

# VPC-64/VPX-64

## Video Pole Camera

### User Manual



**Research Electronics International, LLC**

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## CASE CONTENTS



1. **Supplemental Lenses\*** - 3.6mm (wide angle), 8mm (“normal”) and/or 16mm (telephoto). See info on lenses.
2. **Color Camera Head\*** - 3.6mm lens installed
3. **Black & White Camera Head\*** (*not shown*) - 16mm lens installed
4. **Flexible Cable** - provides additional flexibility to position camera head in tight spots
5. **Bendable Extension** - for positioning camera around obstacles
6. **Y-Splitter** - for splitting video signal to view on more than one display via the Video Out/In Jack
7. **International Plug Adapter** - to adapt Battery Charger Power Supply for various outlets
8. **Battery Charger** - for use with the Power Supply to recharge batteries
9. **Battery Pack (2)** - rechargeable NiMH batteries
10. **AC Power Supply** - for Battery Charger
11. **Pole/monitor assembly** - the VPC-64 extends to 6.5 feet (200 cm), the VPX-64 extends to 12.5 feet (386 cm)

### The Video Pole Camera can be purchased in 1 of 3 camera head configurations:

1. **Single Color Camera Head:** Typically packaged with 3 lenses, a wide-angle (3.6 mm focal length) lens installed for close-up viewing in tight places; a “Normal” (8 mm) lens; and a “Telephoto” (16 mm) lens for viewing distant objects.
2. **Single Black & White Camera Head:** Uses the same 3 lens options as the Color Head except the 16 mm “Telephoto” lens is installed. (The infrared illuminators are focused at a distant spot, which means that if the normal or wide-angle lens is used at night with this camera, a bright spot may appear in the center of the image).
3. **Both Color and Black & White Camera Heads:** Includes 3 total lenses (2 installed and 1 supplemental), interchangeable with either camera head.

*Additional Camera Heads may be purchased separately. Packaging varies depending on model purchased.*

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This manual contains proprietary information intended solely for use with the VPC-64 Video Pole Camera, and the VPX-64 Extended Pole Camera and relative accessories.

All information contained within this manual is subject to change without notice.

The Video Pole Camera is sold in two different versions:

- The VPX-64, which extends to 12.5 feet (386 cm)
- The VPC-64, which extends to 6.5 feet (200 cm)

This manual covers both units, and instructions and accessories may vary slightly depending on which model has been purchased.

#### OWNER'S RECORD

The Serial Number of your unit is located on the side panel. Please record this number and refer to it whenever you contact your dealer or Research Electronics International concerning this product. Note: Removal or alteration of the serial number automatically voids all warranties of this product.

MODEL:           VPC-64 or VPX-64

SERIAL NUMBER: \_\_\_\_\_



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# INTRODUCTION

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## INTRODUCTION

Thank you for purchasing the **VPC-64 Video Pole Camera, or VPX-64 Extended Video Pole Camera**. Both models of the Video Pole Camera allow you to extend your view of your surroundings that might otherwise be difficult or dangerous. With REI's Video Pole Camera, you can look up into drop ceilings or down underneath desk and chairs, or other higher to reach areas. In this way you can visually verify problems without the need to climb ladders or crawl on the floor.

The Video Pole Camera comes standard with a color camera with white LED lights. This would be suitable for most situations. However, an IR camera with IR lights is available for times when the white light might be a distraction.

This instruction manual covers the operation and specifications of the VPC-64 Video Pole Camera and the VPX-64 Extended Video Pole Camera. Operation and specifications may vary slightly depending on the model.

## PRECAUTIONS

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### PRECAUTIONS

Do not use the Video Pole Camera near power lines or high voltage wiring, possible electrocution may occur.

Exercise care in walking, climbing or other movements while watching the LCD Monitor. Serious injuries may result.

If the Video Pole Camera is used to move overhead objects, do not stand directly under the object or in its path. If the object slips and falls personal injury could result.

Do not lift objects over 5 lbs with the Video Pole Camera. Damage to the Video Pole Camera and personal injury could result.

Do not subject the Video Pole Camera to high forces. Damage to the Video Pole Camera could result.

Use only REI approved Power Supply and Charger to Charge the Battery Packs.

The Video Pole Camera is not waterproof. Do not use the Video Pole Camera under water. Do not use the Video Pole Camera in conditions that may expose the components to excessive moisture or water. The electronic circuits can be damaged by excessive moisture.

Do not use the Video Pole Camera in an explosive environment.

# CONTROLS

## CONTROLS

### MONITOR

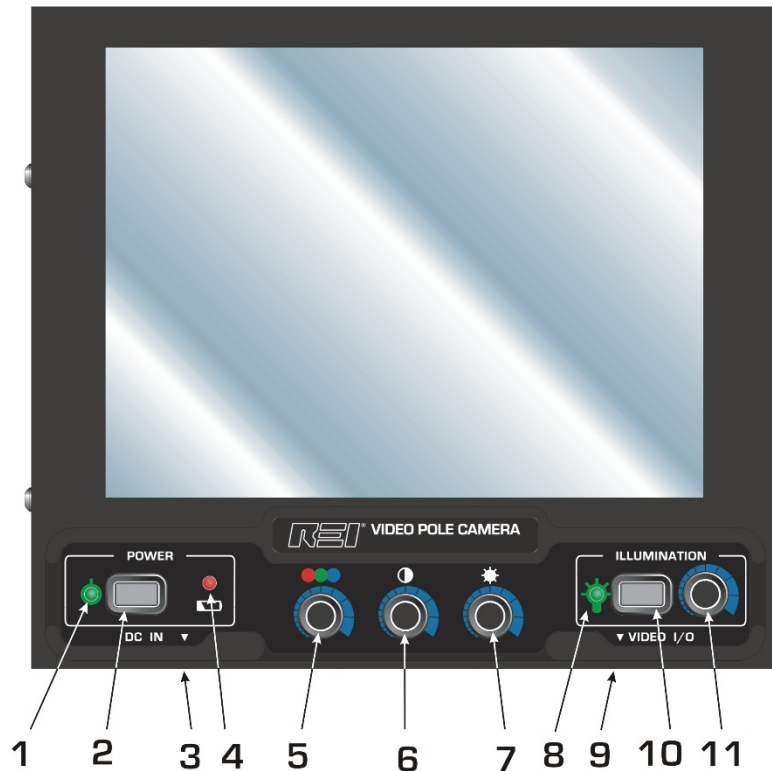


Figure 1 "Monitor Controls"

1. **Power On Indicator:** The unit can be "ON" with or without a Camera Head attached to the pole.
2. **Power Switch:** turns the unit "ON" and "OFF".
3. **DC Power In Jack:** power input for the unit.
4. **Low Battery Indicator:** indicates the battery is low and should be recharged.
5. **Color Saturation\*:** controls the amount of color displayed on the Monitor\*.
6. **Contrast\*:** controls the video Monitor contrast.
7. **Monitor Brightness\*:** controls Monitor brightness.
8. **Illumination On Indicator:** indicates the camera illuminators are turned on.
9. **Video In/Out Jack:** can be used to send the video signal to an external device, OR to receive an external video signal for display on the LCD monitor.
10. **Illumination Switch:** turns the LED Illumination on and off.
11. **Illumination Brightness:** adjusts the brightness of the Camera Head LED's.

\* These controls only affect the displayed video and not the video image signal from the Camera Head.



## CONTROLS

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### CAMERA HEAD



Figure 2 “Camera Head” (Color Camera Head Pictured)

1. **Camera Connector:** connects the Camera Head to the pole. This connector provides both electrical and physical connections.
2. **Camera Lens:** can be rotated to focus the video image. It can also be changed with either of the additionally supplied Wide and Telephoto lenses.
3. **LED Lights:** provide the supplemental light (either white light or IR light, depending on Camera Head) in low to dark lighting conditions.
4. **Rubber Push Pads:** can be used to push objects, for example, the Video Pole Camera could push a drop ceiling tile up to get a view of the upper portion of a room without needing a ladder. Caution, do not push over 5 lbs with the Video Pole Camera, damage to the Video Pole Camera or personal injury could result.
5. **Tilt Pin:** used to rotate the camera to the desired view angle.

# USING THE VIDEO POLE CAMERA

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## USING THE VIDEO POLE CAMERA

### ASSEMBLING THE UNIT

1. Remove the main body of the Video Pole Camera, which includes the pole and monitor, from the case.
2. Remove the camera from the case
3. Place the camera on the pole such that two connectors align. There is a tab in the connector on the pole and a slot in the connector on the camera.
4. Push and rotate the locking ring, located on the camera's connector.
5. Place a battery pack in the battery holder with the cable away from the pole and towards the foam grip.
6. Plug the battery connector into the DC Power IN Jack.

### OPERATING THE MONITOR

1. Turn the monitor on by pressing the Power Switch.
2. Remove the lens cap from the camera.
3. Adjust the color saturation, contrast and brightness to obtain a desired video image.
4. The monitor may be tilted and rotated as needed to allow better viewing of the video image.
5. If desired or in low light conditions the LED illumination can be turned on. To turn the LED illumination on press the Illumination Switch. The illumination brightness may be adjusted by the Illumination Brightness control.

### ADJUSTING THE CAMERA

The camera may be manually tilted using the outer pins on the camera body. The camera can be tilted +90 degrees to -25 degrees.

Because the Video Pole Camera can be used in many different conditions the camera may require focusing. Focusing is a manual adjustment. To focus the camera, rotate the lens by grabbing the outer ring of the lens. Avoid touching the clear part of the lens.

In addition to the lens that is shipped on the camera, other lenses are supplied. To switch lenses, unscrew the lens on the camera. Then screw the new lens on the camera. Take care to keep any dust or foreign objects out of the camera while the lens is off. The camera should have a lens installed at all times, including during non-use periods.

### EXTENDING THE POLE

The VPC-64 can be extended up to 6.5 feet (200cm) and the VPX-64 can be extended up to 12.5 feet (386cm). To extend the pole, release one or more locking latches on the side of the pole. Extend the pole to the desired length. Close the locking latches. When the Video Pole Camera is at or near its full extended length, the pole may have to be held at the desired length while the locking latches are closed.

To retract the pole, open the locking latches and slide the pole sections to the desired length. Do not force the pole sections. The sections should retract with little force.

The Video Pole Camera contains an internal, high stretch ratio, retractable cord eliminating any external wires or cables. The retractable cord will naturally pull the pole sections toward the closed position.

## USING THE VIDEO POLE CAMERA

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NOTE: If the Video Pole Camera is used with the pole extended near its maximum length for more than 30 minutes, the retractable cord inside the pole may develop a memory and retract slower than usual causing part of the cord to be ejected from the bottom of the pole. In extreme cases, the cord can bind inside the pole. **To avoid potential problems with the retractable cord when the pole has been extended for long periods of time, collapse the pole slowly, giving the retractable cord time to retract back to its original stretch ratio memory.**

### RECORDING VIDEO

The Video Pole Camera is supplied with one external video cable and a Y-adapter. The cable is used to allow recording or viewing video. An external video recorder (not supplied) is needed to record video. To record video, insert the 3.5mm stereo plug in the Video I/O Jack. Then insert the Video Out RCA connector in the video in of the external video recorder. Under this configuration the LCD monitor will not display any video. The VPC does not support the recording of audio.

By using the supplied Y-adapter the LCD monitor can display the same video images that are being recorded. To record video and view the video images on the LCD Monitor, insert the 3.5mm stereo plug in the Video I/O Jack. Then insert the Video Out RCA connector in the Y-adapter. Connect the Video In of the cable to the Y-Adapter. Finally, connect the Y-adapter to the Video In of the external video recorder.

### VIEWING RECORDED VIDEO

Video from an external video source can be viewed on the LCD Monitor of the VPC. Using the supplied video cable, insert the 3.5mm stereo plug in the Video I/O Jack. Then the Video In RCA jack in the external video source. Note, when used to view external video signals the Camera's video signal is not displayed.

### USING THE FLEXIBLE EXTENSION (VPC-64 ONLY)

In some situations, especially small hard-to-reach places, the standard straight, rigid pole may not adequate. For these situations the flexible extension may help.

The Flexible Extension is placed between the end of the pole and the camera. It mounts to the camera and the pole in the same fashion as the camera mounts to the pole. Once attached, the Flexible Extension will allow the camera to be twisted and rotated in addition to the other adjustment previously mentioned.

Do not use the camera to twist the Flexible Extension, grab the thicker portion of the Flexible Extension, near the camera. The Flexible Extension is not intended to rotate 360 degrees. Excessive force on the Flexible Extension could result in damage to the Video Pole Camera. While using the Flexible Extension do not attempt to push any object with the camera.

# SPECIFICATIONS

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## SPECIFICATIONS

### VPC-64

#### OVERALL LENGTH

Extended with Camera Head attached 6.5 feet (200cm)  
Retracted with Camera Head attached 24.5 inches (62cm)

#### WEIGHT

VPC-64 with Camera Head attached: 3.6 lbs (1.6 kg)  
Case with VPC-64 and all accessories: 11.0 lbs (5 kg)

#### CASE SIZE

18.5 in (47cm) x 6 in (15.3cm) x 14.5 in (36.8cm)

### VPX-64

#### OVERALL LENGTH

Extended with Camera Head attached 12.5 feet (386cm)  
Retracted with Camera Head attached 38.0 inches (96cm)

#### WEIGHT

VPX-64 with Camera Head attached: 4.5 lbs (2.0 kg)  
Case with VPC-64 and all accessories: 13.0 lbs (6 kg)

#### CASE SIZE

36 in (92cm) x 5 in (13cm) x 13 in (33cm)

### COLOR LCD DISPLAY

Size: 6.4 inch (16cm) diagonal  
Brightness: 300 Nits  
Viewing Angles: +/- 50° horizontal, +/- 40° vertical  
Display Controls: color saturation, contrast, and brightness  
Camera Head Controls: variable illumination  
Display Rotation: 80° CCW, 180° CW  
Display Tilt: 0° to 90°  
Video In: NTSC/PAL 1Vp-p  
Video Out: NTSC 1Vp-p

### COLOR CAMERA HEAD\*

Signal Format: NTSC  
Horizontal Resolution: More than 380 Lines  
Sensitivity: 0.5 Lux / F1.2, 1.0 Lux / F2.0 (AGC on)  
Illumination: 8 White LEDs with variable brightness control  
Camera Lens: 3.6mm, 8 mm, & 16 mm  
Camera Tilt: +90° to -25°

## SPECIFICATIONS

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### IR ILLUMINATED BLACK & WHITE CAMERA HEAD\*

Signal Format: NTSC  
Horizontal Resolution: 420 Lines  
Sensitivity: 0.0003 Lux / F1.2, 1.0 Lux / F2.0 (AGC on)  
Illumination: 8 IR LEDs with variable brightness control  
Camera Lens: 3.6mm, 8 mm, & 16 mm  
Camera Tilt: +90° to -25°

\* Video Pole Camera's are sold with various camera configurations; your unit may not contain both cameras. Additional Camera Heads may be purchased separately.

### POWER SUPPLY

9.6 VDC, 2300 mAh, Rechargeable  
Average Run-Time: 2.0 hours  
Average Battery Charge-Time: 1.8 hours  
Maximum input Voltage: 15 VDC

DO NOT USE ANY OTHER BATTERY, CHARGER, OR POWER SUPPLY. USE ONLY REI SUPPLIED BATTERIES AND CHARGER.