

English

# User's Manual

2.4GHz Wireless Color Camera Kit

Weather-proof & Night Vision

Model: 206AC



Please read this manual carefully and thoroughly before any attempt to install and operate this product and retain it for your future reference.

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### **EU Environmental Protection**

Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice.



# INTRODUCTION

Thank you for purchasing this wireless camera kit. This product works at ISM-2.4GHz frequency band, which could be legally used worldwide without permission. We feel confident that you will be pleased with the quality and features of this product.

The camera features one CMOS image sensor and a transmitting module to capture the image and transmit them wirelessly. It is made of alloyed shell and special weather-proof enclosure that protect it against powder and water sprays. It passed the IP 54 testing.

## Notice

**Notice:** This product may cause interferences with other wireless equipment that operates at 2.4GHz ISM band. Please turn off one of the equipments to eliminate the interference.

**Product Assurance:** This camera will emit electromagnetic wave, just like other wireless products, however, its transmitting power is less than other wireless products such as mobile phones. The 2.4GHz wireless camera meets wireless frequency security standards and recommended indexes while working. These standards and indexes are certificated by academic organization and represent the cogitative research of the scientific workers who continuously explore and annotate the involved fields. So we believe that our products are safe for customers.

## Approval Information

All our products meet the requirements of approval FCC or CE, and are granted the FCC or CE certification. They are authorized to bear FCC or CE mark.

## **FCC**

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 or 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 the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the 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. Changes and modification not expressly approved by the manufacturer or registrant of this equipment can void your authority to operate this equipment under Federal Communications Commissions rules.

## **CE**

This product complies with standards including **Low Voltage Device Directive 73/23/EEC**; **EMC Directive 89/336/EEC** and **R&TTE Directive 1999/5/EC**. It passed the subject tests by the authority concerned and is authorized to bear **CE** mark.

## **Restrictions**

1. DO NOT use this product to violate one's privacy. Monitoring one's activities without consent is illegal and this product is not designed and manufactured for such purpose;
2. DO NOT put this product near any medical equipment. Radio waves might potentially cause breakdown of electrical medical equipment. So this product should be placed at least 1 feet away from any heart pacemaker. Radio waves might potentially influence heart pacemaker and lead to respiratory disturbance;
3. DO NOT use this product for any illegal activities. We shall not be responsible for any consequences of illegal acts committed by the user.

## **Maintenance**

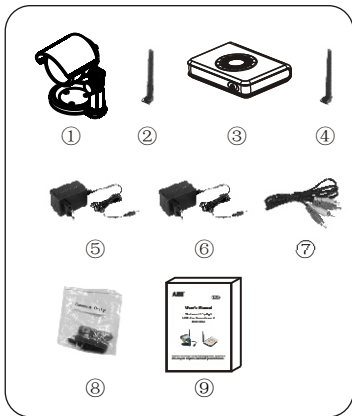
1. Ensure the sufficient ventilation space is available;
2. Do not shake or strike the product;
3. Keep it dry and dustless and avoid exposing it to direct sunlight;
4. Do not place product near any magnetic objects;
5. Avoid putting the product in places where the constantly changed temperature or humidity occurs;
6. Keep product away from heat sources such as electric heater;
7. Do not use the camera near aggressive chemicals;
8. Do not use the camera in the places which are enclosed by metal. The surrounding metal like lifter, cabin, may shield the electromagnetic wave, and result in failure of signal reception;
9. Please obey the local government's environment protection policy;
10. Please turn off the power when left unused;
11. Do not disassemble or repair the camera; doing so might cause damages to the product.

# PRODUCT

## Package Contents

This package comes with the following items. Please check whether they are all included in the packaging box, if one or some is missing, contact the retailer for replacement.

- ① 2.4GHz Wireless Camera X1
- ② Antenna for Camera X1
- ③ 2.4GHz Wireless Receiver X1
- ④ Antenna for Receiver X1
- ⑤ Adapter for Camera X1
- ⑥ Adapter for Receiver X1
- ⑦ AV Cable X1
- ⑧ Mounting Hardware X1
- ⑨ User's Manual X1

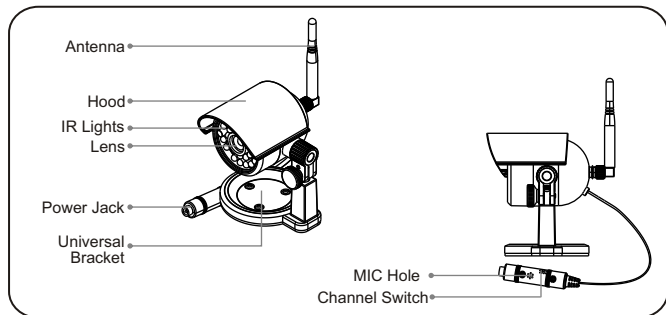


**Note:**

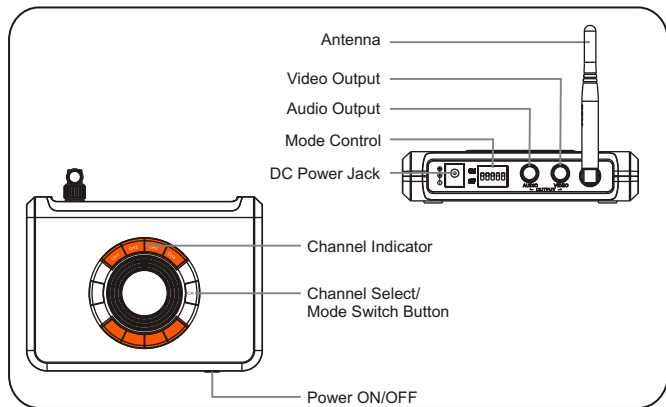
*The pictures may vary from the actual objects.*

# Feature Locations

## 1. CAMERA



## 2. RECEIVER



## Adapter

This product always conforms to the authenticated AC adapter. The adapter should be marked one of the following:



### UL Mark

American power  
supply authentication



### SAA Mark

Australia power  
supply authentication



### CE Mark

European Union power  
supply authentication



### PSE Mark

Japan power  
supply authentication



### GS Mark

German power  
supply authentication



### BS Mark

British power  
supply authentication

### Note:

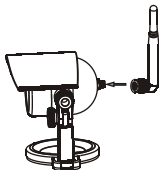
*When using the power adapter, make sure the rating voltage on it is compatible with that of the device to avoid potential damages resulting from incorrect usage of power supply.*



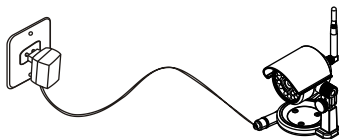
# INSTALLATION & USAGE

## Installation

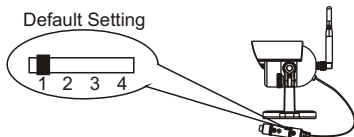
1. Connect the antenna to the camera and locate the camera to suitable position.



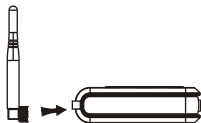
2. Connect the adapter (DC 12V 500mA) to the camera.



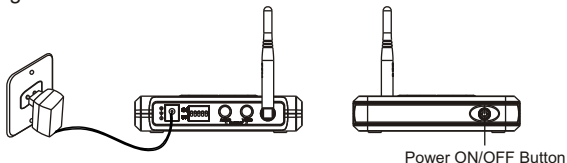
3. Set the camera to the desired channel.



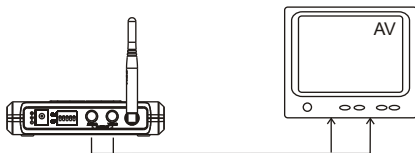
4. Connect the antenna to the receiver.



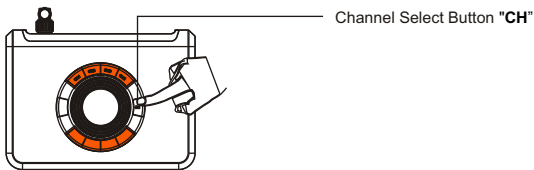
5. Connect the power jack of adapter (DC 7.5V 300mA) to receiver. Press the **Power ON/OFF** "⏻" button and the channel indicator lights up green.



6. Connect the receiver to a monitor/TV with AV cable (yellow for video and red for audio). Turn on the monitor/TV and select AV mode.



7. Press the Channel Select Button "**CH**" on the receiver until the channel indicator matches to the channel on the corresponding camera, and the monitor/TV will display pictures.



8. Adjust the brightness, contrast and color of the monitor/TV for the perfect effect.

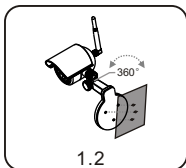
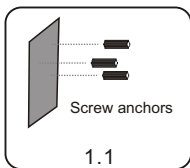


## Fix the Camera

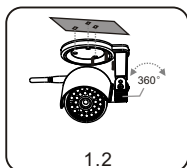
### 1. Locate the camera

The camera can be located on the desk, floor, wall or ceiling. If you want to fix the camera on the wall or ceiling please follow the steps below.

- 1.1 Drill holes on the mounting surface according to holes in the universal bracket; Insert screw anchors into the holes;
- 1.2 Align holes in bracket, holes in the mounting surface, drive screws through the bracket into the anchors. Adjust the angle of the camera for surveillance.



On the Wall



On the Ceiling

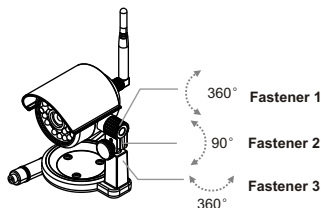
**Note:**

*When locating the camera on the wall or ceiling you are recommended to adjust the angle according to the above pictures.*

## 2. Adjust the angle

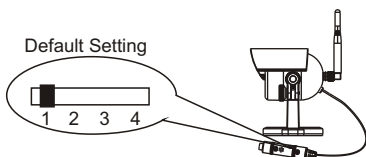
- 2.1 Revolve **Fastener 1** and adjust the camera to an appropriate angle;
- 2.2 Revolve **Fastener 2** and adjust the camera to an appropriate angle;
- 2.3 Revolve **Fastener 3** and adjust the camera to an appropriate angle.

**Tip:** *Fastener 1 and Fastener 3 can be revolved universally.*



## Camera Channel Setup

This camera has 4 selectable channels. You could adjust the channel switch of the camera to set the channel for multi-camera working or avoiding the interference. Please tune the channel switch on the power switch to the desired channel as the following diagram.



### Channel Frequency

CH1=2,414MHz;  
CH2=2,432MHz;  
CH3=2,450MHz;  
CH4=2,468MHz

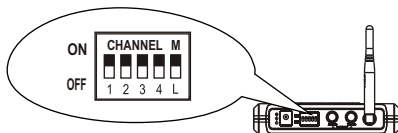
## Night Vision

The built-in Infra-red lights in camera provide night vision for 24hours surveillance. The Infra-red lights will be automatically activated at night or in dark places. The picture will turn to Black & White (monochrome) in Night Vision status.



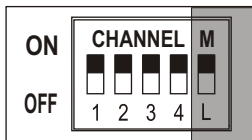
## Receiver Mode Setup

The receiver can support up to 4 cameras working at the same time. You are allowed to set the **Mode Control** as described below. The **Mode Control** has the precedence over other buttons.



### Default Setting

## Channel Set



- 1 – ON: CH1 Enable (Default)  
OFF: CH1 Disable
- 2 – ON: CH2 Enable (Default)  
OFF: CH2 Disable
- 3 – ON: CH3 Enable (Default)  
OFF: CH3 Disable
- 4 – ON: CH4 Enable (Default)  
OFF: CH4 Disable

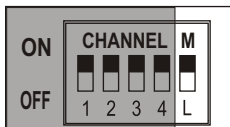
You can confirm which channel is set to receive signal from corresponding camera. With this function, set the unused channels to **OFF**, so that

they will be skipped during the **Manual** mode or **Channel Scan** mode.

**Note:**

*If all channels are on **OFF** position the default setting is **CH1**.*

## Channel-scan Set



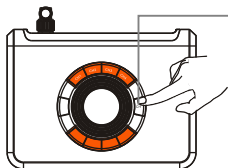
**M:** Manual Mode (Default)

**L:** Channel-scan Mode

1. **Manual mode:** Slide **Mode Control** switch to **M** to enter **Manual** mode. In this mode, the receiver channel won't change until you press the **Channel Select Button "CH"** ;

**Tip:**

*You could also activate channel-scan function by pressing and holding the **Channel Select Button "CH"** more than 5s at **Manual** mode and deactivate it by pressing the button again.*



Channel Select Button "CH"

Press and hold more than 5s to activate;  
Press again to deactivate.

2. **Channel Scan** mode: Slide **Mode Control** switch to **L** enter channel scan mode. In this mode, all the available channels will display one by one looping in turn per 5s. So you can watch the situations from 4 different cameras via one receiver. Slide the **Mode Control** switch to **M** to exit.

**Notes:**

- Press the **Channel Select Button "CH"** at the channel scan mode, the current channel will be switched to the next one immediately (less than 5s).

# SPECIFICATIONS











Items		Value
Transmission Frequency		ISM 2,400MHz~ 2,483MHz
Antenna Type		Omni
Transmission Distance		100m (Without Block)
Operating Temperature		-10°C~+50°C /+14°F~+122°F
Storage Temperature		-20°C~+60°C /-4°F~+140°F
Storage Humidity		≤85% RH
Camera	Imaging Sensor	CMOS
	CMOS Total Pixels	628*582 (PAL)/ 510*492 (NTSC)
	S/N Ratio	40dB (AGC OFF)
	Horizontal Resolution	380 TV Lines
	Minimum Illumination	5 Lux/F1.2 & 0 Lux (IR ON)
	Night Vision Range	15m
	Transmission Power	10mW (CE)/2mW (FCC)
	Power Supply	DC 12V 500mA
	Consumption Current	300 mA (IR ON)/ 90mA(IR OFF)
	Weather-proof Level	IP54 (Main Body)
	Dimensions (W*D*H)	Ø53mm*80mm (Main Body)
	Weight	Approx.249g (Main Body)
Receiver	Receiving Sensitivity	≤-85dBm
	Power Supply	DC 7.5V 300mA
	Consumption Current	240mA (Max.)
	Video Output Level	1.0 ± 0.2V <sub>p-p</sub> @75Ω
	Audio Output Level	1.2 ± 0.4V <sub>p-p</sub> @10kΩ
	Dimensions (W*D*H)	115mm*85mm*24mm (Main Body)
	Weight	Approx.138g (Main Body)

\* Actual transmission may vary according to the weather, location, interference and building construction.

\* Specifications are subject to minor change without prior notice.

# TROUBLESHOOTING

When you experience the operation problems, please check and try the following yourself before claiming that it is the defective product or consulting the experienced technician.

Abnormal Phenomena		Possible Reasons/Solutions
 No image	 No sound	Check whether the camera/receiver is connected to power supply and powered on.
 Snowflakes on image	 Noisy	1. Check if the channel of receiver is the same as that of camera; 2. Check the distance & blocks.
 Ghost image	 Normal sound	1. Interfered with other devices; 2. Check the distance & blocks.
 No color	 Normal sound	Mismatching the TV system of PAL or NTSC.
 Normal image	 Noisy	Interfered with other devices nearby; Remove or turn off such devices.