

SECURITY CAMERA

INSTRUCTION MANUAL

ENGLISH VERSION 1.0



VANTAGE

LBC5451

www.lorextechnology.com

Contents

- 1x Camera and mounting stand
- 1x Power adapter
- 1x Mounting kit
- 1x Allen key
- 1x Screw cap
- 1x 60 ft. (18m) BNC / power extension cable
- 1x BNC Female / RCA Male adapter
- 1x Instruction Manual

CHECK YOUR PACKAGE TO CONFIRM THAT YOU HAVE RECEIVED ALL THE COMPONENTS SHOWN ABOVE.

Features

- High resolution Sony Super HAD™ image sensor delivers 540TV lines of resolution.
- Dual infrared / white-light LEDs provide full-color night vision in complete darkness for long-range monitoring and close-up recognition.
- Capable of capturing images up to 60 ft. (18m) away in total darkness in B/W and 30 ft. (9m) in color*.
- 4.3mm wide-angle lens for wide area coverage (80° FOV)†.
- IP67 rated housing for indoor / outdoor installations‡.

* Illumination range under ideal conditions. Objects at or beyond this range may be partially or completely obscured, depending on the camera application. Color night vision only available once motion triggers white light LEDs to turn on.

† Field of view, diagonal.

‡ Not intended for submersion in water. Installation in a sheltered location recommended.

Safety Instructions

- Read this guide carefully and keep it for future reference.
- Follow all instructions for safe use of the product and handle with care.
- Use the camera within given temperature, humidity, and voltage levels noted in the Technical Specifications.
- Do not disassemble the camera.
- Do not point the camera directly towards the sun or a source of intense light.
- Use only the supplied regulated power supply. Use of a non-regulated, non-conforming power supply can damage this product and voids the warranty.
- Periodic cleaning may be required. Use a damp cloth only. Do not use harsh cleaners or aerosol cleaners.
- The supplied extension cable is rated for surface mounting only. Cables for in-wall / floor-to-floor installations are sold separately.

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1. CAMERA OVERVIEW

1 Camera Module

2 Camera Holder

3 Camera Mount

4 Mounting Base

5 DC Power / BNC Video Connectors:

See “Connecting the Camera” on page 12 for details.

6 Infrared LEDs:

Enable the camera to see at night.

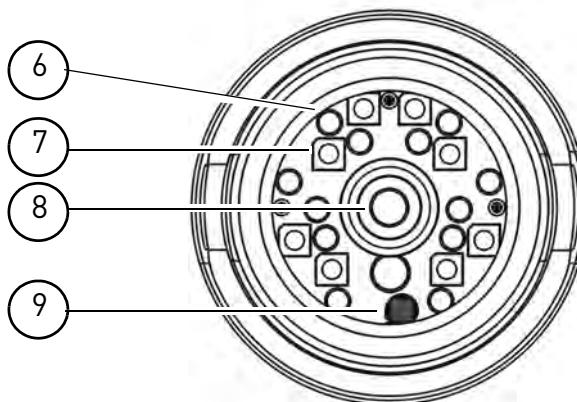
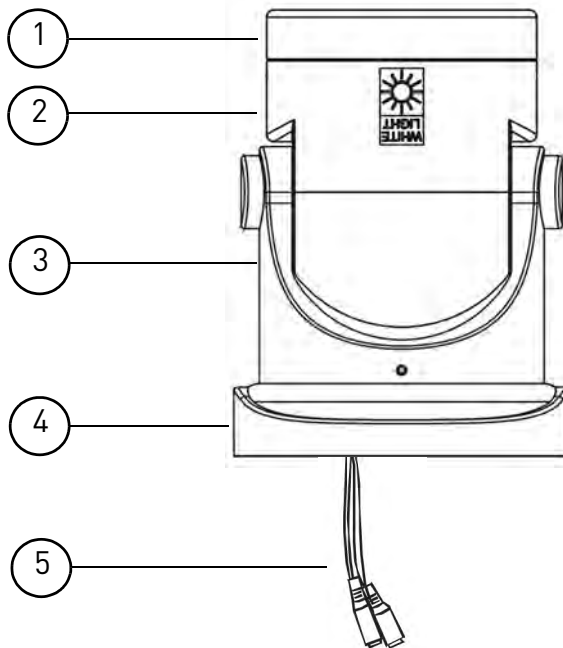
7 White Light LEDs:

Automatically turn on when motion is detected (during night vision only) to deter criminals and allow camera to view color images at night

8 Camera Lens

9 Sensor:

Detects light to control night vision and trigger White Light LEDs.



2. NIGHT VISION FEATURES

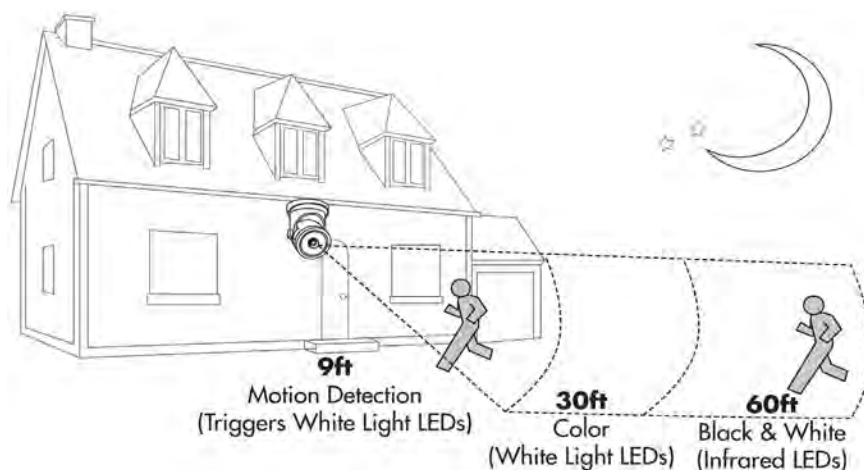
This camera is equipped with special features that make it more effective at deterring and identifying nighttime intruders.

2.1 Night Vision

This camera is equipped with IR (Infrared) LEDs, which allow it to see at night up to a range of 60 ft. (18m). It has a built-in light sensor that activates night vision when it is dark. The camera sees in black and white when night vision is on.

2.2 Motion Detection / White Light LEDs

This camera is also equipped with White Light LEDs. At night, the White Light LEDs are set to turn on automatically when the camera detects motion within a range of 9 ft. (3m).



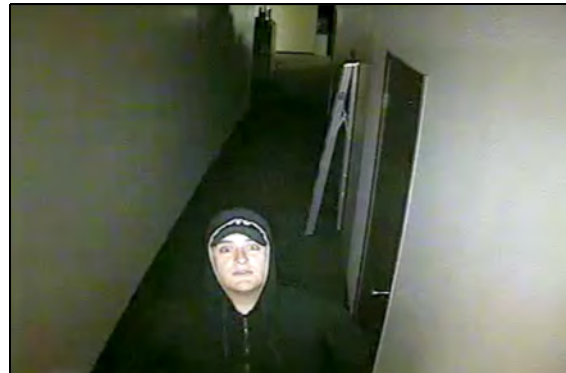
How it Works: During nighttime, the camera's night vision sees up to 60 ft. in black and white. When an object comes within a 9 ft. range, the White Light LEDs turn on, and the Infrared LEDs turn off. White light projects up to 30 ft., allowing the camera to view close by objects in color (depending on lighting conditions). After 15 seconds, the White Light LEDs turn off, and the Infrared LEDs turn back on.

This helps deter / identify intruders by:

- Alerting them to the presence of the camera, after they have already been spotted.
- Providing a better view of the intruder's face. The white lights on the camera turn on instantly to surprise intruders, drawing their eyes to the camera.



Typical night-vision cameras may be overlooked by intruders



White Light LEDs draw attention to help identify faces

- Providing color images at night. When the white lights are activated, the camera can view close by objects in color. Color images help identify the intruder's face and clothing.

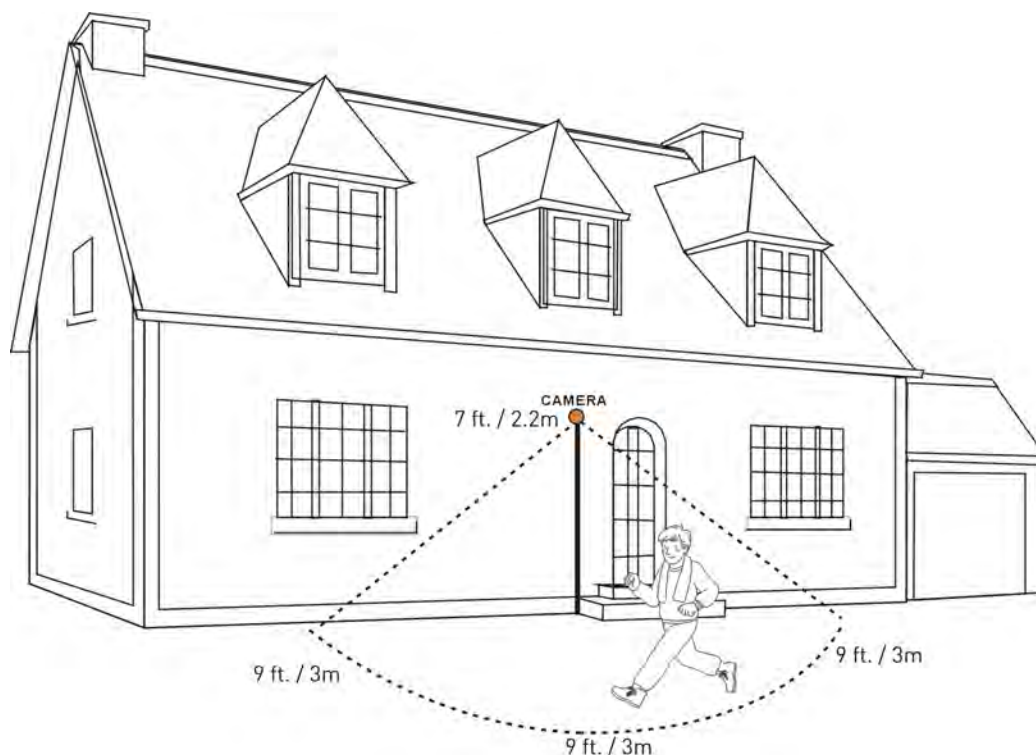
NOTE: White Light LEDs remain on for 15 seconds after the camera detects motion.

IMPORTANT:

The camera detects motion using a built-in light sensor. Avoid installing the camera in areas where the lighting conditions are likely to change frequently, as lighting changes may trigger the sensor even if there is no motion.

3. INSTALLATION TIPS

- Test the camera before installing to ensure that there are no problems with the camera.
- To maximize the range of the motion sensor and White Light LEDs, mount the camera around 7 ft. (2.2m) off the ground.



- Avoid installing the camera in locations overlooking a public road or sidewalk, as motion or lighting changes from these locations will trigger the camera's White Light LEDs.
- Mount the camera where the lenses are away from direct and intense sunlight.
- Plan your cable wiring so that it does not interfere with power lines or telephone lines.
- Ensure that the camera wiring is not exposed or easily cut.

- Adjust the camera angle so that it provides a satisfactory view of the area you would like to monitor.
- In "high-risk" locations, have multiple cameras point in the same area. This provides camera redundancy if a camera malfunctions, or if a vandal attempts to damage the camera.
- Mount the camera in an area that is visible but out of reach.

3.1 Suggested Install Locations

This camera is ideal for entrances and other areas where intruders are likely to come in close proximity to the camera.

Good locations to install the camera are:

- Home entrance.
- Office / warehouse entrance.
- Stairwells.
- Hallways.

Avoid installing the camera:

- Overlooking a road, street, sidewalk, or other location where normal nighttime traffic is likely to trigger the motion sensor.
- In a location where people or objects are unlikely to come within 9 ft. (3m) of the camera (for example, mounted to a high ceiling in a warehouse).
- Where lighting conditions change frequently.
- In a location that is lit at night (such as a parking lot), as existing lighting may prevent the camera from turning on night vision.

4. INSTALLING THE CAMERA

4.1 Before Installing the Camera

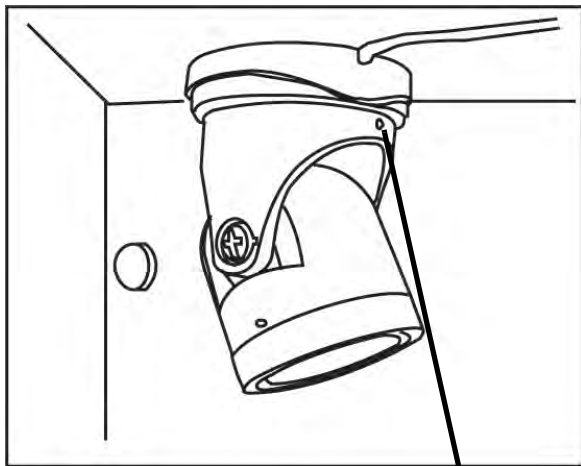
Decide if you are going to run the cables through the wall / ceiling (drilling required) or along the wall / ceiling.

- If you are running the cables through the wall / ceiling, connect the power and BNC video cables to the camera before installing. See “Connecting the Camera” on page 12 for details.
- If you are running the cables along the wall / ceiling, follow the instructions below before connecting the camera power and BNC video cables.

4.2 To Install the Camera

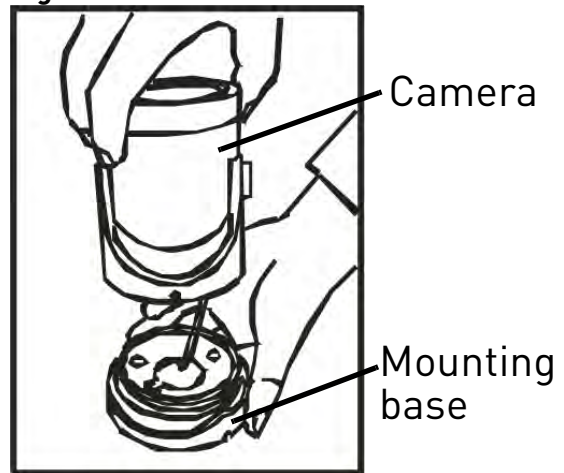
- 1 Use the included allen key to loosen the base screws (Figure 1). Twist the mounting base until it loosens; then, separate the camera from the mounting base.

Figure 1:



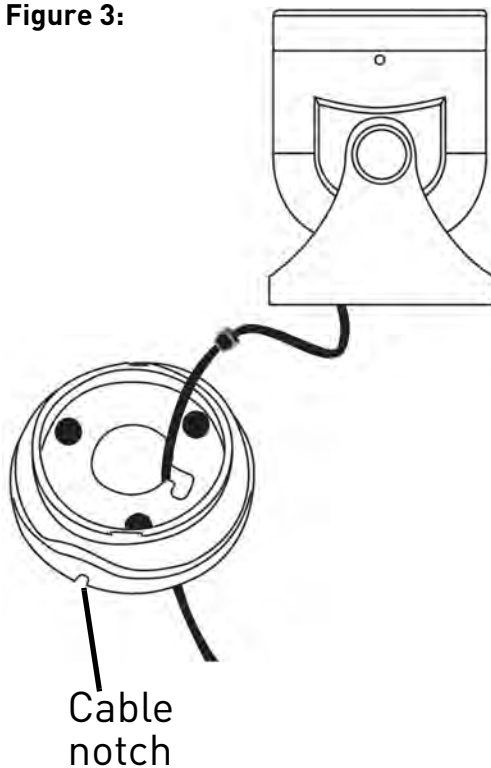
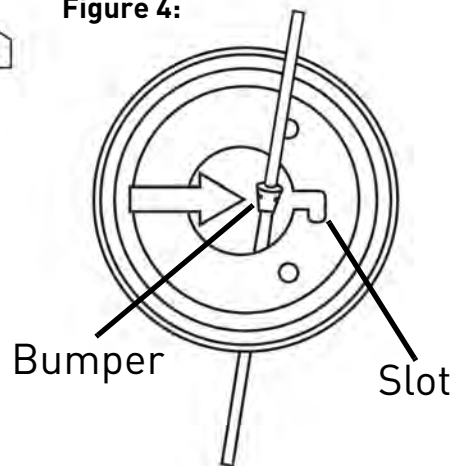
Base screws
(1 on each side)

Figure 2:



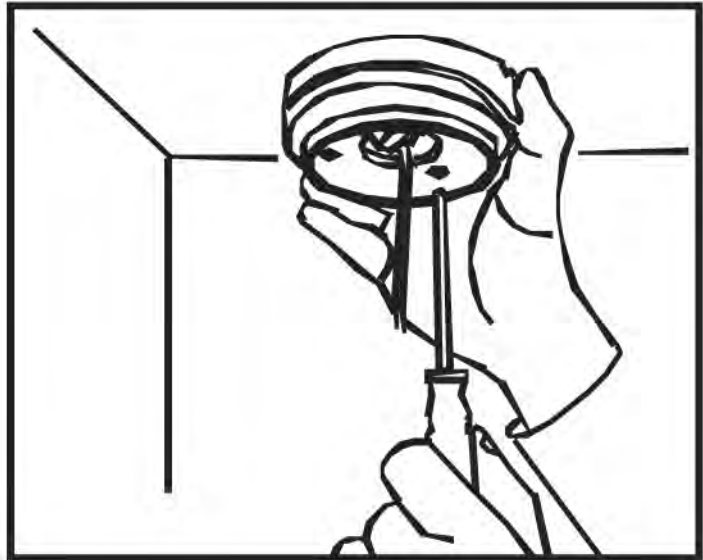
Twist the base until
it loosens; then,
pull to separate.

- 2 Run the cable through the base (Figure 3) and secure it by pushing the rubber bumper on the cable through the slot on the base (Figure 4). This prevents the camera from falling during installation.
- If you are running the cables along the wall / ceiling, make sure to run the cable through the cable notch on the base. This will keep the camera base flush to the wall / ceiling when mounted.

Figure 3:**Figure 4:**

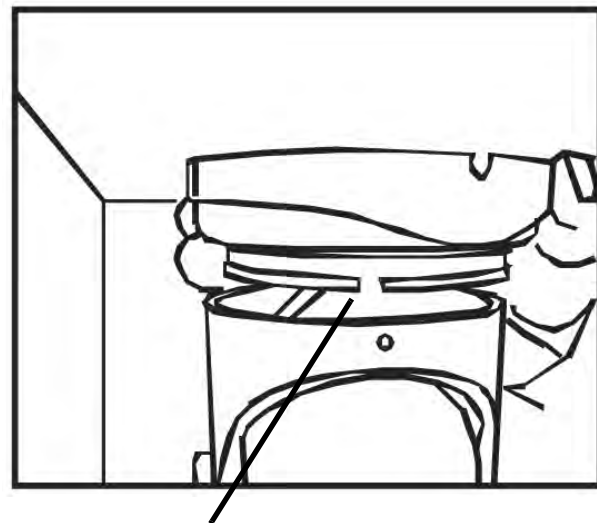
- 3 Mount the base to the desired surface using the included screws.

NOTE: If mounting to drywall, use the included drywall plugs.



NOTE: Camera hangs down from base during mounting.

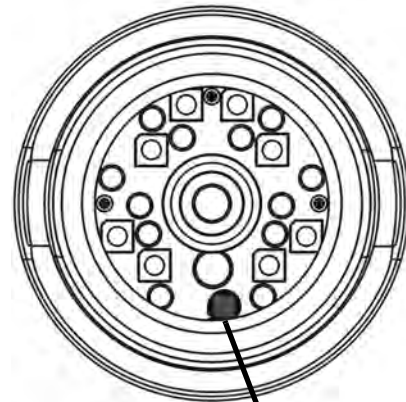
- 4 Attach the camera to the base. Align the base screws with the slots on the base, slide the camera onto the base, and twist.



Base slot

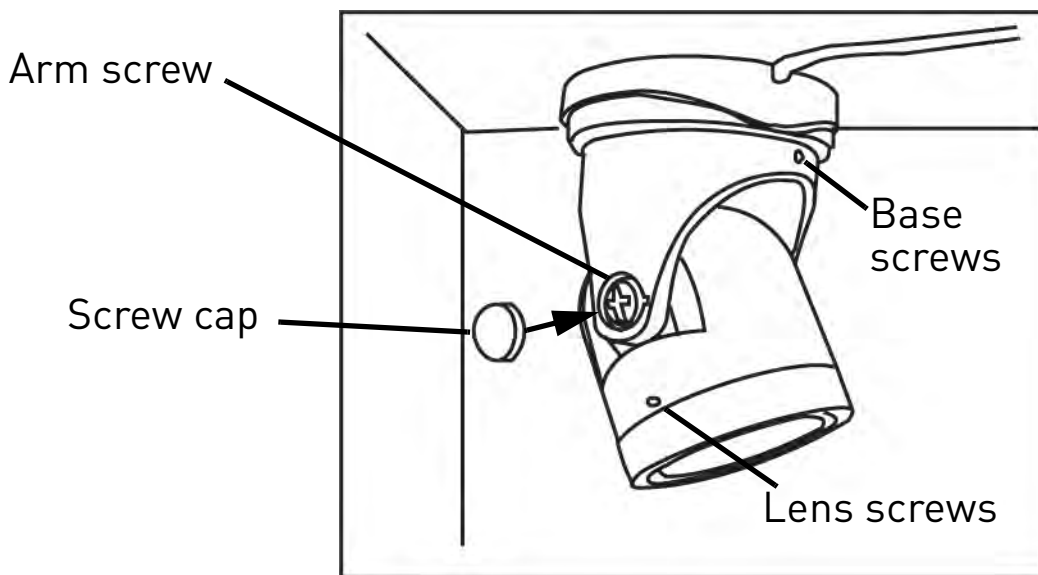
- 5 Adjust the camera position as needed (see “Positioning” on page 10 for details).

NOTE: Ensure that the sensor is directly below the camera lens (in the 6 o'clock position) or the image will appear rotated.



Correct sensor position

- 6 Tighten the screws to secure the camera in position and snap the screw cap over the arm screw.



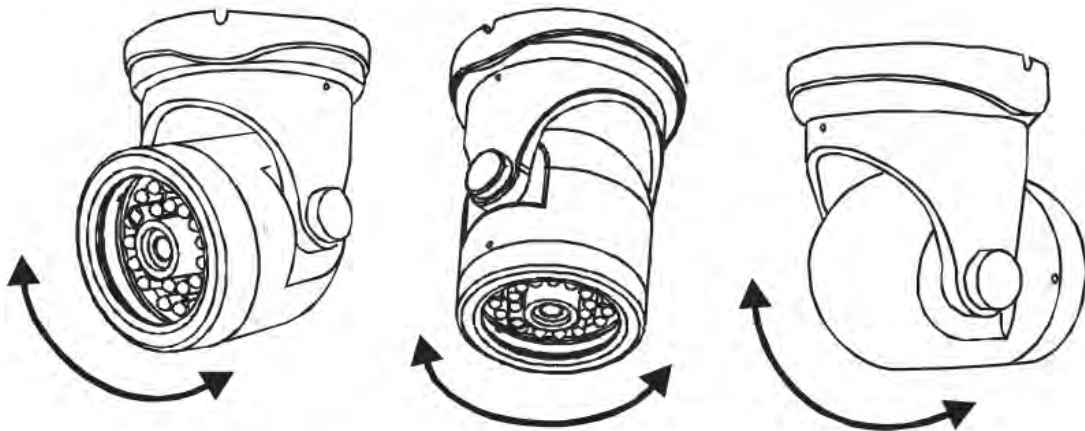
Do not over-tighten the screws, as this may crack the camera or base.

- 7 If you are running the cables along the wall / ceiling, connect the camera power and BNC video cables. See “Connecting the Camera” on page 12 for details.

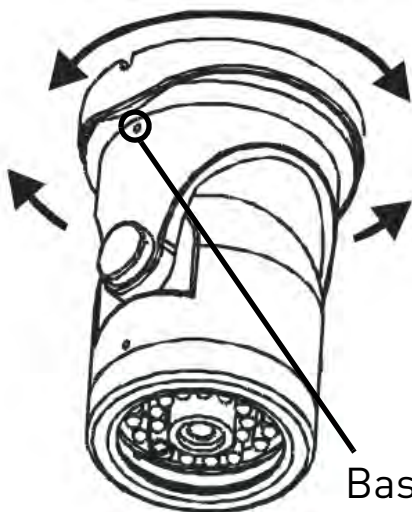
5. POSITIONING

The camera offers flexible positioning, allowing you to manually adjust the camera for wall or ceiling installation.

NOTE: To maximize the range of the motion sensor and White Light LEDs, it is recommended to mount the camera around 7 ft. (2.2m) off the ground.



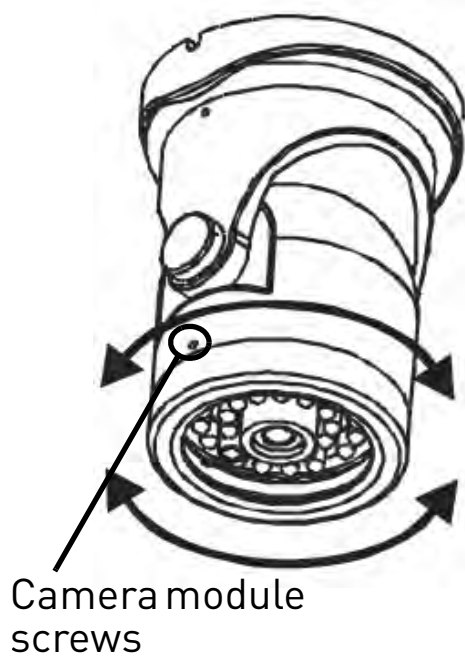
Tilt the camera to adjust the angle.



Loosen the screws on both sides of the base and twist the camera to adjust the camera direction.



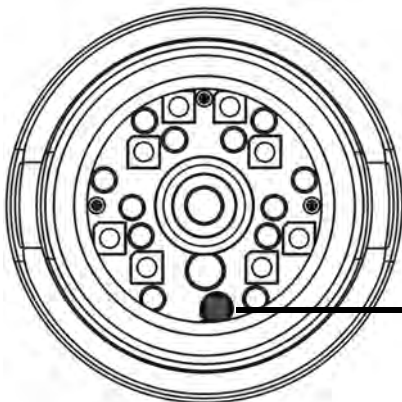
Do not over-tighten the screws, as this may crack the camera or base.



Loosen the screws on both sides of the camera module and twist to adjust the sensor position.



The camera module can only twist one full rotation in either direction. Do not force the lens, as this can break the camera.

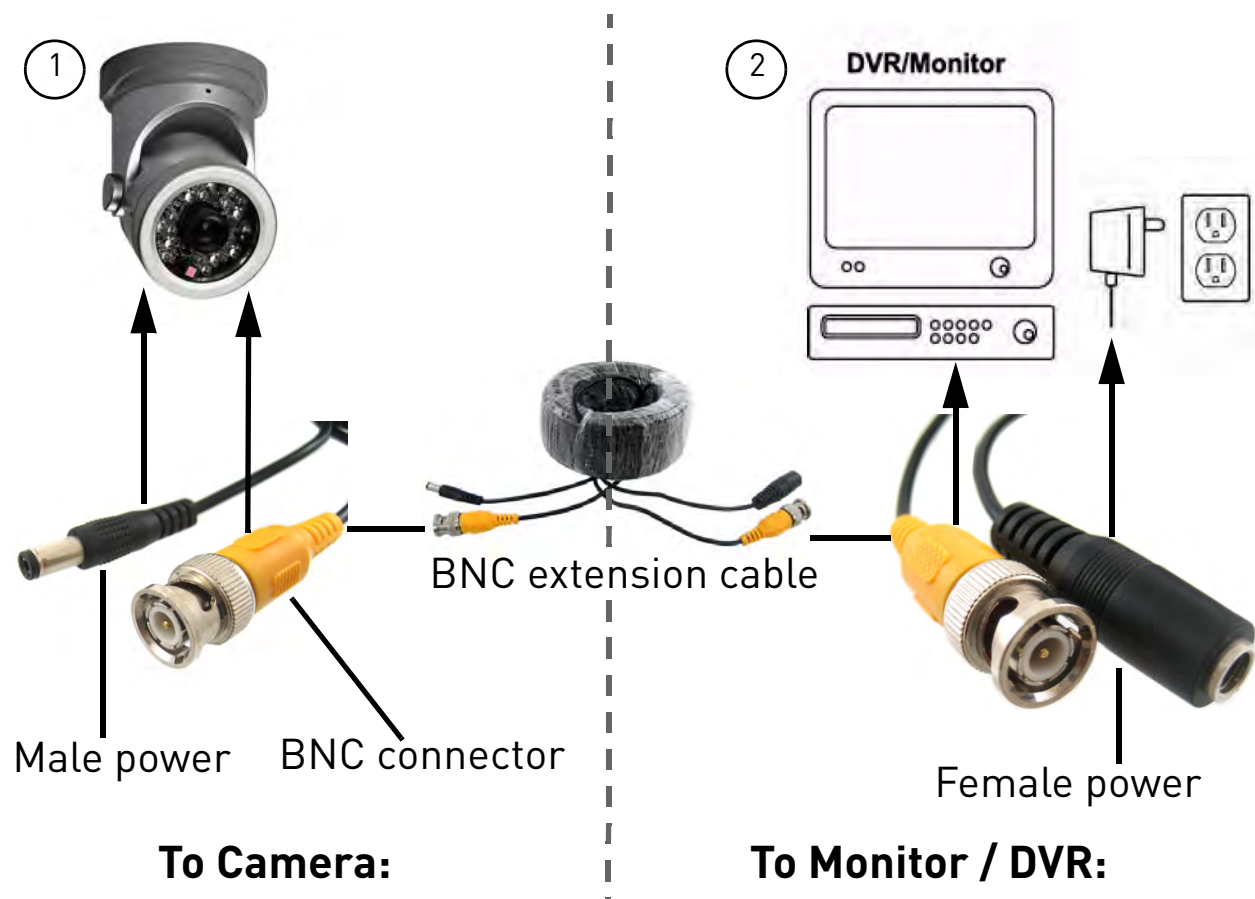


Make sure that the sensor is directly below the camera lens (in the 6 o'clock position). Otherwise, the image will appear rotated.



Do not over-tighten the screws, as this may crack the camera or base.

6. CONNECTING THE CAMERA



- 1 Connect the male power connector on the BNC extension cable with the female power connector on the camera.
 - Connect the BNC connector on the extension cable to the camera.
- 2 Connect the female power connector on the extension cable to the power adapter.
 - Connect the BNC connector on the extension cable to your monitor or DVR.
- 3 Plug the power adapter into a power outlet.

6.1 BNC to RCA Adapter (Optional)

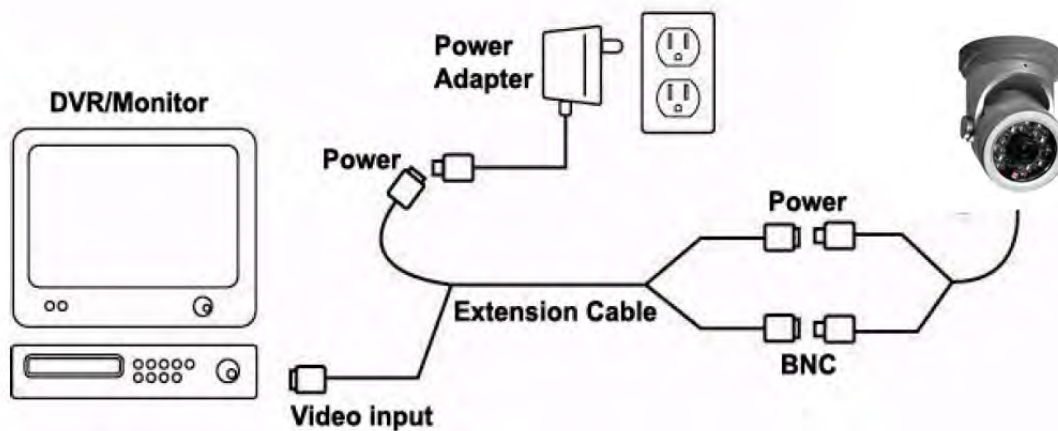
DVR / CCTV MONITOR
Video IN

TV / VCR
Video IN



Attach the included BNC to RCA adapter to connect the extension cable to RCA inputs (i.e. for a TV connection).

6.2 Setup Diagram



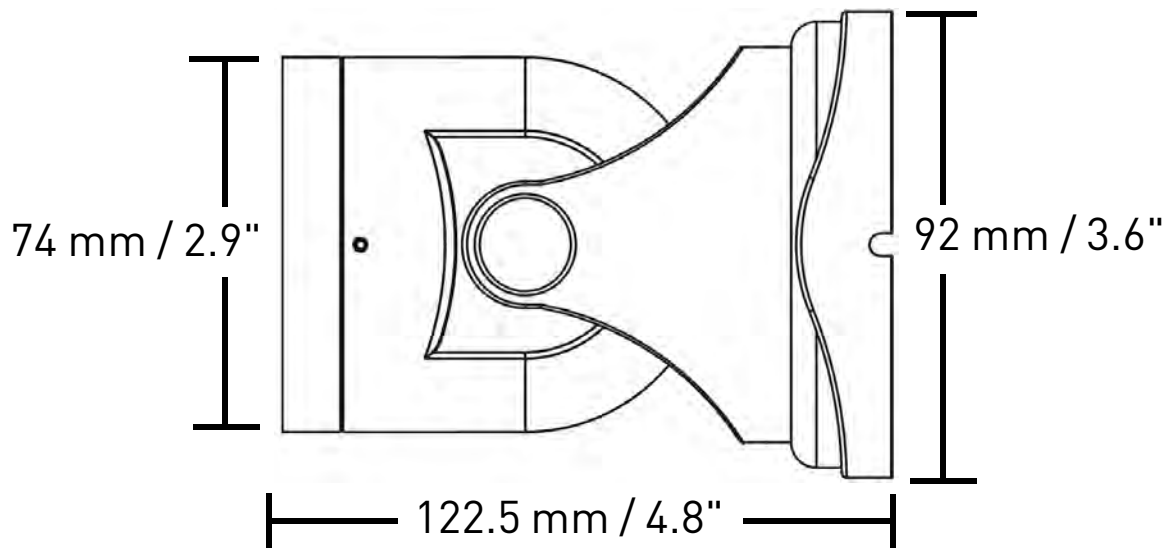
7. TECHNICAL SPECIFICATIONS

Image Sensor	1/3" Sony Super HAD™ II
Video Format	NTSC
Effective Pixels	H:768 V:494
Resolution	540 TV Lines
Scan System	2:1 Interlace
Sync System	Internal
S / N Ratio	48 dB (AGC OFF)
Iris	AES
AES Shutter Speed	NTSC: (1/60~1/100,000 sec.)
Min. Illumination	0.2 Lux without IR LED 0 Lux with IR LED
Video Output	Composite 1.0Vpp @ 75ohm
Lens / Lens Type	4.3mm F2.0 / Fixed
FOV (Diagonal)	80°
Termination	BNC Type
IR LED Qty / Type	12 pcs. / 850nm
Night Vision Range ¹	60 ft. / 18m
White Light LED Qty	8 pcs.
Motion Detection Range	9 ft. / 3m
White Light Range	30 ft. / 9m

Power Requirement	12V DC \pm 10%
Power Consumption	Max. 300mA (w/White Light LEDs)
Operating Temp. Range	14° ~ 122° F / -10 ~ 50° C
Operating Humidity Range	< 80% RH
Environmental Rating ²	IP 67
Weight (including stand)	0.75 lbs. / 0.34kg

1. IR Illumination Range under ideal conditions. Objects at or beyond this range may be partially or completely obscured, depending on the camera application.
2. Not intended for submersion in water. Installation in a sheltered location recommended.

7.1 Dimensions



8. CABLE EXTENSION OPTIONS

You can extend the cable run for your camera up to 300 ft. depending on the cable type used. See table below:

Option	Cable Type	Max Cable Run Distance	Max. # of Extensions
1	Regular BNC (supplied with camera)	180 ft. / 55m	3
2	'RG59' or 'Coax' or 'Coaxial' BNC (sold separately)	300 ft. / 92m	5
3	Lorex Universal Cable (sold separately)	300 ft. / 92m	3

Notes:

- 1 For optimal performance, consider using option 2 or 3. It is best to use the same cable type for the entire distance.
- 2 Cable run recommendation based on typical camera power consumption (up to 500mA). For specialty cameras with higher current consumption, maximum cable run may be reduced. Consider providing power to the camera at the camera side, rather than at the end of the extension cable.
- 3 Indicators that your cable run may be too long:
 - Video is permanently black & white (even during day time).
 - Video is distorted.

9. TROUBLESHOOTING

Problem	Solution
No Picture / Signal	<ul style="list-style-type: none"> • Ensure your TV is on the correct input channel. Common terms of an input channel: INPUT, AV CHANNEL, LINE1, LINE2, AUX. • If your camera is connected to a VCR / DVR, ensure it is properly connected to your TV / Monitor. • Ensure connections are properly connected. • Ensure the camera power supply is plugged in.
Picture is too bright	<ul style="list-style-type: none"> • Ensure your camera isn't pointed directly at a source of light (e.g. sun or spot light). • Move your camera to a different location.
Picture is too dark	<ul style="list-style-type: none"> • Check the brightness and contrast settings of the device your camera connects to (TV / Monitor / DVR).
Picture is rotated sideways or upside down	<ul style="list-style-type: none"> • Rotate the camera module to ensure that the sensor is directly below the camera lens (at the 6 o'clock position).

Problem	Solution
Picture is not clear	<ul style="list-style-type: none"> • Check the camera lens for dust, dirt, and spiderwebs. Clean the lens with a soft, clean cloth. • Make sure that the cable run is within the limitations specified in the section 'Cable Extension Options'.
Night vision is not working	<ul style="list-style-type: none"> • The night vision activates when light levels drop. The area may have too much light.
White Light LEDs do not turn on	<ul style="list-style-type: none"> • Motion detection range is limited to 9 ft. (3m). It is recommended to install the camera at a height of about 7 ft. (2.2m) to ensure that people and objects will be detected.
White Light LEDs turn on too frequently	<ul style="list-style-type: none"> • Move the camera to a different location where normal nighttime traffic will not trigger the motion detection. • Changes in lighting conditions may trigger the motion sensor. Adjust the camera angle down to reduce exposure to light, or move the camera to a different location.
Bright spot in video when viewing camera at night	<ul style="list-style-type: none"> • Night vision reflects when pointing a camera to a window. Move the camera to a different location.
BNC connection does not connect to my TV	<ul style="list-style-type: none"> • Use a BNC to RCA adapter at the end of the extension cable.



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