

1.4). To install the sunshield, please follow the instruction shown below:

• Fixing Bolt for Sunshield

You can release (turn screw counter-clockwise) the bolt in order to slide the sunshield forward or backward and secure (turn screw clockwise) the bolt to fix the sunshield in position.

2). Install Receiver

2.1).Screw the wireless antenna to the back of the receiver, paste 3M magic(female or male) at the receiver bottom, connect the RJ-12 end of the receiver cable to the DVR, place the receiver in a place that will have clear reception to your camera, and paste 3M magic (male or female) at this position, with the receiver bottom's magic stick together.

2.2). Check the signal strength of the receiver's signal indicator, adjust the receiver antennas angle to improve signal strength.

- Signal Indicator: The signal indicator shows the strength of the signal being received from the camera. The number of bars in the signal indicator shows the strength of the signal. One or no bars indicates the signal is poor. Four bars indicate a very strong signal.
- Status Indicator: The status indicator message "No Signal" appears when the receiver is trying to locate a camera.

• If the signal is low (e.g. 1 or 2 bars) adjust the antennas or reposition the camera or receiver to improve signal strength.

Signal Indicator

Status Indicator

Installation Note:

- Avoid installing in a location which requires the wireless signal to pass through cement, concrete, and metal structures. This will reduce the range of transmission.
- It is not recommended to install more than 4 digital wireless security cameras in the same environment to maintain optimal video frame rate performance.
- When installing multiple digital wireless security cameras in the same environment maintain as much space as possible between the receivers to optimize camera performance.
- The signal range varies depending on the type of building materials and/or objects the wireless signal must pass through.
- Drywall, glass, and windows generally do not degrade wireless signal strength.
- Brick, concrete floors, and walls degrade signal strength.
- Trees that are in the line of sight of the wireless camera and receiver may impact signal strength.
- The signal range also depends on whether there are competing signals using the same frequency as the camera.
- Signal strength decreases as it passes through different types of material. Try to position your wireless camera and receiver in a location where the signal does not degrade too much signal strength (as shown in the table below).

Material	Signal Reduction (%)
Plaster & Wood & Moist materials	10 - 30%
Brick & Concrete floors & Walls	30 - 50%
Concrete Cinder Blocks	50 - 70%
Metal & Metal Cladding	70 - 90%
Drywall & Glass & Windows generally	≥ 90%

6. Pairing System

1). Make sure that the camera and receiver are both powered up.

2). On the receiver, press and hold the "pair" button for 5 seconds to activate pairing function.

3). Press the Pair button on the back of the camera. You must press the Pair button on the camera within 30 seconds of pressing the Pair button on the Wireless Receiver. If pairing is successful, live video from the camera will immediately appear on the monitor.

Pairing Note:

- The on-screen display informs you that you have 30 seconds to press the pair button on the camera.
- The camera and receiver have already been pre-paired at the factory, which means that they are exclusively communicating with each other. If for some reason the pairing is lost, follow these steps to pair up the camera and receiver.
- Press "Reset" button, restart the receiver.

7. System Specifications

1).Camera Specifications

Model No.	RCWBS30-1-TX
Transmitting Frequency Range	2.400GHz-2.480GHz
TX Power	16dbm
TX Range	154ft (50m) indoor / 328ft (100m) outdoor
Data Rate	160 Kbps
Modulation	GFSK
Spread Spectrum	FHSS
Image Compression	MPEG-4
Image Device	1/4" Color Image Sensor
Picture Elements	NTSC: (640x480)
Resolution	600 TVL
Min Illumination	0 Lux (IR On)
S/N Ratio	More than 48dB
Electronic Shutter	1/60 ~ 1/62,500 Sec.
Gain Control	Auto
White Balance	Auto
Gamma	0.45
Lens Furnished	Board Lens
Sync System	Internal
Video Output	1Vp-p/ 75 Ohms
Power Supply	DC 12V±10%
Power Consumption	250mA max.
IR LED OFF	400mA max.
IR LED ON	400mA max.
Infrared Luminary	30IR LED
Wavelength	850nm
Illuminant Distance	20m
IR filter	Automatic IR Cut Filter Removal
Operating Temp.	-10°C to 50°C (14°F to 122°F)
Construction	Aluminum case / Plastic sunshield
Waterproofing Criterion	IP 66
Dimensions	φ58.5x112 (L) mm (Body only)

(Note: Design and specifications are subject to change without prior notice.)

2).Receiver Specifications

Model No.	RCWBS30-1-RX
Receiving Frequency Range	2.400GHz-2.480GHz
RX Sensitivity	-81dBm (At Input for BER ≤ 10-3 at 2048 Kbps)
RX Range	154ft (50m) indoor / 328ft (100m) outdoor
Data Rate	160 Kbps
Transmission mode	GFSK
Spread Spectrum	FHSS
Resolution Supported:	640 x 480 @ 25fps
Video Output	1Vp-p/ 75 Ohms
Power Supply	DC 12V±10%
Power Consumption	180mA max.
Operating Temp.	-10°C to 50°C (14°F to 122°F)
Construction	Plastic case
Dimensions	64x26x51 (LxVxH)

(Note: Design and specifications are subject to change without prior notice.)

REVO™ OUT OF SIGHT
PEACE OF MIND

Wireless Digital Security
Camera System

Instruction Manual

VER:1.0

Thank you for purchasing our product. Before installing this product, please read this instruction manual carefully to ensure proper use.

1. Safety Precautions

CAUTION

RISK OF ELECTRIC SHOCK. DO NOT OPEN!

CAUTION : TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT OPEN COVERS. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems).

- ◆ Although the camera is provided with tempered glass, please avoid all direct contact to eliminate contamination, and use cotton balls dipped in cleaning alcohol to clean the window.
- ◆ Do not use receivers in humid or wet places.
- ◆ The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products that produce heat.
- ◆ Keep enough space around the product for ventilation; Slots and openings in the storage cabinet should not be blocked.
- ◆ Do not use attachments unless recommended by the product manufacturer as they may cause a hazard.

FCC NOTE:

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 OR CHANGE TO THIS EQUIPMENT. SUCH MODIFICATIONS OR CHANGE COULD VOID AND CHANGE ANNTENA WHICH THE MANUFACTURER PROVIDES. IT IS THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

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 on and off), 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 or television technician for assistance.

◆ To ensure compliance with the FCC's RF exposure guidelines, this equipment should be installed and operated with minimum distance 20cm (7.87inch) between the radiator and nearby persons.

2. Description

- ◆ The Digital Wireless signal transmission type used by REVO digital wireless cameras is also known as FHSS—Frequency Hopping Spread Spectrum; strong anti-interference ability, provide high quality audio and video transmission.
- ◆ This Infrared Illuminator camera uses a highly sensitive 1/4" interline transfer color image sensor, which provides extremely long life and high reliability. This camera offers excellent image quality and functions with low lag and high burn resistance, and is not subject to distortions from magnetic fields. Highly resistant to shock and vibration and easy to install, this camera is an excellent choice for your CCTV system.
- ◆ The camera and receiver signal is highly resistant to eavesdropping as it generates a channel hopping sequence using an algorithm generated by the receiver, which only the camera can follow through the "pairing" function. FHSS makes digital wireless signals secure, private, and interference free.

3. Feature

◆ General

- Real time (25 frames per second) wireless video.
- Adaptive FHSS digital wireless technology minimizes conflicts with competing wireless signals.
- Simple installation, No video cable required.
- Connect multiple receivers to your surveillance recorder (DVR) to create a wireless surveillance solution.
- Up to 165ft (50m) indoor / 500ft (152m) outdoor wireless range.
- SMA connectors for range extension accessories.

◆ Camera

- Super high resolution indoor/outdoor camera with a built-in high performance illuminator module.
- Total pixels of sensor: NTSC=300Kpixels.
- High sensitivity,low smear,excellent anti-blooming, and high S/N ratio. Supports functions: Auto Electronic Shutter (AES), Auto Gain Control (AGC), Auto White Balance (AWB), Back Light Compensation (BLC), and Flickerless mode (FL).
- Built-in board Lens and furnished with mounting bracket.
- Built-in microphone for listen-in audio.
- Automatic IR Cut Filter Removal.
- Low DC power consumption.
- Dual Window Structure.
- 3-Axis Concealed Cable Bracket.
- Waterproofing criterion: IP66.

◆ Receiver

- High gain antenna ensures improved long distance operation.
- Safety warning feature notifies you when the camera is out of range.
- Convenient signal strength indicator.
- The receiver itself with a signal indicator, used to indicate the signal strength from camera

4. Content

1. Sunshield

2. Wireless Antenna (SMA)

3. Bracket Lock Knob

4. Pair (Blue Led)

5. Reset (Red Led)

6. 3-Axis Bracket

7. REVO Wireless Digital Security Camera System Instruction Manual

Item	Name of Part	Quantity
1	Wireless Camera	1
2	Wireless Receiver	1
3	Bag	1
4	A Fix Retaining Screw for Bracket	3
5	B Anchor	3
6	Wireless Antenna	2
7	AC/DC Adaptor	1
8	Magic(Female+Male)	1
9	Instruction Manual	1

5. Installation & Operation

1).Install Camera

1.1). Drill a hole in the wall if wire needs to go through the wall.

Or cable can go through the camera base slots, If the cable does not need to go through walls.

Installation Note:

- Before you install a 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. 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 monitor, that is free from dust, and that is not in line-of-sight to a strong light source or direct sunlight.
- Avoid installing the camera where there are thick walls or obstructions between the camera and the receiver.
- Avoid installing in a location which requires the wireless signal to pass through cement, concrete, and metal structures. This will reduce the range of transmission.
- Wireless camera requires a power source to operate.

1.2). Screw the antenna to the back of the camera. Use the 3 screws provided to attach the camera and bracket to the ceiling,surface or wall.

*Ceiling Installation

*Wall Installation

1.3). Connect the power cable from the camera to the power adaptor. Plug the power adaptor into a power outlet or surge protector. Adjust the bracket while checking the view angle from the monitor. Loosen the bracket lock knob by turning counterclockwise, after adjusting the 3-Axis bracket (X-Y-Z Axis) to get the desired viewing angle, tighten the lock knob by turning it clockwise.