

Lumens VS-KB21

Lumens VS-KB21 IP Camera Controller

INSTRUCTION MANUAL

1. Introduction

The Lumens VS-KB21 is an advanced IP camera controller designed for professional video production environments. It provides comprehensive control over up to 255 IP-connected cameras, supporting various communication interfaces including RS-232, RS-422, and Ethernet. Key features include a 4-axis joystick for precise Pan/Tilt/Zoom control, a 3-inch LCD for RTSP preview, and user-assignable keys for quick access to functions. This manual provides detailed instructions for setting up, operating, and maintaining your VS-KB21 controller.

2. Product Overview

Familiarize yourself with the components and controls of the VS-KB21 controller.

2.1 Front Panel Controls



Figure 1: Front view of the Lumens VS-KB21 IP Camera Controller, showing the joystick, LCD screen, and various control buttons and knobs.

- **Joystick:** 4-axis control for Pan, Tilt, and Zoom.
- **LCD Screen:** 3-inch display for RTSP video preview and menu navigation.
- **Knobs:** Dedicated controls for Iris, Shutter, Gain, White Balance, and Focus.
- **Keypad:** Numeric and function keys for camera selection, preset recall, and menu input.
- **User-Assignable Keys (F1, F2):** Customizable function buttons.
- **Zoom Seesaw Lever:** For precise zoom control (Tele/Wide).

2.2 Rear Panel Connections



Figure 2: Rear view of the Lumens VS-KB21 IP Camera Controller, highlighting the connectivity ports.

- **RS-422 Port:** For serial communication with cameras.
- **RS-232 Port:** For serial communication with cameras.
- **SERVICE Port:** USB port for firmware updates and service.
- **ETHERNET Port:** RJ-45 connector for IP control and PoE (Power over Ethernet).
- **DC IN 12V:** Power input for the included DC adapter.
- **POWER Switch:** On/Off switch for the unit.
- **LOCK Slot:** For security cable.

3. Setup

Follow these steps to set up your VS-KB21 controller.

1. Power Connection:

- Connect the provided DC 12V power adapter to the 'DC IN 12V' port on the rear panel and plug it into a power outlet.
- Alternatively, if using a PoE-enabled network switch, connect an Ethernet cable from the switch to the 'ETHERNET' port. The unit will power on via PoE.

2. Network Connection (for IP Control):

- Connect an Ethernet cable from the 'ETHERNET' port on the controller to your network switch or router. Ensure the controller and IP cameras are on the same network segment.

3. Serial Connection (for RS-232/RS-422 Control):

- For RS-232 control, connect a serial cable from the 'RS-232' port on the controller to the camera's RS-232 port.
- For RS-422 control, connect a serial cable from the 'RS-422' port on the controller to the camera's RS-422 port.

4. Initial Power On:

- Flip the 'POWER' switch to the ON position. The LCD screen will illuminate, and the controller will initialize.

5. Camera Configuration:

- Access the controller's settings menu via the LCD to add and configure your IP or serial cameras. Refer to the on-screen prompts for IP address, port, and protocol settings (VISCA, VISCA Over IP).

4. Operating Instructions

This section details the operation of the VS-KB21 controller for managing your cameras.

4.1 Camera Selection

- Press the 'CAM LIST' button to view a list of configured cameras.
- Use the numeric keypad (CAM 1-7) or the joystick to select the desired camera.
- Press 'ENTER' to confirm your selection.

4.2 Pan, Tilt, and Zoom (PTZ) Control

- **Pan/Tilt:** Move the 4-axis joystick left/right for pan and up/down for tilt.
- **Zoom:** Rotate the joystick head or use the 'TELE' (zoom in) and 'WIDE' (zoom out) buttons on the seesaw lever.
- **PTZ Speed:** Adjust the 'PTZ SPEED' knob to control the responsiveness of the joystick.

4.3 Focus Control

- Press the 'AUTO FOCUS' button for automatic focus adjustment.
- For manual focus, use the 'FOCUS' knob: rotate 'NEAR' to focus on closer objects, 'FAR' for distant objects.

4.4 Exposure and White Balance

- **Exposure Mode:** Press 'EXPOSURE MODE' to cycle through auto, manual, and shutter priority modes.
- **Iris/Shutter/Gain:** Use the dedicated knobs to adjust these parameters in manual exposure mode.
- **White Balance:** Press 'WB MODE' to select white balance presets or 'ONE PUSH WB' for automatic one-push white balance.

4.5 Presets

- **Saving a Preset:** Position the camera as desired, then press 'SAVE' followed by a numeric key (0-9) to store the preset.
- **Recalling a Preset:** Press 'CALL' followed by the numeric key corresponding to the saved preset.

4.6 RTSP Preview

- The 3-inch LCD screen supports RTSP video preview from the selected IP camera. Ensure the camera's RTSP stream is correctly configured in the controller's settings.
- Press 'PVW' to toggle the preview on/off.

5. Maintenance

Proper maintenance ensures the longevity and optimal performance of your VS-KB21 controller.

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the controller. For stubborn marks, a slightly damp cloth with mild detergent can be used, ensuring no liquid enters the device.
- **Storage:** Store the controller in a cool, dry place away from direct sunlight and extreme temperatures when not in use.
- **Firmware Updates:** Periodically check the Lumens official website for firmware updates. Updates can be installed via the 'SERVICE' USB port.
- **Avoid Liquids:** Do not expose the controller to water or other liquids.
- **Avoid Impact:** Protect the device from physical shocks and drops, especially the joystick.

6. Troubleshooting

Refer to this section for solutions to common issues.

Problem	Possible Cause	Solution
Controller does not power on.	No power supply; Power switch off; Faulty power adapter/PoE.	Ensure power adapter is connected and outlet is active. Check PoE connection. Verify power switch is ON.
Cannot control camera via IP.	Incorrect IP settings; Network issue; Camera not configured; Firewall blocking.	Verify IP address, subnet mask, and gateway settings. Ensure controller and camera are on the same network. Check camera configuration in controller. Disable firewalls temporarily for testing.
No RTSP preview on LCD.	Incorrect RTSP stream URL; Network congestion; Camera not streaming.	Confirm the RTSP stream URL in the controller's settings matches the camera's output. Check network bandwidth. Ensure the camera is actively streaming.
Joystick control is unresponsive or erratic.	Loose cable connection; Joystick calibration needed; Physical damage.	Check all cable connections. Refer to the controller's menu for joystick calibration options. If issues persist, contact support.

7. Specifications

Detailed technical specifications for the Lumens VS-KB21 IP Camera Controller.

Feature	Description
Communication Interface	RS-232 / RS-422 / IP (Ethernet)
Display	3-inch LCD
Joystick	4-axis (Pan / Tilt / Zoom)
Speed Control	1 Knob
Zoom Control	1 Seesaw Lever
Gain Control	R/B Gain

Feature	Description
Focus Control	Auto / Manual
Assignable Buttons	2 (F1, F2)
Keypad	Backlit
Stream Preview	RTSP
Baud Rate	2400 / 4800 / 9600 / 38400 / 115200 bps
Camera Address Range	1~255
Presets	255
Power	DC12V / PoE
Dimensions (WxHxD)	11.89 x 5.63 x 4.41 inches (30.2 x 14.3 x 11.2 cm)
Weight	2.8 pounds (1.27 kg)
Color	Black
Model Name	VS-KB21

8. Warranty and Support

For warranty information, technical support, or service inquiries, please visit the official Lumens website or contact your authorized dealer. Keep your purchase receipt as proof of purchase for warranty claims.

Lumens Website: www.mylumens.com