RGBlink RGBBKT

RGBlink NDI PTZ Camera Controller (RGBBKT) User Manual

Model: RGBBKT

1. Introduction

This manual provides detailed instructions for the setup, operation, maintenance, and troubleshooting of the RGBlink NDI PTZ Camera Controller (RGBBKT). This device is designed for professional video production environments, offering comprehensive control over various PTZ cameras using multiple protocols.

Image 1.1: RGBlink NDI PTZ Camera Controller (RGBBKT).

2. Setup

Follow these steps to set up your RGBlink NDI PTZ Camera Controller.

2.1 Unpacking and Initial Inspection

- Carefully remove all components from the packaging.
- Verify that all items listed in the packing list are present.
- Inspect the controller for any signs of physical damage. If damage is found, contact your dealer immediately.

2.2 Connecting the Controller

The RGBlink NDI PTZ Camera Controller supports various connection methods for power and camera control.

- **Power over Ethernet (PoE):** Connect a single RJ45 Ethernet cable from a PoE-enabled network switch to the controller's LAN port. This provides both power and network connectivity.
- **External Power Adapter:** If PoE is not available, connect the provided power adapter to the DC 12V input port and to

a power outlet.

- **Camera Connections:**
  - **Ethernet (IP Control):** Connect PTZ cameras to the same network as the controller via RJ45 Ethernet cables. The controller supports VISCA over IP, ONVIF v2.42, and NDI v5.5 protocols.
  - **Serial Control:** For cameras supporting serial communication, use RS232, RS422, or RS485 interfaces. Connect the appropriate cables from the controller's serial ports to the cameras.

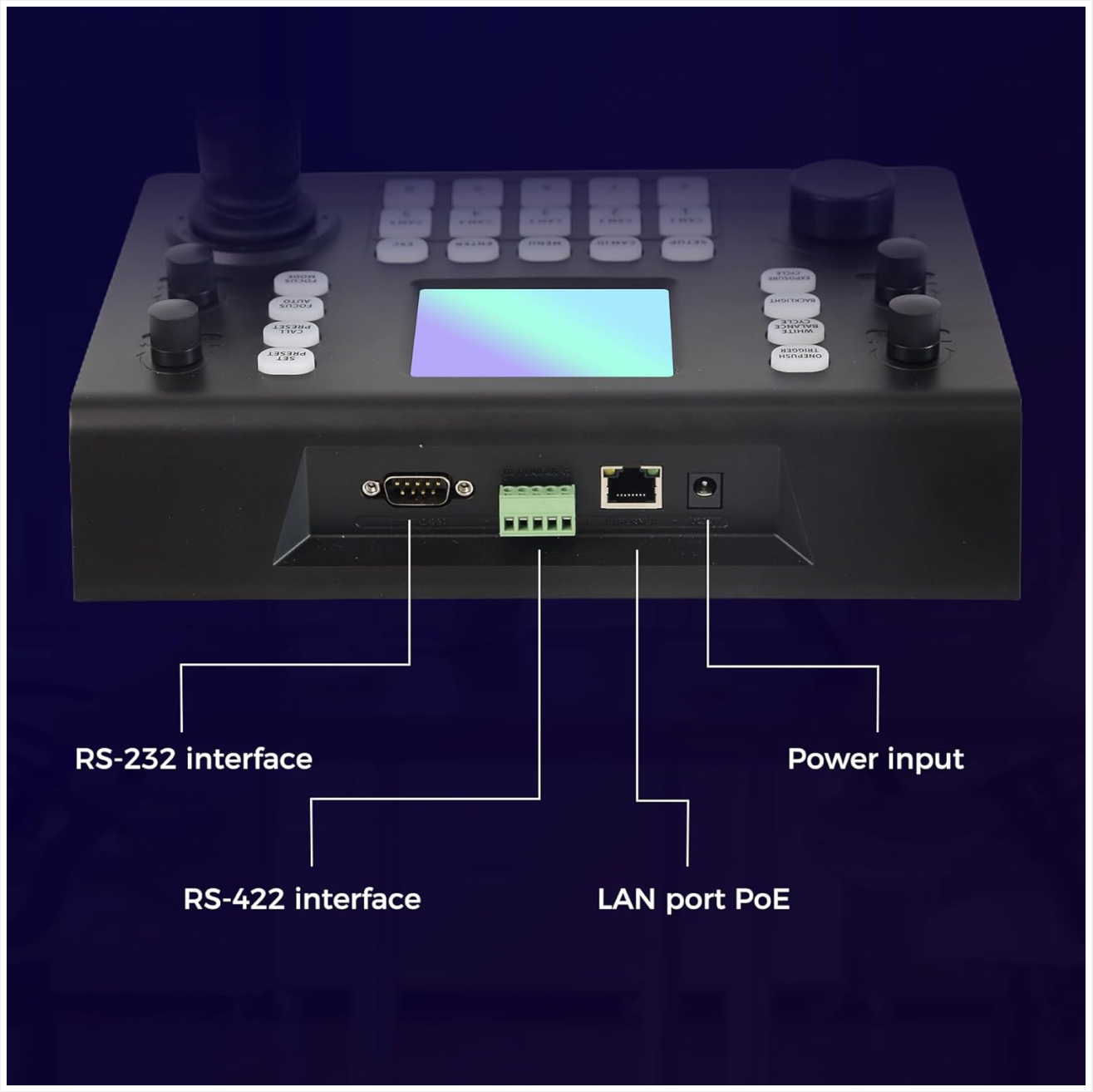

Image 2.1: Rear panel connections including RS-232, RS-422, LAN (PoE), and Power Input.

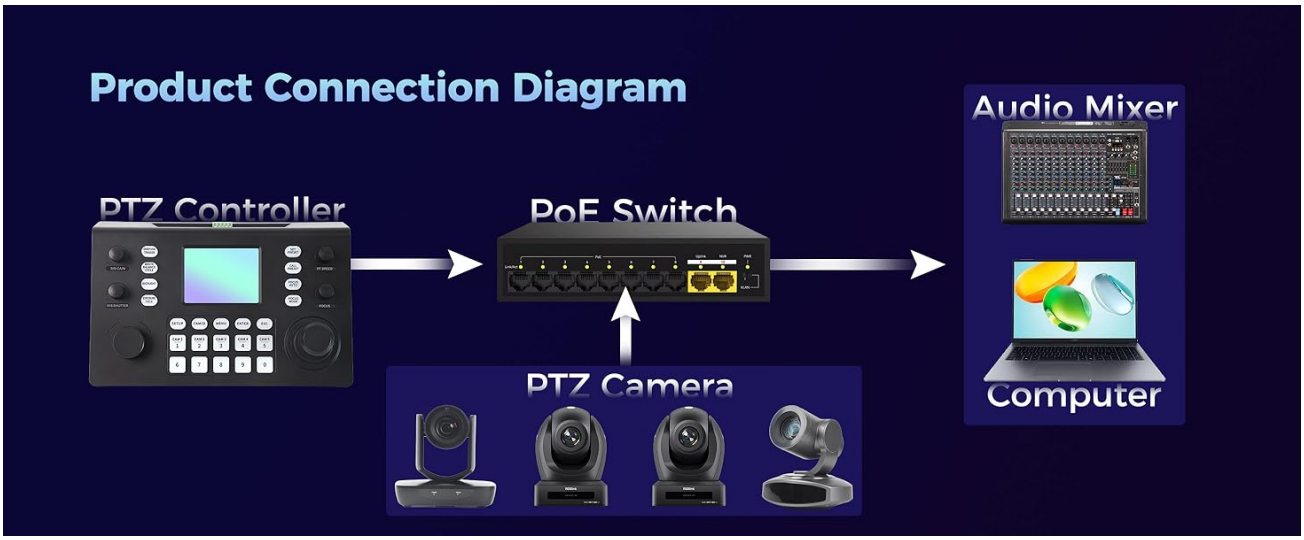

Image 2.2: Example connection diagram showing PTZ Controller, PoE Switch, PTZ Cameras, Audio Mixer, and Computer.

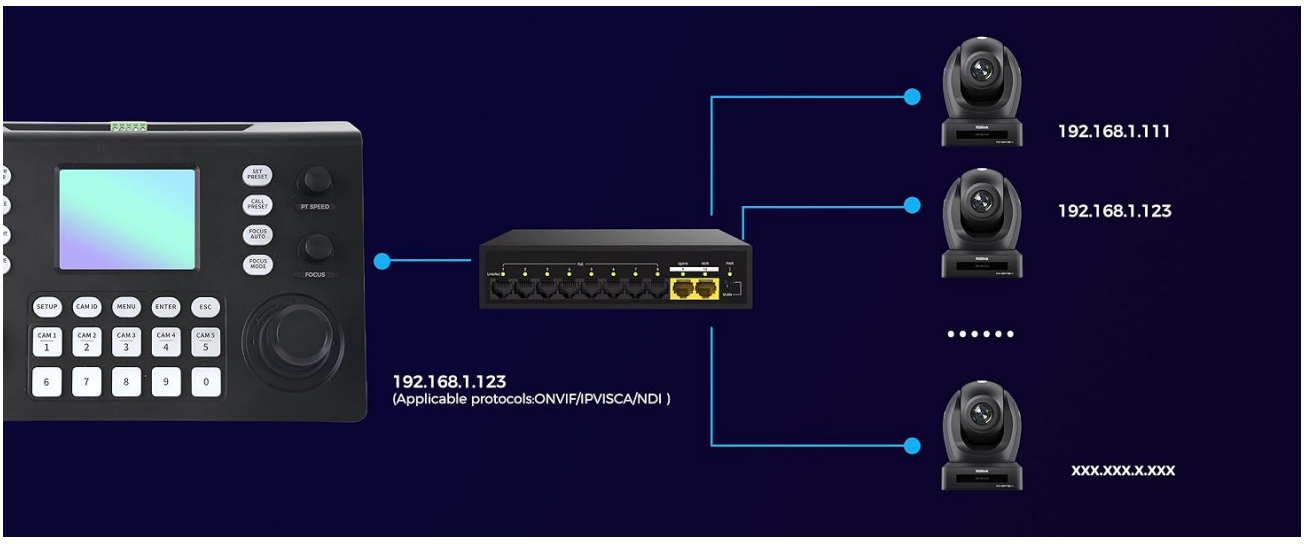

Image 2.3: Diagram illustrating IP camera connections via a network switch.

2.3 Network Configuration

For IP-based camera control, ensure the controller and cameras are on the same network segment. The controller supports automatic detection of NDI-enabled PTZ cameras.

- Access the controller's web interface by entering its IP address into a web browser. (Refer to the device's display or network tools to find the IP address).
- The default login credentials are typically 'admin' with a blank password. It is recommended to set a strong password immediately.
- Within the web interface, configure camera protocols (e.g., ONVIF, VISCA over IP) and enter camera-specific user credentials if required.

Image 2.4: NDI|HX camera search and control interface on the controller.

3. Operation

This section details the operational functions of the RGBlink NDI PTZ Camera Controller.

3.1 Overview of Controls

The controller features a 3.49" LCD display, a 3D joystick, various knobs, and a numeric keypad for intuitive control.

Image 3.1: The controller's 3.49-inch LCD display.

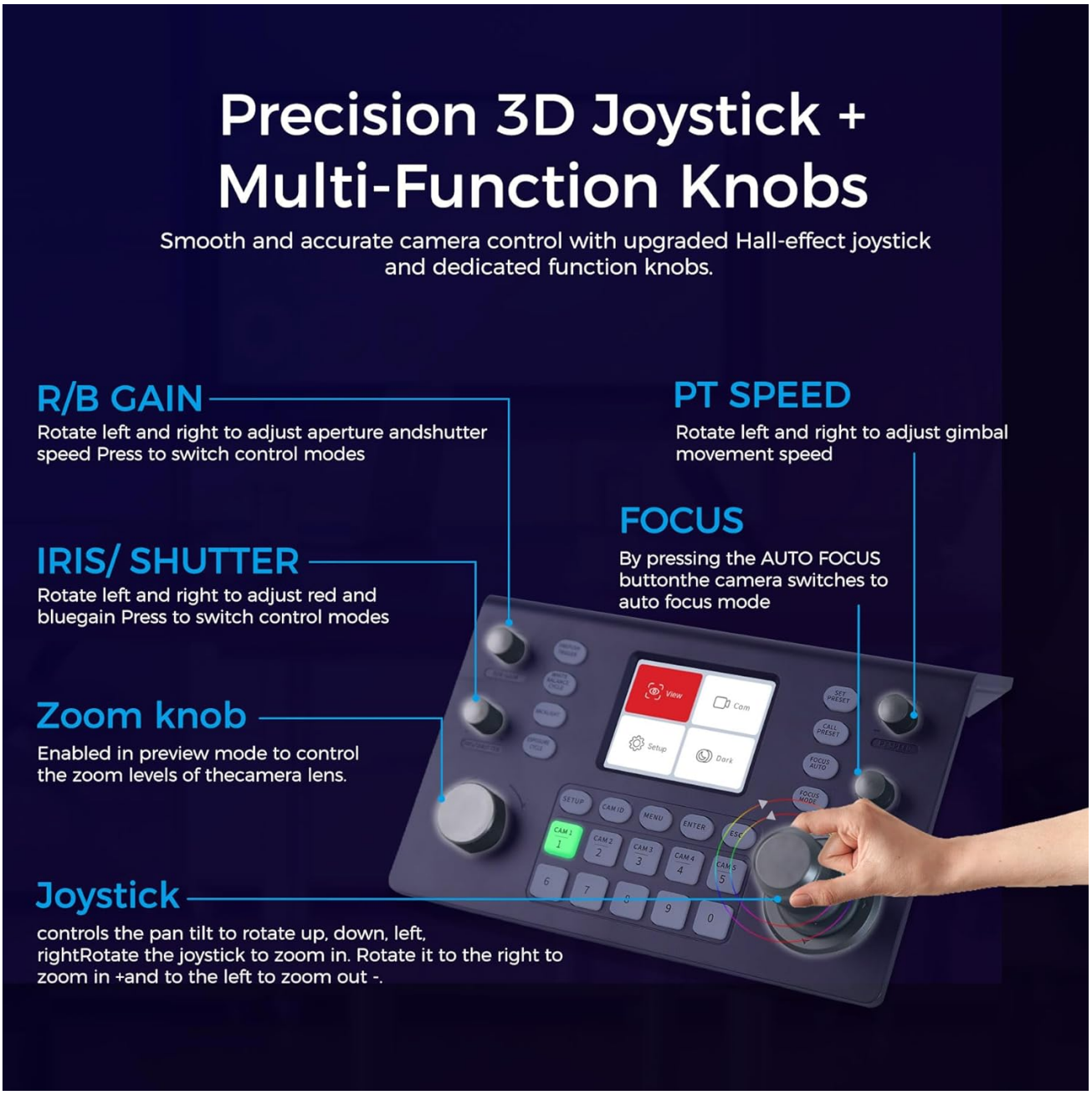

Image 3.2: Detailed view of the 3D joystick and multi-function knobs.

Image 3.3: Layout of the controller's buttons and numeric keypad area.

3.2 Camera Selection

- **Quick Select Buttons:** Use the dedicated CAM 1-5 buttons for quick selection of up to 5 cameras.
- **Numeric Keypad:** For cameras beyond the quick select buttons (up to 255), press the **CAM ID** button, then enter the camera number using the numeric keypad, and press **ENTER**.

Image 3.4: The controller's ability to manage multiple cameras.

3.3 PTZ Control

- **Joystick:** The 3D joystick controls pan (left/right), tilt (up/down), and zoom (rotate the joystick).
- **PT Speed Knob:** Adjusts the gimbal movement speed for pan and tilt.
- **Zoom Knob:** Provides precise zoom control, especially useful in preview mode.

3.4 Image Parameter Adjustment

- **IRIS/SHUTTER Knob:** Rotate to adjust aperture and shutter speed. Press to switch control modes.
- **R/B GAIN Knob:** Rotate to adjust red and blue gain. Press to switch control modes.
- **FOCUS Button:** Press the **AUTO FOCUS** button to switch the camera to auto focus mode.
- **EXPOSURE Button:** Cycles through exposure modes (Aperture Priority, Shutter Priority, Gain Priority, Manual Exposure, Auto Exposure).
- **BACKLIGHT Button:** Toggles the camera's backlight mode.
- **WHITE BALANCE CYCLE Button:** Cycles through white balance modes (Indoor, Outdoor, Manual, Auto).
- **ONE PUSH TRIGGER Button:** When white balance is set to "One-Push White Balance", press this button to initiate a one-push white balance calibration.

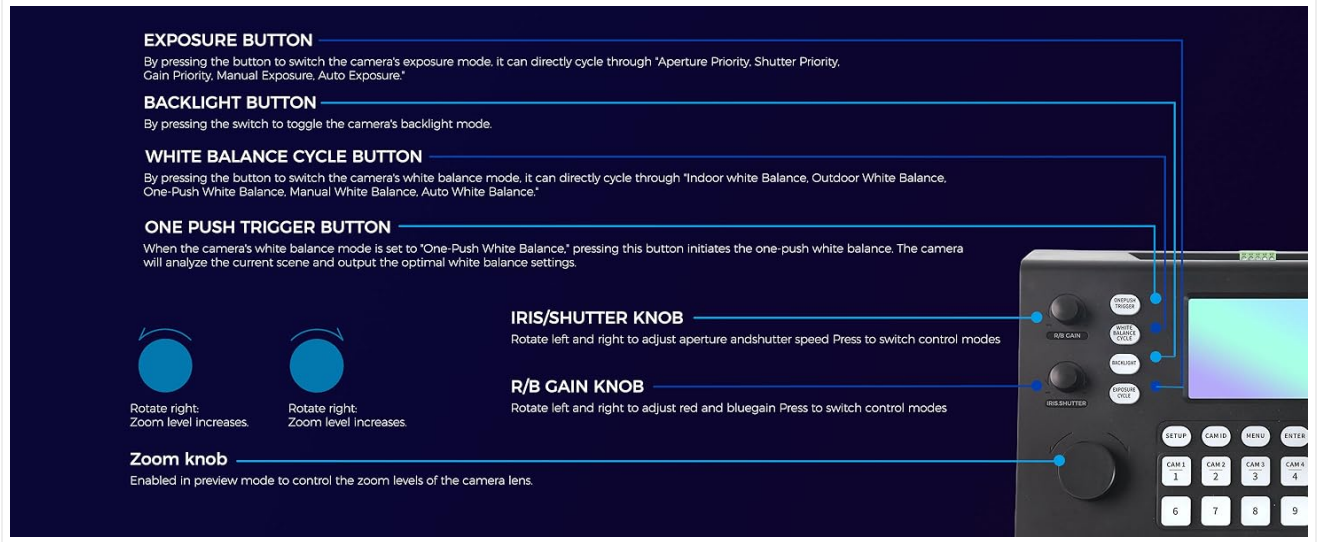

Image 3.5: Functions of buttons and knobs on the left side of the controller.

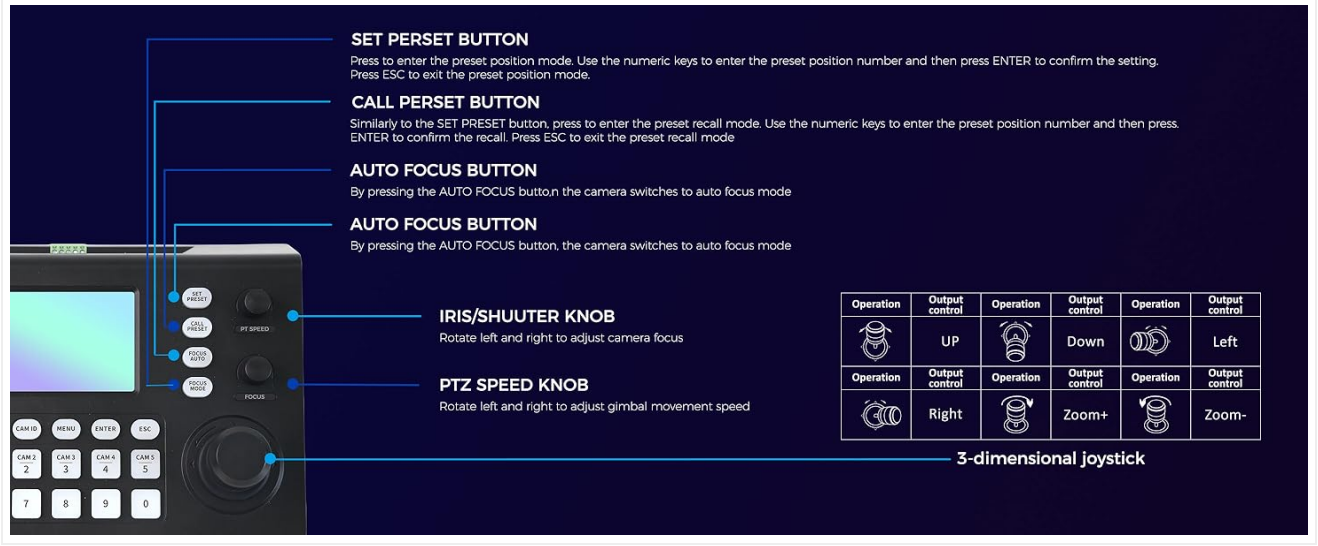

Image 3.6: Functions of buttons and knobs on the right side of the controller, including preset controls.

3.5 Presets

- **SET PRESET Button:** Press to enter preset position mode. Use the numeric keys to enter the preset number (0-9) and press **ENTER** to save. Press **ESC** to exit.
- **CALL PRESET Button:** Press to enter preset recall mode. Use the numeric keys to enter the preset number (0-9) and press **ENTER** to recall. Press **ESC** to exit.
- The controller supports saving and recalling up to 255 presets per camera.

3.6 Menu Navigation

- **MENU Button:** Press to open or close the camera settings menu. In menu control mode, the joystick controls navigation (up, down, left, right), **ENTER** confirms selections, and **ESC** acts as a back button.

4. Maintenance

Proper maintenance ensures the longevity and optimal performance of your RGBlink NDI PTZ Camera Controller.

4.1 Cleaning

- Use a soft, dry cloth to clean the exterior of the controller.

- For stubborn dirt, slightly dampen the cloth with water or a mild, non-abrasive cleaning solution.
- Avoid using harsh chemicals, solvents, or abrasive materials, as these can damage the surface and display.
- Ensure no liquids enter the device through openings or ports.

4.2 Storage

- When not in use for extended periods, store the controller in a cool, dry place away from direct sunlight and extreme temperatures.
- Protect the device from dust and moisture.

5. Troubleshooting

This section provides solutions to common issues you might encounter.

5.1 No Power

- **Check Power Source:** Ensure the power adapter is securely connected to both the controller and a working power outlet.
- **PoE Check:** If using PoE, verify that the Ethernet cable is connected to a PoE-enabled port on your network switch and that the switch is powered on.
- **Cable Integrity:** Inspect the power cable and Ethernet cable for any damage.

5.2 Cannot Control Camera

- **Network Connectivity:** For IP cameras, ensure the controller and cameras are on the same network and can communicate. Check network cables and IP addresses.
- **Protocol Mismatch:** Verify that the correct control protocol (e.g., VISCA over IP, ONVIF, NDI, Pelco-D/P) is selected on both the controller and the camera.
- **Camera ID:** Ensure the correct camera ID is selected on the controller.
- **Login Credentials:** If the camera requires authentication, confirm that the correct username and password are configured in the controller's web interface.
- **Serial Connection:** For serial control, check RS232/RS422/RS485 cable connections and ensure baud rates and addresses match between the controller and camera.
- **Firmware:** Ensure both the controller and cameras have the latest firmware installed. Visit the RGBlink support website for updates.

5.3 LCD Display Issues

- **No Display:** Ensure the controller is powered on.
- **Dim Display:** Check if there are any brightness settings on the controller that can be adjusted.

6. Specifications

Feature	Detail
Model	RGBBKT
Dimensions (L x W x H)	11.4 x 7.8 x 5.9 inches (approx. 290 x 200 x 150 mm)
Weight	2.2 pounds (approx. 1 kg)
Display	3.49" LCD

Feature	Detail
Control Protocols	VISCA over IP, ONVIF v2.42, NDI v5.5, Pelco-D/P
Interfaces	RS232, RS422, RS485, RJ45 Ethernet (PoE)
Camera Capacity	Up to 255 PTZ cameras
Power Input	PoE or DC 12V (external adapter)
Joystick	High-precision Hall sensor 3D joystick

Image 6.1: Controller dimensions and typical usage environments.

Image 6.2: Visual representation of supported protocols including RJ45, RS485, RS422, RS232, ONVIF, NDI, Pelco-D, Pelco-P, and Visca.

7. Product Video Demonstration

Watch the official product video for a visual demonstration of the RGBlink NDI PTZ Camera Controller's features and operation.

[redacted]

Video 7.1: Official demonstration of the RGBlink PTZ Camera Controller Joystick, showcasing multi-camera control and key features.

8. Warranty and Support

For warranty information, technical support, or service inquiries, please contact RGBlink customer service or visit their official website.

- **Manufacturer:** Xiamen RGBlink Science & Technology Co.,Ltd.
- **Official Website:** www.rgblink.com (*Note: This is a placeholder URL, please refer to your product packaging or official documentation for the correct support website.*)
- **Contact Information:** Refer to the RGBlink official website for the most current contact details for technical support and warranty claims.