Please read this manual thoroughly before operation and keep it handy for further reference.
WARNING & CAUTION

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK
DO NOT REMOVE COVER (OR BACK).
NO USER SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED
SERVICE PERSONNEL.

The lighting flash with an arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of un-insulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (serving) instructions in the literature accompanying the appliance.

INFORMATION - This equipment has been tested and found to company with limits for a class A digital device Pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference. When the equipments operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which Case the user will be required to correct the interference at his own expense.

WARNING – Change or modification not expressly approved by the manufacturer could void the user’s authority to operate the equipment.

CAUTION: To prevent electric shock and risk of fire hazards.
DO NOT use power sources other than that specified.
DO NOT expose this appliance to rain or moisture.

This installation should be made by a qualified service person and should conform to all local codes.
1. **READ AND RETAIN INSTRUCTIONS**  
Read the instruction manual before operating the equipment. Retain the manual for future reference.

2. **CLEANING**  
Turn the unit off and unplug from the power outlet before cleaning. Use a damp cloth for cleaning. Do not use harsh cleansers or aerosol cleaners.

3. **ATTACHMENTS**  
Do not use attachments unless recommended by manufactured as they may affect the functionality of the unit and result in the risk of fire, electric shock or injury.

4. **MOISTURE**  
Do not use equipment near water or other liquids.

5. **ACCESSORIES**  
Equipment should be installed in a safe, stable location. Any wall or shelf mounting accessory equipment should be installed using the manufacturers instructions. Care should be used when moving heavy equipment. Quick stops, excessive force, and uneven surfaces may cause the equipment to fall causing serious injury to persons and objects.

6. **VENTILATION**  
Openings in the equipment, if any, are provided for ventilation to ensure reliable operation of the unit and to protect it from overheating. These openings must not be blocked or covered.

7. **POWER SOURCES**  
The equipment should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied at the installation location, contact your dealer. For equipment designed to operate from battery power, refer to the operating instructions.

8. **GROUNDING OR POLARIZATION**  
Equipment that is powered through a polarized plug (a plug with one blade wider than the other) will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. Do not defeat the safety purpose of the polarized plug.

Alternate Warning: If the equipment is powered through a three way grounding type plug, a plug having a third (grounding) pin, will only fit into a grounding-type power outlet. This is a safety feature. Do not defeat the safety purpose of the grounding type plug. If your outlet does not have the grounding plug receptacle, contact your local electrician.

9. **CORD AND CABLE PROTECTION**  
Route power cords and cables in a manner to protect them from damage by being walked on or pinched by items places upon or against them.

10. **LIGHTNING**  
For protection of the equipment during a lightning storm or when it is left unattended and unused for long periods of time, unplug the unit from the wall outlet. Disconnect any antennas or cable systems that may be connected to the equipment. This will prevent damage to the equipment due to lightning or power line surges.

11. **OVERLOADING**  
Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

12. **SERVICING**  
Do not attempt to service the video monitor or equipment yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

13. **DAMAGE REQUIRING SERVICE**  
Unplug the equipment from the wall outlet and refer servicing to qualified service personnel under the following conditions:

A. When the power supply cord or the plug has been damaged.
B. If liquid has spilled or objects have fallen into the unit.
C. If the equipment has been exposed to water or other liquids.
D. If the equipment does not operate normally by following the operating instructions, adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage to the unit.
E. If the equipment has been dropped or the casing damaged.
F. When the equipment exhibits a distinct change in performance.

14. **REPLACEMENT PARTS**  
When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

15. **SAFETY CHECK**  
Upon completion of any service or repairs to the equipment, ask the service technician to perform safety checks to verify that the equipment is in proper operating condition.

16. **FIELD INSTALLATION**  
The installation of equipment should be made by a qualified service person and should conform to all local codes.
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LIMITATION OF LIABILITY

THE INFORMATION IN THIS PUBLICATION IS BELIEVED TO BE ACCURATE IN ALL RESPECTS, HOWEVER, WE CANNOT ASSUME RESPONSIBILITY FOR ANY CONSEQUENCES RESULTING FROM THE USE THEREOF. THE INFORMATION CONTAINED HEREIN IS SUBJECT TO CHANGE WITHOUT NOTICE. REVISIONS OR NEW EDITIONS TO THIS PUBLICATION MAY BE ISSUED TO IN CORPORATE SUCH CHANGES.
 CHAPTER 1 INTRODUCTION

In This Manual

Overview | This manual covers the operation of the KBDPTZ1 keyboard.

KBDPTZ1

This remote keyboard is an accessory for PTZ dome camera, etc. It allows the user to control from 1 to 255 cameras.

Features

- Controls from 1 ~ 255 cameras.
- Multiple protocol supported in each channel
- RS 485/RS-422 communication (Tx: 3 port, Trx:1 port).
- Programmable user preferences. (preset, tour, group, etc.).
- Built-in 3-Axis proportional joystick
- Easy upload programmed data via serial communication port of PC.
- Built-in 2 lines character LCD.
- User password support.
- Designed for desktop use
- Programmable transmission speed for each ID. (2.4~57.6kbps)

Note: units should be set to the communication protocol and the same baud rate.

Before installation

This keyboard system must be installed by qualified service and installation personnel. Perform the following steps to install the keyboard system.

A. Unpack all components.
B. Place the keyboard in a convenient location.

Note: Carefully and completely read the manuals for each piece of equipment before attempting to install and connect the equipment.

C. Decide on the configuration method.
D. Use one of the following sections to configure the wiring.
**CHAPTER 1 INTRODUCTION**

**Hardware Overview**

**Hardware Components**
This remote keyboard contains easy to use control keys on the front and simple input and output connectors on the back.

**Control Buttons & Connection**
The unit provides the primary operator interface. Most operations are one or two button presses. The following Table contains a description for each buttons on the keyboard and port of cable connection. Use Figure 1 and Figure 2 as a reference.

![Keyboard Diagram](image)

<Figure 1>

<table>
<thead>
<tr>
<th>Number</th>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ESC/POWER</td>
<td>Pressing the ESC/POWER button enters the Power on/off or escape key. Right description led on (red). Pressing it again exits the POWER OFF. (Push the button (about 2-3 seconds) and then POWER OFF)</td>
</tr>
<tr>
<td>2</td>
<td>LCD DISPLAY</td>
<td>Displays Camera ID, Protocol, function status, general status, etc.</td>
</tr>
<tr>
<td></td>
<td>[16 x 2 Graphic display]</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Numbers</td>
<td>Camera ID setting value change ,PTZ setup (1+= ), Main setup (2+= )</td>
</tr>
<tr>
<td>4</td>
<td>Controller Function keys</td>
<td>Hold : System locking (Unlocking : Input the Pass word 4 digit ****)  SHIFT/TURBO : SHIFT-Key for special function (Customize)/ TURBO -High Speed AUX : External equipment on/off SET : Ptz and main setup (1+= ), (2+= )  IRES CLOSE : Camera Iris close IRIS OPEN : Camera Iris open</td>
</tr>
</tbody>
</table>
### CHAPTER 1 INTRODUCTION

#### Control buttons (continued)

<table>
<thead>
<tr>
<th>Number</th>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td><img src="image1" alt="Camera Focus control" /></td>
<td>Camera Focus control</td>
</tr>
<tr>
<td>7</td>
<td><img src="image2" alt="Camera Zoom control" /></td>
<td>Camera Zoom control</td>
</tr>
<tr>
<td></td>
<td><img src="image3" alt="MOUSE ON/OFF (MOUSE FUNCTION KEY 2-3 Seconds push)" /></td>
<td>MOUSE ON/OFF (MOUSE FUNCTION KEY 2-3 Seconds push)</td>
</tr>
<tr>
<td></td>
<td><img src="image4" alt="MOUSE CHARACTER DESCRIPTION WILL BE DISPLAY" /></td>
<td>MOUSE CHARACTER DESCRIPTION WILL BE DISPLAY</td>
</tr>
</tbody>
</table>

---

#### Figure 2

![Diagram of control buttons](image5)

#### Number | Item | Description
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Joystick</td>
<td>Telemetry Joystick Blt allows precise control of Pan/Tilt/Zoom</td>
</tr>
<tr>
<td>2</td>
<td><img src="image6" alt="DC 12V Input" /></td>
<td>DC 12V Input, 140 mA</td>
</tr>
<tr>
<td>3</td>
<td>USB PORT</td>
<td>Universal Serial Bus Port, USB Mouse function (External Equipment communication port)</td>
</tr>
<tr>
<td>4</td>
<td><img src="image7" alt="TRx Tx3 Tx2 Tx1 RS-485" /></td>
<td>RS-485/RS-422 communications. (Tx/Rx : 3 port, Trx : 1 port)</td>
</tr>
<tr>
<td>5</td>
<td>Program</td>
<td>Download connector (For Program Update)</td>
</tr>
</tbody>
</table>
CHAPTER 1 INTRODUCTION

System Configuration and Wiring

Basic Installation

Use the Keyboard Configuration when only one keyboard is connected to the controlled units. Connect the RS-485 output port of Remote keyboard to RS-485 input port of the first controlled unit using the terminal block.

![Connection Diagram]

<RS-422/RS-485 Connection Diagram>
## CHAPTER 2  SYSTEM INSTALLATION & TYPICAL APPLICATIONS

### System Installation

**Keyboard Installation**
Before you start connecting the keyboard equipment to your system, make sure the units to be controlled are completely installed and everything is working correctly. Before use of this keyboard, you should set the protocol and baud rate (2.4–57.6kbps) in the PTZ SETUP mode.
Use the following steps to set the communication protocol and baud rate.

### PTZ SETUP

**PTZ SETUP**
PTZ Setup mode, select [SET] (2–3 seconds)
setup screen allows you to make change each programmable clause.

*Note: The baud rate must be the same between the controlled unit and the keyboard.*

<table>
<thead>
<tr>
<th>PTZ SETUP</th>
<th>1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PASSWORD</td>
<td>[ **** ]</td>
<td></td>
</tr>
</tbody>
</table>

- **PASS WORD INPUT (4 DIGITS)**
- **ADDRESS CHANGE (1—255)**
- **MODEL CHANGE (WDS/WCY/PEL...ETC)**
- **PROTOCOL CHANGE (PEL-D/PEL-P/WON-D, ...ETC)**
- **BAUDRATE CHANGE (2.4 KBPS—57.6 KBPS)**
- **PARITY CHANGE (NONE/EVEN/ODD)**
- **PROP (ON/OFF) : Proportional speed control**
- **SETUP DATA SAVE**
- **MENU EXIT**
CHAPTER 2  SYSTEM INSTALLATION & TYPICAL APPLICATIONS

MAIN SETUP

Main Setup mode, select 2+[KEY]. (2–3 seconds)

setup screen allows you to make change each programmable clause.

Note: The baud rate must be the same between the controlled unit and the keyboard.

MAIN SETUP

[ MAIN SETUP ]
PASSWD [ **** ]

[ MAIN SETUP ]
1. VER : ****

[ MAIN SETUP ]
2. DATE : 20******

[ MAIN SETUP ]
3. TITLE SET : ABC

[ MAIN SETUP ]
4. CONTROL ID : NO.

[ MAIN SETUP ]
5. DVR SPD : 9.6K

[ MAIN SETUP ]
6. COMM : RS422

[ MAIN SETUP ]
7. SLEEP : OFF

[ MAIN SETUP ]
8. BUZZER : ON

[ MAIN SETUP ]
9. BACKLIGHT : AUTO

: Cursor move
: Character Select
[ TITLE SET ]
ABC

: ID No. Change

: 2.4 KBPS—57.6 KBPS

: RS422 / RS485

: OFF/ 1Min/ 5Min /10Min /30Min /1 (Hour)

: OFF / ON

: OFF / ON / AUTO
**CHAPTER 2 SYSTEM INSTALLATION & TYPICAL APPLICATIONS**

- **10. MOUSE SET :** ON
- **11. PASSWORD :** ****
- **12. FACTORY SET :**<br>**<NO>**<br>**YES**
- **13. SAVE/EXIT :**<br>**<NO>**<br>**YES**

- **OFF / ON**
- **4 DIGITS (Default :0000)**
- **ALL DATA INITIALIZED**
- **JOYSTICK ALIBRATION**

<SETUP DATA WILL BE CHANGED DEFAULT VALUE>  
1. MODEL : WDS  
2. PROTOCOL : PEL-D  
3. BAUDRATE : 2.4 K

**JOYSTICK CALIBRATION**

It is for the keyboard to set the Max. movement of joystick.

CALIBRATION METHOD : JOYSTICK MOVE (POSITION VALUE) +

- **[ JOYSTICK CALL ]**
  1. PTZ OFFSET : **
  2. PAN LEFT : **
  3. PAN RIGHT : **
  4. PAN UP : **
  5. PAN DOWN : **
  6. ZOOM WIDE : **
  7. ZOOM TELE : **

- **[ JOYSTICK SAVE ]**
  <NO> YES

- **SET THE JOYSTICK CENTER POSITION**
- **SET THE MAX. PAN LEFT POSITION**
- **SET THE MAX. PAN RIGHT POSITION**
- **SET THE MAX. TILT UP POSITION**
- **SET THE MAX. TILT DOWN POSITION**
- **SET THE MAX. ZOOM WIDE POSITION**
- **SET THE MAX. ZOOM TELE POSITION**
- **REBOOTING**
CHAPTER 2 SYSTEM INSTALLATION & TYPICAL APPLICATIONS

EASY SETTING FUNCTION (E.S.F)

EASY SETTINF FUNCTION (Number key + Function key)
Number key + PSET/TOUR/PATT/SCAN/ E.S.F
is current position data (pan, tilt, focus, zoom data) save or call of Dome memory

DATA SAVE (SET)

② + PSET (PSET button 2 seconds push) ⟷ Current Position Saved Preset No 2
③ + TOUR (TOUR button 2 seconds push) ⟷ TOUR MENU CALL OF DOME

DATA CALL (GOTO)

② + PSET (PSET button push) ⟷ No 2 Preset position execution
③ + TOUR (TOUR button push) ⟷ No 3 TOUR Execution of DOME

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>KBDPTZ1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keyboard Communication</td>
<td>Interface: RS-485 (Tx 3 port, Trx 1 port) P an/Tilt operating distance : 4700 ft (1029m) No 24 AWG wire Protocol: Multiple (Pelco-d, etc. ) (Baud rate selectable)</td>
</tr>
<tr>
<td>Connector Type Data</td>
<td>TERMINAL BLOCK(8p)</td>
</tr>
<tr>
<td>Keyboard Keypad</td>
<td>Rubber button</td>
</tr>
<tr>
<td></td>
<td>Numeric keypad and camera function key</td>
</tr>
<tr>
<td>Joystick</td>
<td>Stick 3-axis, variable speed with zoom</td>
</tr>
<tr>
<td>Input Voltage</td>
<td>12V DC or 9V batt (battery mode)</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>Max.140mA</td>
</tr>
<tr>
<td>LCD Display</td>
<td>Graphic display : 16 * 2 Graphic display</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0 to 45</td>
</tr>
<tr>
<td>Humidity</td>
<td>10% -70 % non-condensing</td>
</tr>
<tr>
<td>Dimension &amp; Weight</td>
<td>280(W) x 174(D) x 92(H), Net : 0.7 Kg Gross: 1.7Kg</td>
</tr>
<tr>
<td>Packing include</td>
<td>WTX-1200A KEYBOARD, ADAPTOR</td>
</tr>
<tr>
<td></td>
<td>Packing include : BATT 9V(Alkaline), USB CABLE, MANUAL, TERMINAL BLOCK(8p)</td>
</tr>
</tbody>
</table>
LIMITED WARRANTY

THIS WARRANTY IS VALID ONLY ON PRODUCTS PURCHASED AND USED IN THE UNITED STATES OF AMERICA. THIS WARRANTY APPLIES ONLY TO THE ORIGINAL USER.

SUBJECT TO CONDITIONS AND EXCLUSIONS FOUND BELOW, THIS PRODUCT IS WARRANTED AGAINST MANUFACTURING DEFECTS IN MATERIAL AND WORKMANSHIP FOR THE FOLLOWING PERIOD FOR PARTS AND LABOR:

SPECOTECNOLOGIES CAMERAS: 5 YEARS
SPECOTECNOLOGIES MONITORS: 1 YEAR
BALANCE OF SPECOTECNOLOGIES LINE: 1 YEAR*
* IR LEDs, Time Lapse VCR Drum Assemblies & Heads: 90-DAYS

SPECOTECNOLOGIES WILL REPAIR OR REPLACE (AT OUR DISCRETION) ANY PARTS FOUND TO BE DEFECTIVE FOR THE WARRANTY PERIOD SPECIFIED. WE WILL PROVIDE A REPLACEMENT FOR ANY DEFECTIVE PART.

CONDITIONS

1. YOU MUST OBTAIN A RETURN AUTHORIZATION NUMBER FOR ANY MERCHANDISE BEING RETURNED TO SPECOTECNOLOGIES, WHETHER FOR RETURNS/EXCHANGE OR REPAIR, WHETHER IN OR OUT OF WARRANTY.

2. THIS WARRANTY WILL BE HONORED ONLY UPON PRESENTATION OF THE ORIGINAL DATED BILL OF SALE OR SALES SLIP.

3. TRANSPORTATION OF THE PRODUCT TO OUR SERVICE DEPARTMENT IS THE RESPONSIBILITY OF THE USER. REPAIRED OR REPLACED PRODUCT WILL BE RETURNED PREPAID DURING THE WARRANTY PERIOD.

EXCLUSIONS

1. THIS WARRANTY SHALL NOT COVER ADJUSTMENT OF CUSTOMER OPERATED CONTROLS AS EXPLAINED IN THE APPROPRIATE MODEL'S INSTRUCTION MANUAL OR PRODUCTS WHICH HAVE BEEN ALTERED, ABUSED, OR HAVE HAVING OR ALTERED SERIAL NUMBERS.

2. THIS WARRANTY SHALL NOT APPLY TO UNCRATING, SETUP, INSTALLATION, OR THE REMOVAL AND REINSTALLATION OF PRODUCTS AFTER REPAIR.

3. THIS WARRANTY SHALL NOT APPLY TO REPAIRS OR REPLACEMENTS NEEDED BEYOND THE RESULT OF MANUFACTURE INCLUDING, BUT NOT LIMITED TO, ANY MALFUNCTION, DEFECTS OR FAILURE CAUSED BY OR RESULTING FROM UNAUTHORIZED SERVICE OR PARTS, IMPROPER MAINTENANCE, MODIFICATION OR REPAIR BY THE USER, ABUSE, MISUSE, NEGLECT, ACCIDENT, FIRE, FLOOD, OR OTHER ACTS OF NATURE, INCORRECT LINE VOLTAGE, DAMAGE OR IMAGE BURNS TO TELEVISION PICTURE TUBES CAUSED BY OR ATTRIBUTABLE TO THE USE OF ANY ACCESSORY, ELECTRONICS GAME OR DEVICE, OR DAMAGE CAUSED TO IMAGE PICKUP DEVICES BY EXCESSIVE LIGHT.

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THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

NOTE: FOR YOUR PROTECTION IN THE EVENT OF THEFT OR LOSS OF THIS PRODUCT, PLEASE FILL IN THE INFORMATION REQUESTED BELOW AND RETAIN WITH YOUR SALES RECEIPT.

MODEL NO.: _______________________ SERIAL NO.: _______________________
(LOCATED ON BACK OR BOTTOM OF UNIT)

DATE OF PURCHASE: ________________________

WHERE PURCHASED: ________________________ PURCHASE PRICE: ________________________

Speco Technologies
200 NEW HIGHWAY
AMITYVILLE, NY 11701 www.specotech.com

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TOLL FREE: 1-800-645-0516 IN METRO NY: 631-957-8700

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