

**SAMSUNG TECHWIN**

# **PTZ Controller**

## **User Manual**

SPC-1010



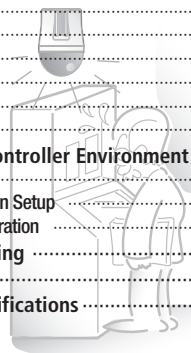
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# Contents

• Table of Contents .....	2
• Safety caution .....	3
• Main Features and Characteristics .....	5
1. Introduction .....	5
2. Characteristics .....	5
• Controller Button Layout .....	6
• Package Contents .....	6
• System Diagram .....	6
1. Wiring Diagram .....	7
2. Connecting RS-485/422 Signal Wires .....	7
• Names and Functions .....	8
• Controlling PTZ Camera .....	9
1. Power .....	9
2. Initial Screen Display .....	9
3. Camera ID Setup .....	9
4. Pan / Tilt / Zoom Using Joystick .....	10
5. Iris / Focus / Zoom Buttons .....	11
6. Preset .....	11
7. Swing .....	12
8. Group .....	12
9. A/F .....	12
10. OSD .....	13
11. Lock .....	13
12. AUX .....	13
• Setting Up Controller Environment .....	14
1. PTZ Setup .....	14
2. Controller Main Setup .....	15
3. Joystick Calibration .....	18
• Troubleshooting .....	19
• Design .....	19
• Product Specifications .....	20



Samsung Techwin cares for the environment at all product manufacturing stages to preserve the environment, and is taking a number of steps to provide customers with more environment-friendly products. The Eco mark represents Samsung Techwin's will to create environment-friendly products, and indicates that the product satisfies the EU RoHS Directive.

## Safety caution

### Warning

- All work related to the installation of this appliance must be performed by qualified service personnel or system installers.
  - If the product is connected or installed improperly, electric shock, fire, severe injury, and/or damage can result.
- Please install the product on a completely flat floor.
  - Always check the strength and stability of the installation location.
  - Do not drop the appliance on the floor. This may result in damage or injury.
  - Do not attempt to disassemble the appliance. To prevent electric shock, do not remove screws or covers.
  - There are no user-serviceable parts inside. Contact qualified service personnel for maintenance.
- Never use the appliance in places where there are flammable materials.
  - Never use the appliance in places where flammable materials such as gas are used.
- This may result in fire, explosion, and other serious accidents.
  - Never touch un-insulated parts with wet hands.
  - Touching un-insulated parts with wet hands may result in serious electric shock.
- Never expose the appliance to water or moisture.
  - If the appliance gets wet, immediately turn the power off.
  - Stop using the appliance if it gets wet. Contact the manufacturer immediately.
- Stop using the appliance if there appears to be any operational problem.
  - Immediately turn the power off to the appliance if there is any abnormal condition such as smoke or unusual smells.
  - Continuing to use the appliance under abnormal conditions may result in serious damage.
- Always use the recommended power.
  - Using incorrect power source ratings may result in fire, electric shock, or damage.
- Always handle the connection cable with care.
  - Never damage or modify the connection cable.
  - Do not pull, expose to heat, or place heavy objects on the connection cable.
  - Non-observance of these warnings may result in fire, electric shock or damage.



## Safety caution

### Caution

- Use the appliance indoors only.
  - Do not place the appliance outdoors or expose it to rain or moisture.
  - If dropped in water, the appliance may be corroded and damaged.
- Do not use the appliance where there is excessive dust, smoke, or moisture.
  - Using the appliance under such conditions may result in fire, electric shock or serious damage.
- Do not operate the appliance in temperatures beyond those specified.
  - Excessive heat or cold may damage the appliance.
  - Always operate the appliance within the recommended temperature range of 0°C ~ 40°C.
- Do not place the appliance in direct sunlight.
  - This may discolor the appliance.
- Do not apply excessive shock to the appliance.
  - Excessive shock may damage the appliance.

### Maintenance and Repair

- If the controller body gets dirty, turn the power off and wipe the surface with a soft cloth.
- Do not use chemical agents such as alcohol or benzene. For detailed information on upgrading the firmware, please direct your inquiries to the installation vendor.

**Refer all work related to the installation of this appliance to qualified service personnel or system installers.**

#### FCC Compliance Statement

This equipment has been tested and found to comply with the 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 equipment is 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.



#### **Correct Disposal of This Product** **(Waste Electrical & Electronic Equipment)**

*(Applicable in the European Union and other European countries with separate collection systems)*

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

## Main Features and Characteristics

### 1. Introduction

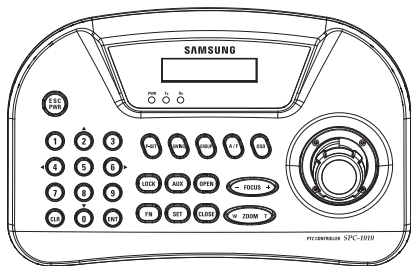
The SPC-1010 PTZ Controller controls the operation of the PTZ Dome and Zoom Camera series and the SRX-100B Receiver.

- Supported Protocols: SAMSUNG-T, SAMSUNG-E, PELCO-D, PELCO-P, Panasonic, Vicon, AD, and Honeywell.

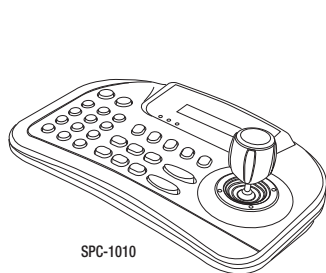
### 2. Characteristics

- Controls up to 255 cameras.
- Supports different protocols per channel.
- Supports serial communications for RS-485/422.
- Supports Pan / Tilt / Zoom operations using a 3-axis joystick.
- Supports Zoom / Focus / Iris operations using the controller buttons.
- Supports various camera options: Preset, Swing, Group, etc.
- Supports 9V Battery.

## Controller Button Layout



## Package Contents



SPC-1010



Power Adapter (DC 12V)



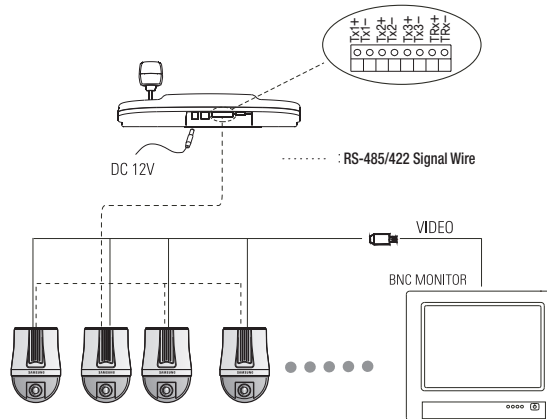
Terminal Block



User's Manual

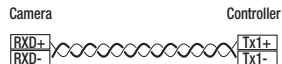
## System Diagram

### 1. Wiring Diagram

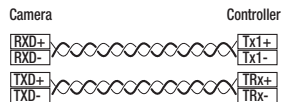


### 2. Connecting RS-485/422 Signal Wires

#### RS485 Communications

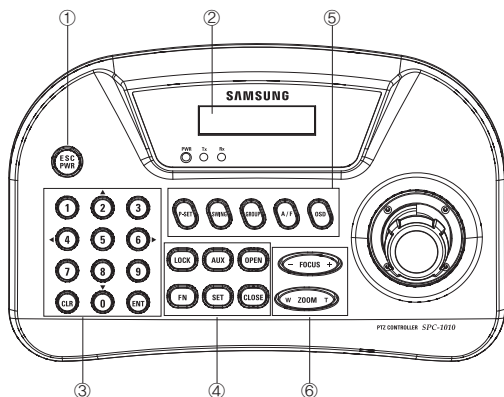


#### RS485 Communications



- You may use the Tx2 or Tx3 terminal instead of Tx1.

## Names and Functions



①	ESC / POWER	Cancels a command or turns power on/off.
②	LCD DISPLAY	16 X 2 LCD
③	Number Pad	Enables changing channels or opening and closing the camera OSD.
④	1. LOCK 2. FN 3. AUX 4. SET 5. OPEN 6. CLOSE	Locks out the system. Function keys: Perform special functions in combination with other buttons. Controls the camera's AUX output. Enters the controller settings menu. IRIS OPEN IRIS CLOSE
⑤	1. P-SET 2. SWING 3. GROUP 4. A/F 5. OSD	Sets up and moves to preset locations. Commands the camera to move between 2 selected locations while panning or tilting. Commands the camera to monitor preset locations at a selected speed and standby time in an orderly manner. Performs the One-Shot AF function. Indicates the camera's OSD menu.
⑥	1. FOCUS -/+ 2. ZOOM W/T	Manually focuses the camera. Zooms the camera in or out.

## Controlling PTZ Camera

### 1. Power

- ① To turn on the power, press the PWR button.
- ② To turn off the power, hold down the PWR button.

### 2. Initial Screen Display

SAMSUNG-T 9.6K  
ID:001

- ① ID : Indicates the current channel number.
- ② SAMSUNG-T : Indicates the current channel camera protocol.
- ③ 9.6k : Indicates the current channel camera baud-rate.

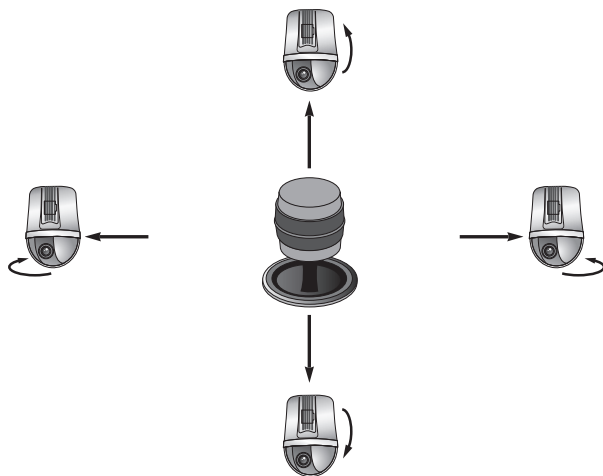
### 3. Camera ID Setup

- ① Using the number pad, enter a number.
  - ② Press the ENT button to confirm the Camera ID.
- Camera IDs are between 1 to 255.

## Controlling PTZ Camera

### 4. Pan / Tilt / Zoom Using Joystick

- You can use the joystick to control the camera's Pan and Tilt operations.
- The farther you move the joystick from the center, the faster the camera moves.



- You can also use the joystick to control the camera's Zoom operation.



[ Zoom Wide Action ]

[ Zoom Tele Action ]

## Controlling PTZ Camera

### 5. Iris / Focus / Zoom Buttons

- ① Screen Brightness
  - To adjust the camera's screen brightness, use the OPEN and CLOSE buttons.
    - OPEN : Brighter (Iris Open)
    - CLOSE : Darker (Iris Close)
- ② Camera Focus
  - To adjust the focus of the camera, use the FOCUS - / + button.
    - FOCUS - : Closer
    - FOCUS + : Farther
- ③ Camera Zoom
  - To control the camera's Zoom operation, use the ZOOM W / T button.
    - ZOOM W : Zoom Wide
    - ZOOM T : Zoom Tele

### 6. Preset

#### 6-1. Setting Up Preset Location

- ① Using the joystick and controller buttons, move the camera to a desired location.
- ② Enter a preset number.
- ③ Hold down the P-SET button for 2 seconds to save the preset location.

#### 6-2. Moving to Preset Location

- ① Enter the number of a preset location.
- ② Press the P-SET button to move the camera to the preset location.



#### Notes

- You can select preset numbers from 1 to 255 using the controller. The maximum preset location number varies depending on the camera model. (For more information, please refer to your camera's user manual.)
- You can set up preset locations in the OSD menu of the camera.

## Controlling PTZ Camera

### 7. SWING

- The Swing function commands the camera to move between 2 selected locations, monitoring the route.
- ① Press the SWING button.
  - ② Press Number 1 or 2 to activate the Swing mode.
    - Number 1 : Commands the camera to pan while moving between 2 locations.
    - Number 2 : Commands the camera to tilt while moving between 2 locations.
    - To pause Swing, move the joystick.

### 8. Group

- The Group command recalls a ground of multiple preset locations in sequence.
- ① Enter the group number.
  - ② Press the GROUP button to activate the Group mode.
    - To pause the Group mode, move the joystick.



#### Notes

- In order to use Swing and Group modes, you must set up the modes in the camera's OSD menu prior to actual operation.
- The Swing and Group modes only support the Samsung Techwin SAMSUNG-T protocol.

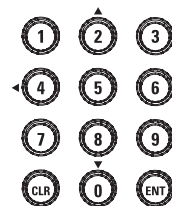
### 9. A/F

- Pressing the A/F button uses One-Shot AF.

## Controlling PTZ Camera

### 10. OSD

- Shows the camera's OSD menu on the monitor screen.
- ① To enter the OSD menu, press the OSD button. To exit the menu, hold down the OSD button. (SAMSUNG-T Protocol)
  - ② ENT Button : Performs the Enter function in the OSD menu.
  - ③ CLR Button : Performs the Esc function in the OSD menu.
  - ④ To move the menu cursor upward, downward, leftward, or rightward, use the joystick. Certain protocols (SAMSUNG-E, Panasonic, etc.) do not support using the joystick to move the menu cursor. Instead, they require pressing a number button while holding down the FN button. (Number 2, 4, 6, 8 Buttons)



### 11. Lock

- Locks out the controller.
- ① To lock out, hold down the LOCK button.
  - ② To unlock, enter the 4-digit password. (Default Password: 0000)

### 12. AUX

- Controls the camera's Aux output operation.
- ① AUX ON : Press the AUX button to turn AUX on.
  - ② AUX OFF : Hold down the AUX button for 2 seconds to turn AUX off.

## Setting Up Controller Environment

### 1. PTZ Setup

- 1 Press 1 on the number pad.
- 2 Hold down the SET button to enter the PTZ SETUP mode.
- 3 Enter the 4-digit password. (Default Password: 0000)
- 4 To change a channel address, select a channel by moving the joystick to the right or left. Or you can enter the channel number and then press the ENT button.
- 5 Change the Protocol, Baud Rate, and Parity Bit settings of the select channel.
- 6 Select the SAVE menu to save the changes. You can continue changing the settings by selecting different channels. To exit to the initial screen, select the EXIT menu or press the ESC button.

- To move between the options, move the joystick up or down.
- To change the value of the settings, move the joystick to the right or left.
- For the default settings values, please refer to the picture on the right.  
Protocol : Samsung Techwin SAMSUNG-T  
Baud Rate : 9.6Kbps, Parity Bit : None

```
[ PTZ SETUP      1 ]  
PASSWORD [ **** ]
```



```
[ PTZ SETUP      1 ]  
1. ADDRESS : 001
```



```
[ PTZ SETUP      1 ]  
2. MODEL : SAMSUNG-T
```



```
[ PTZ SETUP      1 ]  
3. BAUDRATE : 9.6 K
```



```
[ PTZ SETUP      1 ]  
4. PARITY : NONE
```



```
[ PTZ SETUP      1 ]  
5. SAVE
```



```
[ PTZ SETUP      1 ]  
6. EXIT
```



#### Notes

- After changing the settings of a channel, you must select the Save menu. If you move to a different channel without using the SAVE menu, the changes will not be saved.
- Under Controller Serial Setup, Data Bit is fixed to 8 and Stop Bit to 1. Serial values of the controller and camera must match each other.

## Setting Up Controller Environment

### 2. Controller Main Setup

- 1 Press 2 on the number pad.
- 2 Hold down the SET button to enter the controller's MAIN SETUP mode.
- 3 Enter the 4-digit password. (Default Password: 0000)
- 4 After changing the settings, select <YES> in the SAVE/EXIT menu to save the changes and move back to the initial screen. To cancel changes and move back to the initial screen, select <NO> in the Save menu or press the ESC button.

- To move between the options, move the joystick up or down.
- To change the value of the settings, move the joystick to the right or left.
- For the default settings values, please refer to the picture on the right.

```
[ MAIN SETUP ]  
PASSWORD [ **** ]
```

```
[ MAIN SETUP ]  
10. SAVE/EXIT
```

#### 2-1. Firmware Version

- Displays the current version of the controller firmware.

```
[ MAIN SETUP ]  
1. v.1.41_100712
```

#### 2-2. Serial Data Transfer Standard

- Select RS-485 or RS-422.

```
[ MAIN SETUP ]  
2. COMM : RS485
```

#### 2-3. LCD Backlight

- AUTO : Turns the backlight off automatically if no command has been entered in the last 30 seconds.
- ON : Keeps the backlight on at all times.
- OFF : Keeps the backlight off at all times.

```
[ MAIN SETUP ]  
3. BACKLIGHT : AUTO
```



## Setting Up Controller Environment

### 2-4. Sleep

- If no joystick or button input is detected for a set duration, the LCD screen turns itself off and enters Sleep mode.

[ MAIN SETUP ]  
4. SLEEP : OFF

### 2-5. Buzzer

- Turns the sound of controller buttons on or off.

[ MAIN SETUP ]  
5. BUZZER : ON

### 2-6. Terminate

- To prevent the attenuation of communication signals between the camera and controller, the controller's termination option must be ON if it is located farthest from the camera and controller communication loop. If the controller is in the middle of the camera and controller communication loop, turn the termination option off.

[ MAIN SETUP ]  
6. TERMINATE : ON

### 2-7. Joystick's Serial Command Transfer Cycle

- Select a PTZ serial command transfer cycle for using the joystick. Shortening the transfer cycle increases the response speed of the camera.

[ MAIN SETUP ]  
7. JOY SPD : 100MS



#### Notes

- Shortening the joystick's serial command transfer cycle may cause certain camera models to not process commands properly. To prevent and resolve such malfunctions, extend the transfer cycle.

## Setting Up Controller Environment

### 2-8. Password

- Enables changing the controller password.

[ MAIN SETUP ]  
8. PASSWORD : \*\*\*\*

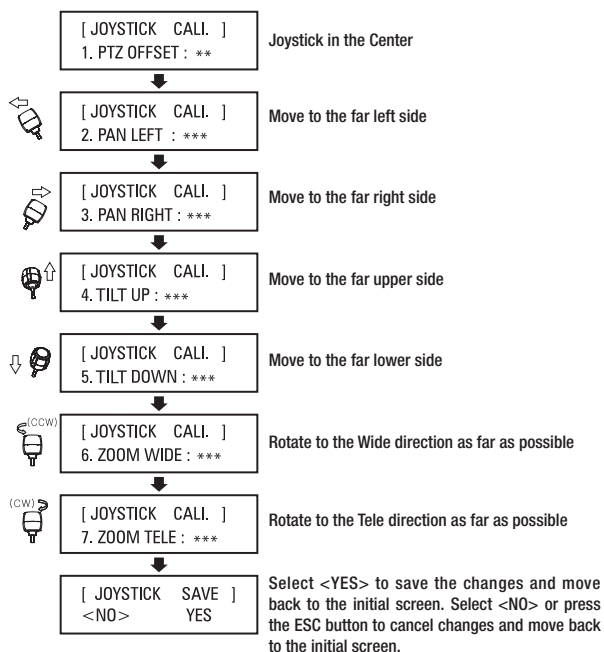
### 2-9. Factory Set

- Resets the controller's current settings to the factory release default values and optimizes the joystick calibration.

[ MAIN SETUP ]  
9. FACTORY SET

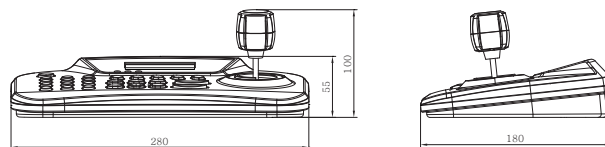
## 3. Joystick Calibration

- ① Press 3 on the number pad.
- ② Hold down the SET button to enter the Joystick Calibration mode.
- ③ At each option, move the joystick as far as you can, and then press the ENT button to calibrate.



- **If the power is not turned on**
  - ▶ Please check if the controller is connected to the power adapter.
- **If the joystick does not move, or the controller buttons are not pressed**
  - ▶ There may be a problem with the controller board. Please contact your nearest dealer for further assistance.
- **If the controller cannot control the camera**
  - ▶ Please check the network cable between the controller and camera.
  - ▶ Please check if you have selected the correct ID for the camera on the controller.
  - ▶ Please check the protocol and serial settings of the controller and camera.

## Design



## Product Specifications

Product		SPC-1010
LCD Display		16 x 2 Character LCD
Speed Control		Joystick (3-axis Twist Zoom)
Compatible Hardware	PTZ Dome	Samsung Techwin PTZ Dome
		SAMSUNG-T, SAMSUNG-E, PELCO-D/P, Panasonic, Vicon, AD, Honeywell
	Zoom Camera	SCZ-3430/2430/3370/2370/3250 SDZ-375/370
	Receiver	SRX-100B
Control Capacity		Up to 255 Cameras (Suitable for Mid-, Large-size System)
Communications	Standards	RS-485 / RS-422 (Remote Control: 1km Distance)
	Transfer Speed	2,400 ~ 57,600bps
Voltage		12V DC, 140mA
Operating Temperature		0°C~ 45°C
Operating Humidity		10 ~ 70%
Dimensions		280(W) x 180(H) x 100(D)mm
Weight		Approx. 0.7Kg (Without Adapter)

MEMO

**MEMO**

**MEMO**

# SAMSUNG TECHWIN

The Samsung logo, consisting of the word "SAMSUNG" in white, uppercase letters inside a black, horizontally-oriented oval.

## SALES NETWORK

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