

# DIGITAL WIRELESS CAMERA

INSTRUCTION MANUAL



**MODEL: CA670**

## Features

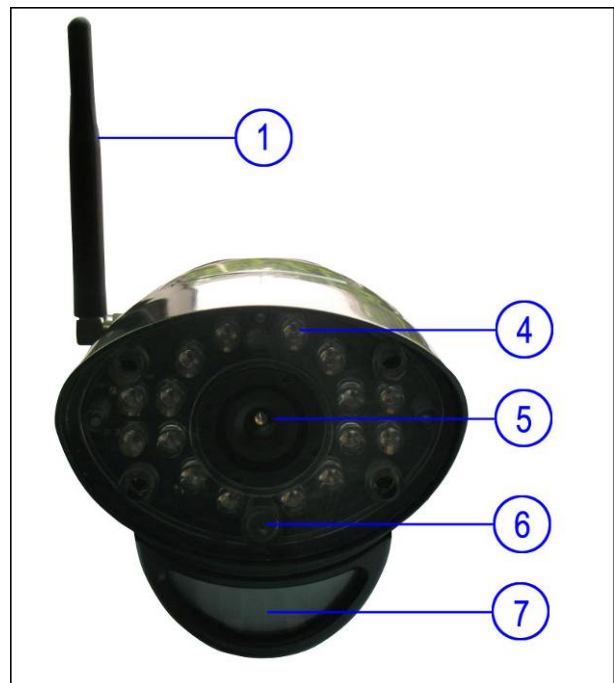
- Digital wireless technology provides excellent image quality and clarity
- Interference free, secure and private signal
- Up to 300ft wireless transmission range <sup>①</sup>
- VGA resolution camera
- Night vision allows for low light viewing up to 40 feet / 12 meters
- Built-in microphone
- Weatherproof for outdoor use
- PIR Sensor for motion detection

<sup>①</sup> IR illumination range of 40ft./12m under ideal conditions. Objects at or beyond this range may be partially or completely obscured, depending on the camera application.

## Overviews

### Front & Side Controls

- 1. Camera Antenna** – Sends & receives signals to or from the receiver.
- 2. AC Adaptor Jack** – Plug the AC adaptor to the jack for camera's power supply.
- 3. Wall Mounting Bracket** – Use the bracket to mount the camera on a wall or other flat surfaces.
- 4. IR LEDs** – Infrared LEDs provide viewing in no/low light conditions
- 5. Lens** – Catches the video in front of the lens and transmits video from camera to receiver.



**6. Microphone** – Receives sounds from the area near the camera, and transmits sound from the camera to the receiver.

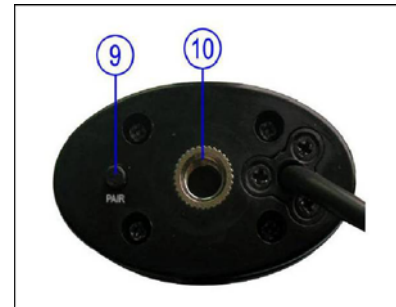
**7. PIR Sensor** – Detects motion in front of the lens and emits detection signal to transmitter.

**8. Speaker** – Produces the sound transmitted from the receiver.

## Back Controls

**9. Pair Button** – The pair button is located on the back of the camera, it is used to pair the camera with receiver.

**10. Bracket Jack** – Screw the wall mounting bracket to the jack, and fix the bracket on a wall or other flat surfaces.



## Camera Installation

Before you install the camera, carefully plan where and how it will be positioned, and where you will route the cable that connects the camera to the power adaptor.

Before starting permanent installation, verify its performance by observing the image on the receiver when camera is positioned in the same location/position where it will be permanently installed and the receiver is placed in the location where it will be used most of the time.

## Installation Warnings

Aim the camera(s) to best optimize the viewing area: Select a location for the camera that provides a clear view of the area you want to receive, which is free from dust, and is not in line-of-sight to a strong light source or direct sunlight.

Avoid installing the cameras where there are thick walls, or obstructions between the cameras and the receiver.

## Night Vision

This camera has built-in IR LEDs, which provides the camera with the ability to view images in no/low light conditions. Night vision will be automatically switched on in low illumination condition.

## Installing the Camera

1. Carefully unpack the camera.

NOTE: If you are installing cameras that did not come with the system, please see the pairing camera section of this manual for installation details.

2. Mount the camera to the wall.

Mark the position of the screw holes on the wall, drill holes and insert the supplied 3 plastic anchors, then firmly fix the camera bracket to the plastic anchors with supplied screws.

3. Adjust the viewing angle of the camera

You can adjust the viewing angle to monitor desired area by rotating the camera bracket.

4. Connect camera power

After the camera is installed, plug the AC adaptor power output cable into the 9V POWER jack of the camera, and plug the power plug into a wall outlet or surge protector.

**NOTE:** You can install additional cameras (maximum of 4 cameras). When adding cameras that were

not included in the original box, you will need to pair the cameras with the receiver. Refer to the camera pairing section of this manual.

Camera installation is now completed.

## Camera Pairing

The system comes with camera(s) that have already been paired. These cameras will communicate with the receiver once powered on.

The pairing function assigns each camera to a different channel on the wireless receiver (up to 4 cameras), and is necessary for configuring additional cameras.

NOTE: It is highly recommended to pair the cameras to the receiver before permanently mounting the cameras.

1. Power on the receiver by connecting it to power outlet with supplied 5V power adaptor.
2. Power on the camera by connecting it to power outlet with supplied 9V power adaptor.

3. Press the **Menu** button on the receiver or remote controller. Navigate to the **Pairing** menu option by pressing the **▼▲◀▶** buttons on the remote controller or operating the joystick on the receiver. Press the **Enter** button to enter the pairing operation.



4. Select a channel by pressing the UP and DOWN **▼▲** buttons on the remote controller or pushing upwards/downwards the joystick on the receiver. Press the **Enter** button to confirm the selection.



5. A message will be displayed on the receiver screen. The receiver will count down from 30~0 – you must press the **Pair** button on the camera during this time to successfully pair the camera.



If the button on the camera is not pressed, the receiver will return to the view screen, and no pairing will take place.

6. Press the **Pair** button on the back of the camera.

Once the camera has been paired, it will be immediately viewable on the receiver monitor.



## Troubleshooting

If you have problems with the system, there is often a quick and simple solution. Please try the following:

<b>Problem</b>	<b>Solution</b>
No picture from a camera	<ol style="list-style-type: none"><li>1. Check all connections to the camera. Make sure the adaptor is plugged in.</li><li>2. Make sure that the receiver is ON.</li><li>3. Make sure that the camera is in range of the receiver.</li></ol>
The picture is dropping	<ol style="list-style-type: none"><li>1. Move the camera closer to the receiver.</li><li>2. Try repositioning the camera, receiver or both to improve the reception.</li></ol>
Audio problems	<ol style="list-style-type: none"><li>1. Increase the volume when there is no sound.</li><li>2. Make sure that there is sound within range of the camera microphone.</li><li>3. If the unit emits a loud screeching noise (audio feedback), move the camera or receiver farther apart.</li></ol>
The picture is or has become choppy	<p>The picture may become choppy when experiencing a lower frame rate (i.e. 10 frames per second vs. a higher 20 frames per second).</p> <p>Try moving the camera closer to the receiver. Remove obstructions between the receiver and camera.</p>
The Picture appears to be grainy when using AV out function to view on a large screen TV/Monitor	<p>The purpose of the AV output is for convenience only. When using with large screen TV/Monitor, the picture might be grainy as the camera limits video resolution to VGA (640x480 pixels). This is not a product defect.</p> <ol style="list-style-type: none"><li>1. For best performance use with TV/Monitor PIP (Picture in Picture) function. Check your TV/Monitor product manual to see if this feature is available on your TV/Monitor.</li><li>2. View video on a smaller screen TV/Monitor.</li></ol>
Recording Problems	<ol style="list-style-type: none"><li>1. Make sure the SD card is inserted to SD card slot correctly.</li><li>2. Check the SD card is not full of memory.</li><li>3. Make sure the size of SD card is compatible with the system. The system can support up to 16GB SD card.</li></ol>

## Appendix #1 – System General Specifications

Operating Frequency Range	2.400GHz~2.483GHz
TX Power	14dBm
RX Sensitivity	-81dBm
Type of Spread Spectrum Used	FHSS
Type of Modulation Used	GFSK
Data Rate	2Mbps
Communication Range	100m Line of Sight

## Appendix #2 - Camera Specifications

Camera(s)	
Image Sensor Type	1/4" Color CMOS Image Sensor
Effective Pixel	H: 640, V: X: 480,
Image Resolution	H: 640, V: 480 @ 9fps. H:320, V: 240 @25fps
Lens	4.5mm F 2.0
AGC	Auto
AES Speed	1/60~1/15,000 Sec
White Balance	Auto
Power Requirement	9V DC +/-10%.
Power Consumption	Max 350mA with IR LED, Max 145mA without IR LED.
Operating Temp Range	-10~50 degree C
Operating Humidity Range	Within 85%RH
Dimension	115mm x 72mm x 70mm
Environment Rating	IP54
Regulation Compliance	FCC/IC
RoHS Compliance	Yes
Camera Housing Material	ABS Plastic

FCC NOTE:

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.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

The antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operated in conjunction with any other antenna or transmitter

IC NOTE:

This device complies with Industry Canada licence-exempt RSS standard(s): Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device."

This Class [B] digital apparatus complies with Canadian ICES-003.