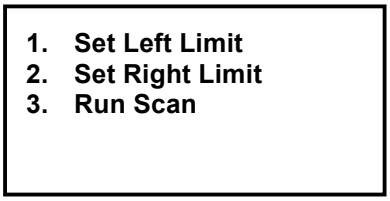
- To **delete a preset**, press the **3** key for **Clear Preset** under the Dome Setup Menu.

Preset num:_____
(1-128)

Press PREV to back

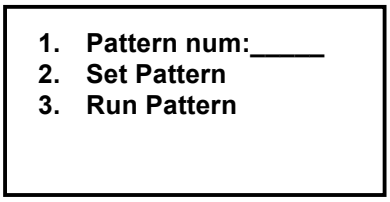
- Input the preset to be cleared and press **ENTER** to clear it. The LCD will then display "Success".
- Press **PREV** to return to the previous menu.

- **Scan Setup:**
  - Enter the Dome Setup Menu and press the **2** key for **Set Dome Scan**. The LCD will display:

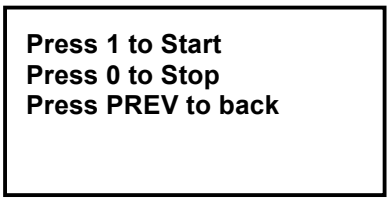


  - To **set the left limit**, press **1. Set Left Limit** and press **ENTER** to enable the joystick. Move the joystick to aim the camera to the desired left position and press **ENTER** to save. The LCD will display "Success"
  - To **set the right limit**, press **2. Set Right Limit** and press **ENTER** to enable the joystick. Move the joystick to aim the camera to the desired right position and press **ENTER** to save. The LCD will display "Success".
  - To **run the scan** simply press **3. Run Scan**.
  - Press **PREV** to return to the previous menu.

- **Pattern Setup:**
  - Enter the Dome Setup Menu and press the **3** key for **Set Dome Pattern**. The LCD will display:

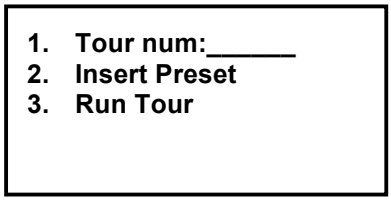


  - The controller will support up to 4 patterns. Input pattern number 1 – 4 and press ENTER. The system will skip to the next item automatically to set the second pattern if needed.
  - To set a pattern, aim the camera to the desired position and press **2. Set Pattern**. The LCD will display:

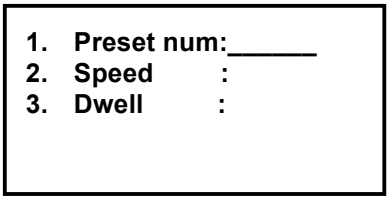


  - Press **1** to start the scan recording track. The screen will display "Start ……," Move the camera along the desired scan track. When completed press **0** to finish the scan recording track. The LCD will then display "Success".
  - To **run the pattern**, enter the pattern number in the Set Dome Pattern menu and press **3. Run Pattern**.

- **Tour Setup:**
  - Enter the Dome Setup Menu and press the 4 key for Set Dome Tour. The LCD will display:

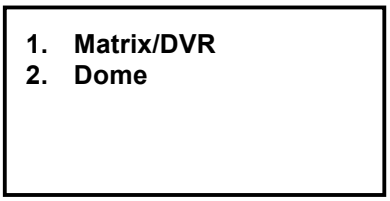


  - The controller will support up to 6 tours. Input tour number 1 – 6 and press ENTER to confirm. The system will skip to the next item automatically to set the second tour if needed. If not, the user can skip it and the LCD will display "Success". The system will return to the previous menu.
  - To enter presets for the tour press 2. Insert Preset in the Set Dome Tour Menu. The LCD will display:



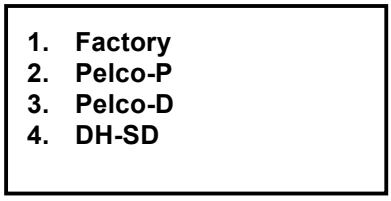
  - Press **1 to enter the preset number**. Press **2 to enter the speed** using the range of 1 – 127. Press **3 to enter the dwell time** using the range of 1 – 255. After entering all the above parameters press **ENTER** to save. The LCD will display "Success" and return to the previous menu.
  - To **run the tour**, press **3. Run Tour** in the Set Dome Tour Menu.

Protocol Setup: Press **MENU** to enter the main menu then press the **3** key to enter the Protocol Setup Menu.



- **Matrix Protocol Setup:** Press the **1** key for **Matrix/DVR**. The LCD will display:

  - Press the 1 key to select Pelco Matrix the press ENTER to select the Protocol and return to the previous menu. All Securitytronix cameras use the Pelco-D protocol. For setting of a third party matrix or DVR refer to the unit's operation manual.
- **Dome Camera Protocol Setup:** Press the 2 key for Dome in the Protocol Setup Menu. The LCD will display:



  - Refer to the camera's manual for the protocol to be used. Press the **1**, **2** or **3** key according to the camera's protocol. Press **ENTER** to confirm.

Upon completing all settings return to the main menu and press the **5** key **Exit Menu**.

6. TROUBLESHOOTING TIPS

a. *The ST-PTZMINI-KB is not controlling the camera at all* – (i) be sure the R485 connections between the ST-PTZMINI-KB and the camera are using the same polarities; (ii) be sure correct connections are made at the ST-PTZMINI-KB's connection block; (iii) check to see if the correct baud rate has been set with the camera; (iv) check to see if the correct protocol has been with the camera.

b. *The ST-PTZMINI-KB is communicating with the camera, but certain functions do not work* – PTZ controllers are designed to perform a wide variety of PTZ camera control functions. However, the utility of any PTZ controller is highly dependant upon the particular PTZ camera to be controlled as each camera has not only its own functions but specific methods of how those native functions are accessed and managed. Further, a particular PTZ controller's terminology may differ from that used by a particular PTZ camera. Therefore, it will be necessary for the installer and/or user to consult BOTH the PTZ controller and PTZ camera's user manuals to ensure proper set-up, configuration and application.

c. Additional troubleshooting assistance can be found on-line at www.securitytronix.com in addition to support from Securitytronix sales engineers at 1-610-429-1511.

APPENDIX 1: KEYBOARD SHORTCUTS

Working Mode	Shortcut	Operation Object	Function
Direct Control Mode	Press【SET】for 2 seconds	Keyboard	IR remote ON/OFF
	Press 【MENU】for 2 seconds	Keyboard	Enter the system setting
	【N】+【CAM】	High speed dome	Input Dome ID, press【CAM】to select object dome.
	【Rotate the joystick anti-clockwise】	High speed dome	Zoom in
	【Rotate the joystick clockwise】	High speed dome	Zoom out
	【FAR】	High speed dome	Press【FAR】, far focus
	【NEAR】	High speed dome	Press【NEAR】, near focus
	【CLOSE】	High speed dome	Press【CLOSE】, reduce iris
	【OPEN】	High speed dome	Press【OPEN】, increase Iris
	【SET】+【N】+【PRESET】	High speed dome	Adjust the image to object position, Press【SET】to input the preset, and press【PRESET】to set the preset
	【N】+【PRESET】	High speed dome	Input preset ID, press【Preset】to call the preset
	【SHI】+【1】+【ENT】	High speed dome	ON/OFF water Wiper
	【SHI】+【2】+【ENT】	High speed dome	ON/OFF auxiliary light
	【SET】+【1】+【SCAN】	High speed dome	Adjust the image to object position, press Set to input【1】,then press Scan to set【scan】left limit.
	【SET】+【2】+【SCAN】	High speed dome	Adjust the image to object position, press Set to input【2】, then press【Scan】to set scan right limit.
	【1】+【SCAN】	High speed dome	Input【1】, press【Scan】to run scan.
	【SET】+【N】+【PATTERN】	High speed dome	Press 【Set】to input pattern number, press【Pattern】 to

			record pattern path.
	【SET】+【0】+【PATTERN】	High speed dome	Press【SET】 and input0, Press【PATTERN】to save path
	【N】+【PATTERN】	High speed dome	Input the pattern path（1-4），Press【PATTERN】to start pattern
	【N】+【TOUR】/【TOUR】	High speed dome	Input the TOUR NO, press【TOUR】 or directly press【TOUR】to start the Tour
	【9】+【5】+【PRESET】	High speed dome	Input 95 and press【Preset】to call the menu
PELCO Matrix Mode	【SHIFT】+【SET】	Matrix	Press【SHIFT】and【SET】to call the matrix menu
	【PREV】	Matrix	Press【PREV】skip to the previous dome, hold on 2sec on【PREV】to continuously skip the sixteen domes of connection matrix forwards
	【NEXT】	Matrix	Press【NEXT】skip to the previous dome, hold on 2sec on【NEXT】to continuously skip the sixteen domes of connection matrix backwards
	【ENTER】	Matrix	After program, press【Enter】to confirm.。
	【N】+【MON】	Matrix	Input monitor ID, press【Cam】 to select object monitor

APPENDIX 2: MENU TREE