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VS-PTC-300

PTZ Camera IP/ Controller

User Manual

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Table of Contents

Chapter 1: Safety Instructions

Always follow these safety instructions when setting up and using this product:

1. Use attachments only as recommended.

2. Use the type of power source indicated on the VS-PTC-300 Keyboard Controller. If you are not sure of the type of power available, consult your distributor or local electricity company for advice.

3. Always take the following precautions when handling the plug. Failure to do so may result in sparks or fire:

    • Ensure the plug is free of dust before inserting it into a socket.
    • Ensure that the plug is securely inserted into the socket.

4. Do not overload wall sockets, extension cords or multi-way plug boards as this may cause fire or electric shock.

5. Do not place this product where the cord can be stepped on, as this may result in fraying or damage to the lead or the plug.

6. Never allow liquid of any kind to spill into this product.

7. Except as specifically instructed in this User Manual, do not attempt to operate this product by yourself. Opening or removing covers may expose you to dangerous voltages and other hazards. Refer all servicing to licensed service personnel.

8. Unplug this product during thunderstorms or if it is not going to be used for an extended period. Do not place this product or remote control on top of vibrating equipment or heated objects such as a car, etc.

9. Unplug this product from the wall outlet and refer servicing to licensed service personnel when the following situations happen:

    • If the power cord or plug becomes damaged or frayed.
    • If liquid is spilled into this product or this product has been exposed to rain or water.

⚡ PRECAUTIONS

Warning: To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

If the this product will not be used for an extended time, unplug it from the power socket.

⚡	Caution	⚡
	Risk of Electric Shock	
	Please do not open it by yourself.	
Caution: To reduce the risk of electric shock, do not remove cover (or back). No user-serviceable parts inside. Refer servicing to licensed service personnel.		

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	This symbol indicates that this equipment may contain dangerous voltage which could cause electric shock.		This symbol indicates that there are important operating and maintenance instructions in this User Manual with this unit.

FCC WARNING

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

NOTICE :

The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This product has been tested and found to comply with the limits for a Class B computer device, pursuant to Article 15-J of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation.

Chapter 2: Product Overview

2.1: I/O Functions Introduction

No	Item	Function Descriptions
1	RS-422 port	Connect the RS-422 adapter cable that can control up to 7 units of RS-422 camera
2	RS-232 port	Connect the RS-232 adapter cable
3	USB port	Update the keyboard control firmware via a USB disk <Note> Use format "FAT32", "capacity less than 32G"
4	IP port	Connect the RJ45 network cable § Supports PoE(IEEE802.3af)
5	12 V DC power port	Connect the included DC power supply adapter and the power cable
6	Power Button	Turn on/off keyboard power
7	Safety lock	Use the safety lock to lock the keyboard for anti-theft purpose

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2.2: Panel Function Introduction
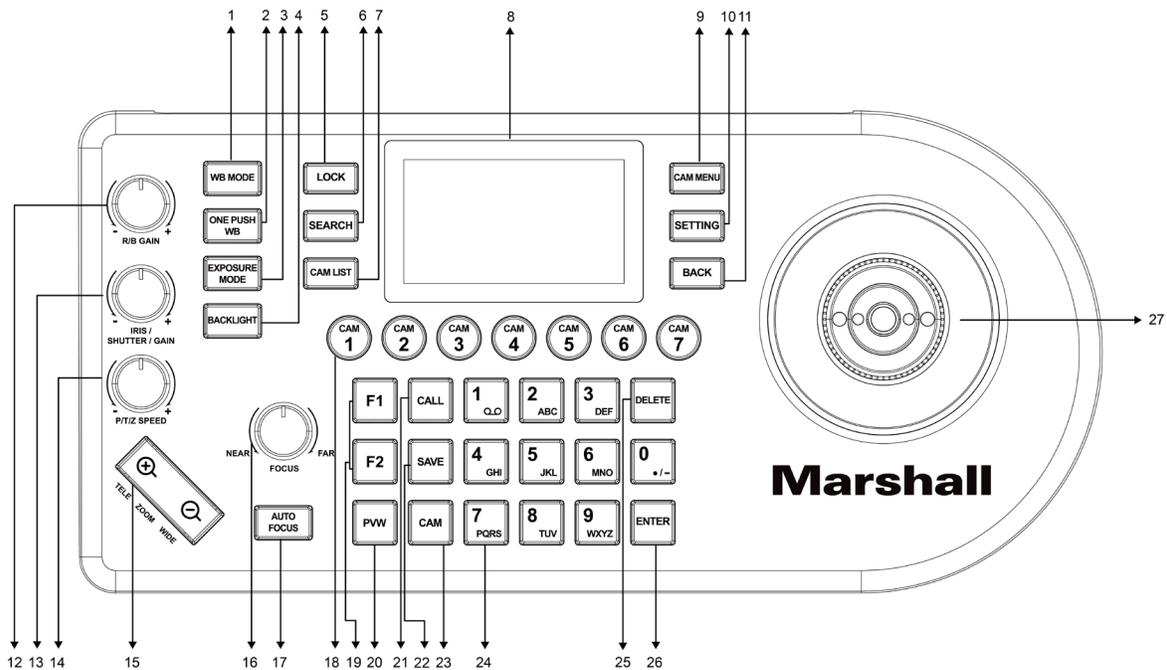
No	Item	Function Descriptions
1	WB	Automatic/manual white balance switch When the setting is automatic white balance, the AUTO indicator will turn on
2	ONE PUSH WB	One push white balance
3	EXPOSURE	Auto, Iris PRI, Shutter PRI
4	BACKLIGHT	Turn on/off back light compensation
5	LOCK	Lock the control of all image adjustment and rotary buttons Press and hold for 3 seconds to enable the lock; press and hold for 3 seconds again to cancel the lock
6	SEARCH	Search or add the camera IP setting
7	CAM LIST	Check the currently connected camera
8	LCD screen	Display control and setting information of the keyboard
9	CAM MENU	Call the camera OSD menu
10	SETTING	Enter the settings menu
11	BACK	Back to the previous step
12	R/B GAIN	Adjust the white balance in red/blue manually

No	Item	Function Descriptions
13	IRIS / SHUTTER	Adjust the aperture or shutter
14	P/T/Z SPEED	Rotate: Adjust/control the speed Press: Switch between P/T or Z
15	ZOOM SEESAW	Control ZOOM in/out
16	FOCUS CONTROL	Rotate the knob to adjust NEAR/FAR parameters (for Manual Focus use only) Press to execute One Push Focus LCD menu: Rotate left/right to adjust parameters and navigate the menu LCD menu: Press to select an item
17	AUTO FOCUS	Automatic/manual focus switch When the setting is automatic focus, the AUTO indicator will turn on
18	CAMERA BUTTON CAM1~CAM7	Quickly select Camera 1 ~ 7 and control the camera within 1 second Press and hold for 3 seconds to access the shortcut key settings page

2.3: LCD Screen Display Description
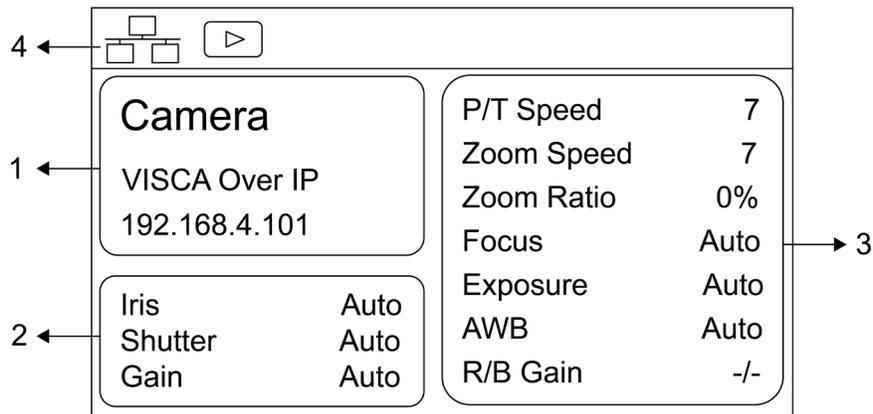
No	Item	Function Descriptions
1	Camera ID and protocol	Display the camera currently under control and the protocol currently in use
2	EXPOSURE MODE	Display the current camera exposure mode
3	Connected device parameter information	Display the current camera parameter information
4	Network connection indication status	If the play icon appears, the camera's RTSP streaming video can be displayed

6

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Chapter 3: LCD Function Menu Description

3.1: Access LCD Function Menu

SETTING Press the **SETTING** button on the keyboard to access the LCD function menu

3.2: Hot Key Camera

Item	Settings	Description
CAM	1~7	Assign the camera number; 7 units can be set at most

Advanced Settings for Hot Key Camera

Item	Settings	Description
Alias	-	The camera can be named using letters on the keyboard
Protocol	**VISCA** VISCAIP VISCATCP ONVIF NDI	Select a control protocol to be used for connecting the camera
Address	1~7	Set VISCA ID from 1 to 7
Baudrate	**9600** / 19200 / 38400 / 115200	Set control Baudrate
Stream URL	rtsp://cam ip:8557/h264	Can be automatically imported based on added models
RTSP Authentication	**Off**/On	Select to enable RTSP Authentication function
User Name	admin	Automatically import account and password, shown by User name.
Password	9999	Automatically import account and password, shown by *****
Select from List	-	Select a specific camera from the CAM List and apply it automatically

3.3: Device Management

Item	Settings	Description
Device List	-	View the current device list
Add a New List	-	Add a new device
Ignored Device List	-	View the current list of ignored devices
Add an Ignored Device	-	Add an ignored device

3.4: Network

Item	Settings	Description
Type	STATIC / **DHCP**	Specify a static IP or let DHCP to assign an IP to the keyboard
IP Address	192.168.0.100	For a static IP, specify the IP address in this field (Default IP is 192.168.0.100)
Subnet Mask	255.255.255.0	For a static IP, specify the subnet mask in this field
Gateway	192.168.0.1	For a static IP, specify the gateway in this field
DNS 1	192.168.0.1	Set DNS 1 information
DNS 2	8.8.8.8	Set DNS 2 information

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Item	Settings	Description
F1 ~ F2	None Home Power Mute Picture Freeze Picture Flip Picture LR_Reverse Tracking Mode Framing Mode Auto Tracking On Auto Tracking Off Auto Framing On Auto Framing Off D-Zoom On D-Zoom Off Group Custom Commands	F1 ~ F2 buttons can be set as shortcut keys separately Functions may be set as the list displayed to the left After selecting Function, choose the target function Press the shortcut key and the camera will perform the specified function quickly

3.6 DISPLAY

Item	Settings	Description
Theme Color	Red Green **Blue** Orange Purple	Adjust LCD theme color
Brightness	Low Medium **High**	Adjust keyboard brightness
Key Brightness	Low **Medium** High	Adjust key brightness

3.7 BEEP

Item	Settings	Description
Enable	**Off** / On	Turn on or off button sound effects
Style	**1** / 2 / 3	Select the button sound type

3.8 JOYSTICK

Item	Settings	Description
Zoom Enable	**On** / Off	Enable/Disable the Joystick control for Zoom
Pan Reverse	On / **Off**	Enable/Disable the horizontal inversion
Tilt Reverse	On / **Off**	Enable/Disable the vertical inversion
Correction	-	Correct the Joystick direction

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3.9 TALLY

Item	Settings	Description
Enable	**ON** / OFF	Enable the Tally light

3.10 LANGUAGE

Item	Description
English / Simplified Chinese / Traditional Chinese	Language setting

3.11 PASSWORD SETTING

Item	Settings	Description
Enable	ON / **OFF**	Once enabled, you need to enter a password when entering SETTINGS
Change Password	-	Set up a new password

3.12 SLEEP MODE

Item	Settings	Description
Enable	ON / **OFF**	Enable the sleep mode
Goes to Sleep after	15 Mins / 30 Mins / 60 Mins	Set the sleep mode activation time
Lightness change	LCD Screen Light Keypad Backlight	Set the sleep mode preview screen and keyboard brightness

3.13 ABOUT DEVICE

Item	Description
-	Display device information

3.14 RESET DEVICE

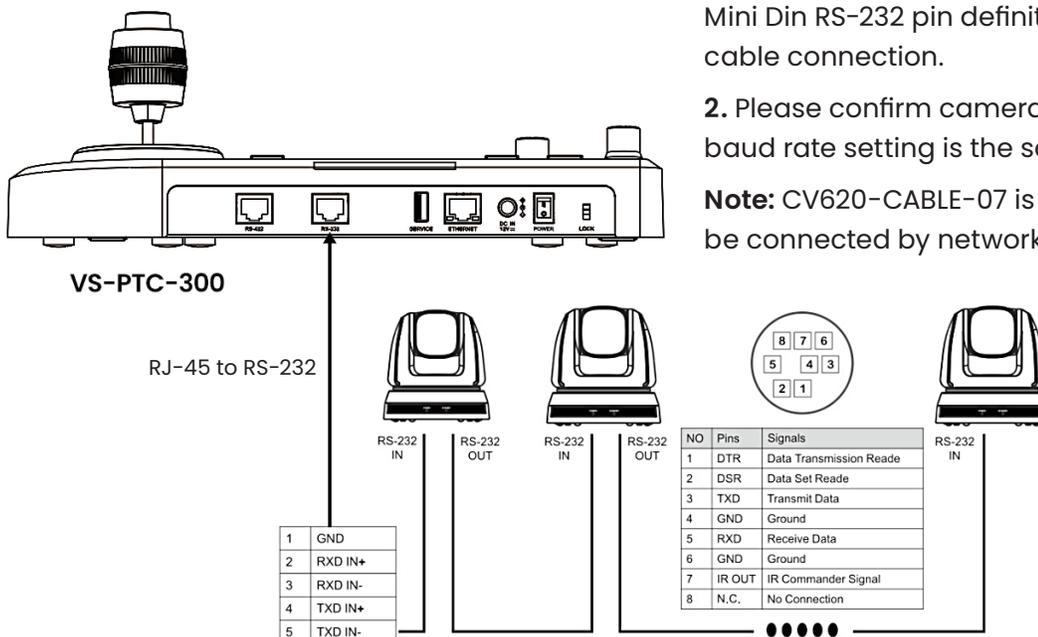| Item	Settings	Description
Reset Setting	ON / **OFF**	Remain the keyboard network and CAM LIST, restore other settings to default values
Reset Setting and Data	ON / **OFF**	Clear all keyboard settings, including IP setting

Chapter 4: Camera Connection Description

4.1 Port Pin Definition

VS-PTC-300 supports crossing protocol hybrid control between RS-232, RS-422 and IP.

Supported control protocols include: VISCA and VISCA over IP

RS-232

Pin No.	Function	Color
1	-	Orange/White
2	-	Orange
3	GND	Green/White
4	-	Blue
5	-	Blue/White
6	GND	Green
7	TXD	Brown/White
8	RXD	Brown

IP

Pin No.	Function	Color
1	TX+	Orange/White
2	TX-	Orange
3	RX+	Green/White
4	n/c	Blue
5	n/c	Blue/White
6	RX-	Green
7	n/c	Brown/White
8	n/c	Brown

RS-422

Pin No.	Function	Color
1	TX-	Orange/White
2	TX+	Orange
3	GND	Green/White
4	-	Blue
5	-	Blue/White
6	-	Green
7	RX-	Brown/White
8	RX+	Brown

4.2 How to connect RS-232

1. Please refer to the RJ-45 to RS-232 and camera Mini Din RS-232 pin definitions to complete the cable connection.

2. Please confirm camera is set to RS232 and the baud rate setting is the same as the controller.

Note: CV620-CABLE-07 is an optional item. It can be connected by network cable.

VS-PTC-300

RJ-45 to RS-232

RS-232 IN | RS-232 OUT | RS-232 IN | RS-232 OUT | RS-232 IN

NO	Pins	Signals
1	DTR	Data Transmission Reade
2	DSR	Data Set Reade
3	TXD	Transmit Data
4	GND	Ground
5	RXD	Receive Data
6	GND	Ground
7	IR OUT	IR Commander Signal
8	N.C.	No Connection

1	GND
2	RXD IN+
3	RXD IN-
4	TXD IN+
5	TXD IN-

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4.3: How to connect RS-422

VS-PTC-300

RJ-45 to RS-422

1	RXD OUT-
2	RXD OUT+
3	TXD OUT-
4	TXD OUT+
5	GND
6	RXD IN-
7	RXD IN+
8	TXD IN-
9	TXD IN+

1. Please refer to the RJ-45 to RS-422 and camera RS-422 and camera RS-422 pin definitions to complete the cable connecction.

2. Please make sure camera is set to RS-422 and the baud rate setting is same as the camera

1	RXD OUT-
2	RXD OUT+
3	TXD OUT-
4	TXD OUT+
5	GND
6	RXD IN-
7	RXD IN+
8	TXD IN-
9	TXD IN+

4.4: How to connect IP

1	GND
2	RXD IN+
3	RXD IN-
4	TXD IN+
5	TXD IN-

1	RXD OUT-
2	RXD OUT+
3	TXD OUT-
4	TXD OUT+
5	GND
6	RXD IN-
7	RXD IN+
8	TXD IN-
9	TXD IN+

VS-PTC-300

Use network cables to connect VS-PTC-300 and IP camera to the router
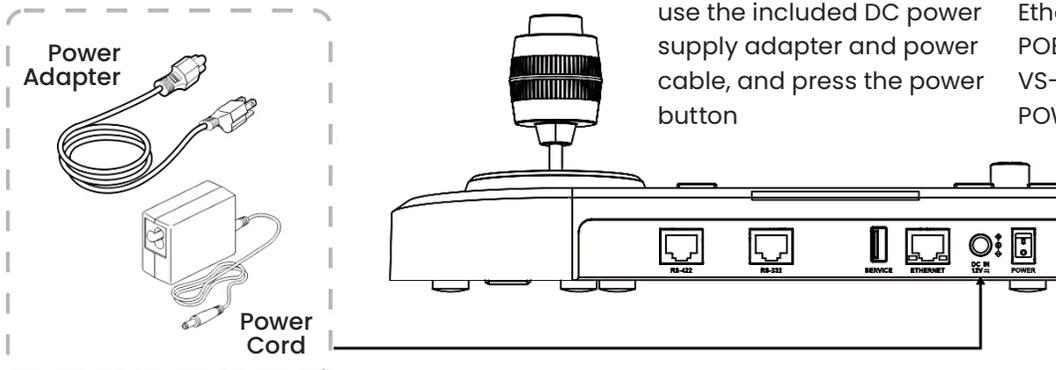
Router

## Chapter 5: Camera Setting Description

5.1 Power on VS-PTC-300

Two types of power supply can be used by **VS-PTC-300:**

DC12V power supply: Please use the included DC power supply adapter and power cable, and press the power button

POE power supply: Use Ethernet cables to connect POE switch and IP port of VS-PTC-300, and press the POWER button

Power Adapter

Power Cord

Chapter 5: Camera Setting Description
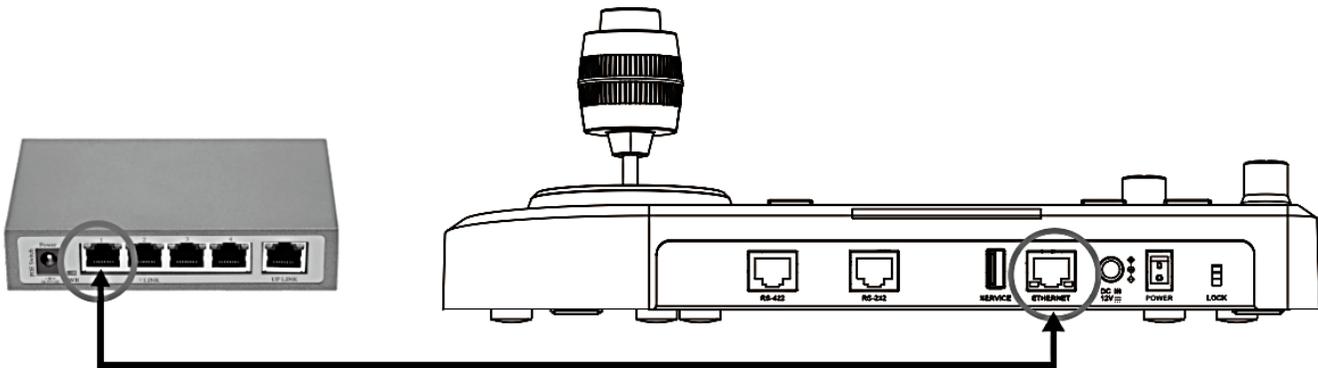
5.2: Instruction on RS-232 Setting

- Press **SETTING**, select Hot Key Camera
- Select CAM1 ~ 7
- Set CAMIDAlias
- Select VISCA for Protocol
    - Port is set as RS-232
    - Set the same baud rate between camera and controller
- Press **Back** to exit

5.3: Instruction on RS-422 Setting

- Press **SETTING**, select Hot Key Camera
- Select CAM1 ~ 7
- Set CAMID Alias
- Select VISCA for Protocol
    - Port is set as RS-422
    - Set the baud rate between camera and controller
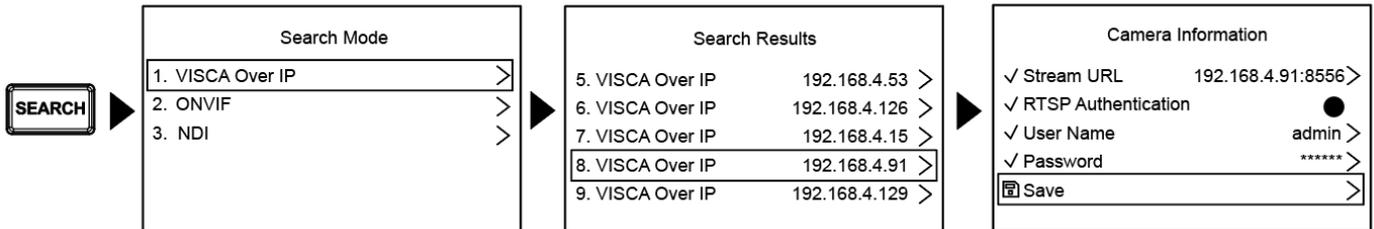- Press **Back** to exit

5.4: Instruction on IP Setting

5.4.1: Set VS-PTC-300 IP address
- Press **SETTING**, select Network
- Type: Select STATIC or DHCP
- IP Address: If select STATIC, use Focus Near/Far to choose the location, input the IP address
  via numbers on the keyboard. Last, press **ENTER** to save and exit

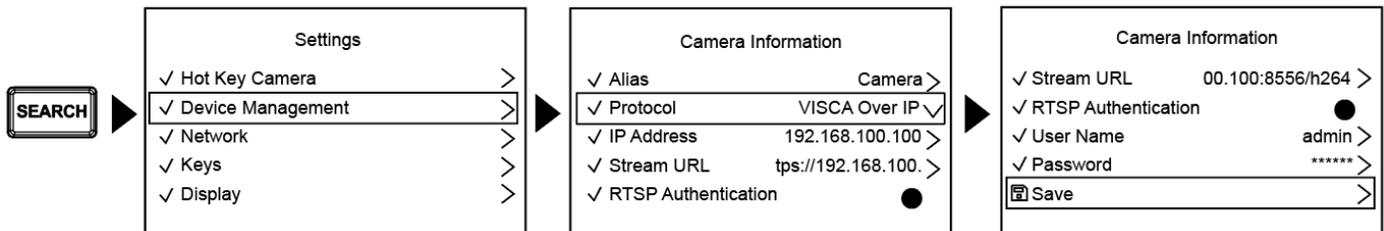# Marshall

5.4: Instruction on IP Setting

5.4.2 Add a Camera

1. Automatic Search

- Press **SEARCH**
- Select search mode
- Select the target camera; set the CAMID
- After pressing **SAVE** at the bottom, you can check the saved camera list
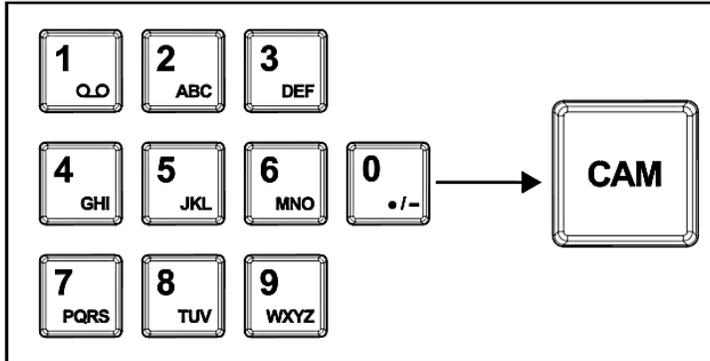
2. Manual Add

- Press **SETTING**, select Device Management
- Set CAMID
- Select VISCAIP/ONVIF for Protocol, and set the camera IP address
- Press **SAVE** at the bottom to save
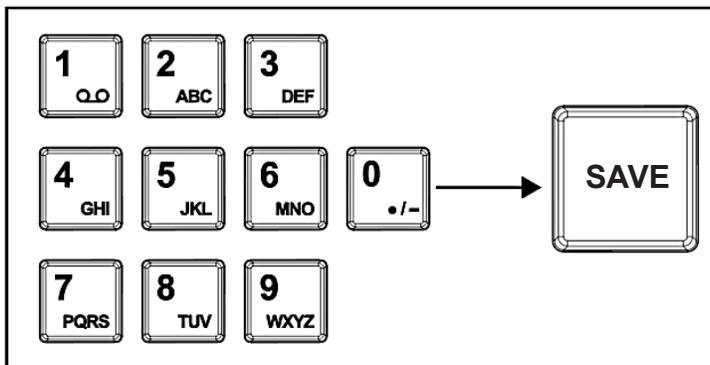
Chapter 6: Descriptions of Major Functions

6.1: Call the camera

6.1.1: Use the number keyboard to call the camera

1. Key in the camera number to be called via the keyboard
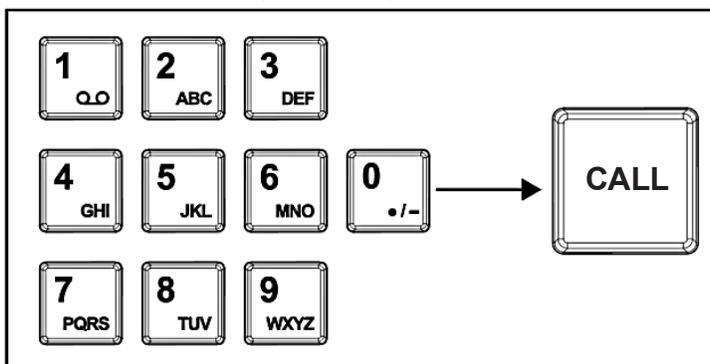
2. Press the "**CAM**" button

6.2: Setup/call/cancel preset position

6.2.1: Save the preset number

1. Relocate the camera to the desired position

2. Enter the desired preset position number, then press the SAVE button

6.2.2: Call the preset position

6.2.2: Call the preset position

1. Key in the desired preset position number via keyboard

2. Press "CALL" button

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6.3: set the camera OSD menu via the keyboard

    1. Press the "CAM MENU" button on the keyboard

    2. Set the camera OSD menu via the PTZ joystick
- Move the joystick up and down. Switch the menu items/Tune the parameter values
- Move the joystick to the right: Enter
- Move the joystick to the left: Exit
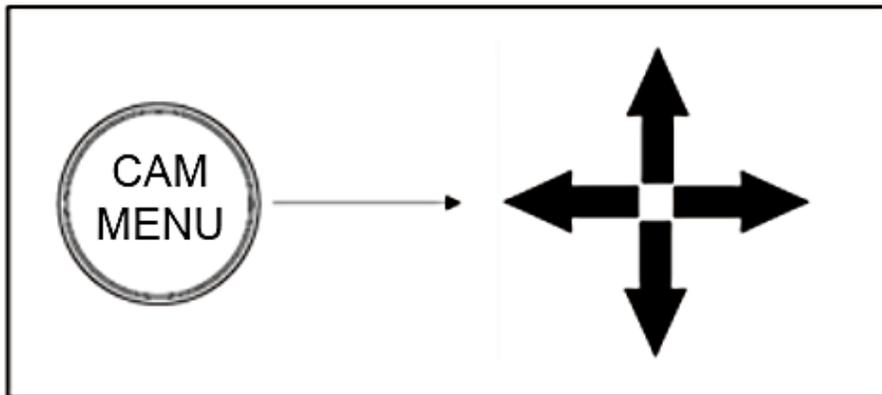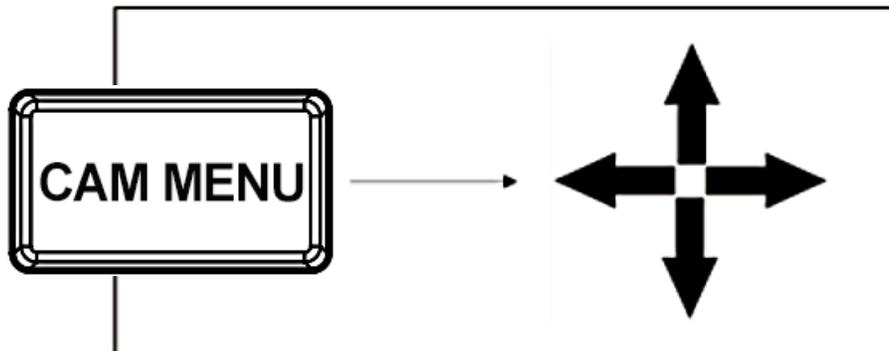
Chapter 7: Troubleshooting

Frequently asked questions about the use of VS-PTC-300
with suggestions, methods, and solutions.

No.	Problems	Solutions
1	**After plugging in the power supply, VS-PTC-300 power is not on**	1. Please check whether the power button on the back is pressed down correctly 2. If POE is used, please make sure the Ethernet network cable is correctly connected to the power port of the POE switch
2	**VS-PTC-300 camera cannot be controlled**	1. Please confirm the port pin connection is correct (RS-232/422) 2. Please confirm if the camera OSD is correctly switched to RS-232/RS-422 and the baud rate setting is the same as the controller. 3. Please confirm whether the MENU button on the keyboard is pressed down by mistake, causing the camera OSD menu to open and the camera unable to be controlled
3	**Cannot use the keyboard buttons to change the image settings or focus**	Please confirm the LOCK button is set in "LOCK" mode

For Warranty information, please refer to Marshall website page:

marshall-usa.com/company/warranty.php