Congratulations on your purchase of the 2.4GHz **Wireless MicroCam System**(WMS). The WMS consists of a wireless receiver and a wireless MicroCam, an ideal product for application of covert monitoring, such as the porch, watching the yard, pool, pets or the baby. It is also suited to many small business.

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FEATURES

- Miniature color camera in bullet type
- Both audio and video output
- Video motion detection(VMD)
- Adjustable beep volume when motion is detected by VMD sensor
- Supports up to 3 cameras
- Manual or auto switching between cameras
- Adjustable cycle time between different channels
- AC power adaptor or battery operation
- Camera can meet IP54 standard for outdoor use.

SYSTEM CONTENTS

- RO160B wireless receiver   x1
- CA100 wireless MicroCam   x1
- Power adaptor   x2
- Adaptor cable   x1
- Hardware kit   x1
- Manual   x1

THINGS TO CONSIDER BEFORE INSTALLATION

For best performance, follow these simple guidelines:

- Camera(s) should be installed between 8 and 13 feet above the area to be monitored
- The Camera should be aimed accordingly to optimize viewing area
- For best transmission, avoid installations where there are thick walls or major obstructions between the Camera and Receiver

INSTALLING THE CAMERA (TRANSMITTER)

1. Unpack the Camera.

2. Decide whether the Camera will be wall-mounted or sit on a desk/table top. If wall mounting, use the hardware kit in the package. The Camera can be adjusted for either mounting scenario by rotating the Camera to the required position.

3. If using the 9V camera power adapter, just connect power jack. Make sure the Camera is positioned no more than 5 1/2 feet from an AC power outlet.

4. Each camera`s channel number is preset by factory, it can be found on the metal case of the camera. The channel number is not changeable by user.

The Camera (Transmitter) installation is now complete.

SETTING UP THE RECEIVER

1. Connect one end of the cable (Min Din<male>) to the back of the receiver, the anther end (RCA cord) to your television's A/V inputs, the yellow plug to the VIDEO IN jack and the white plug to the AUDIO IN jack.
2. Plug the receiver power adapter into the 9V DC power jack on the back of the receiver and plug the power adapter into any **120 V/240** V power outlet.
3. Place the receiver either on top or near to your TV. Rotate the antenna to a vertical position.

OPTIMIZING THE WIRELESS CAMERA SYSTEM

The 2.4GHz video signals pass easily through your homeís interior walls, but the signal may be reflected by power wires or plumbing inside the wall. Usually a slight adjustment of the Receiver and/or Camera antenna will improve reception. Take care not to force the antennas past their lock positions.
The most common source of interference are microwave ovens. Try to avoid mounting the Receiver near a microwave oven or other source of RF interference such as cordless phones.

MULTI-CAMERA OPERATION

Our wireless 2.4GHz MicroCam system is designed to work with up to 3 Cameras. Additional Cameras (With different shapes for your option) are sold separately.
IMPORTANT: When using more than one Camera, please check channel number on package or the metal case of camera, make sure it is exclusive to each camera. Accordingly the dip switch located on the back of the Receiver should be adjusted to reflect the channels in use.

OPERATING THE SYSTEM

Set your TV to monitor the VIDEO INPUT designated for the Receiver.
The receiver can support up to three different camera/transmitter signals. You can switch from one camera to the next either manually or automatically via button on the top panel of the receiver.

MANUAL MODE

To select one of the three channels manually, press the MANUAL button on the panel of the receiver.
The red LED will light and the receiver will switch to a different channel (CAM1, CAM2, CAM3) each time when the MANUAL button is pressed. To avoid searching channels that do not have cameras/transmitters assigned to them, set the DIP switches (located on the rear panel of the receiver) for those corresponding channels to the OFF position (up). When you have selected a channel with an active camera, that video will appear on your TV screen
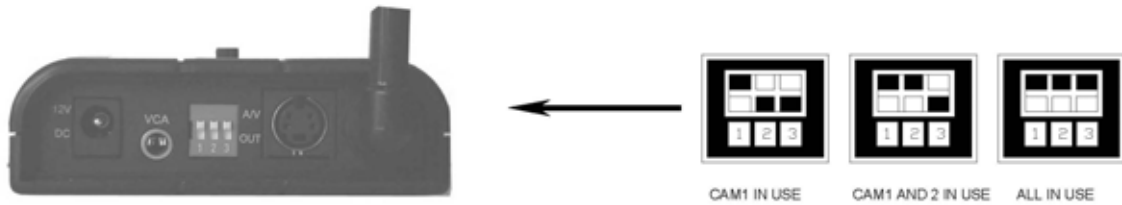
AUTO MODE

To have the receiver automatically rotate through the channels, press the AUTO button on the top panel of the receiver. The green LED will light and the receiver will continuously scan through all channels which are ON. To avoid searching channels that do not have cameras/transmitters assigned to them, set the DIP switches for those corresponding channels to the OFF position. The monitor will display the picture from one camera to the next, while the beeper will sound. The dwell time (time taken to switch between cameras) is preset to 4 seconds and can be adjusted between 2-30 seconds. To adjust the dwell time, press both the AUTO and MANUAL button simultaneously. Each flash of the LED increases the dwell time by one second.

VCA PORT:

If operated with wireless camera with motion detector built in, the receiver can output PIR (passive infra-red) signal through VCA port for additional use. For example, If combine with our VCA60 or VC050 VCR controller box, the enhanced system can start/stop recording automatically in case motion is detected or gone.

MOTION DETECTION:

The camera has video motion detection (VMD) sensor built in, when any motion detected by the sensor, the beeper built in receiver will sound to alert user. The beep sound can be adjustable from null to maximum with the tuning on the top surface of the receiver.

TROUBLE SHOOTING

If you are having trouble operating this product, please consult the guide below:

SYMPTOM	REMEDIES
No camera picture	1. Check all connectors. Make sure camera(s) and receiver are switched ON. 2. Ensure camera(s) and receiver are set to correct channel(s). 3. Make sure camera is within range of receiver.
Blank monitor	1. Make sure receiver is switched ON. 2. If using AC adapter, make sure it is plugged in.
Interference on camera picture	1. Make sure each camera (transmitter) is within range, and that no large obstructions are blocking the signal. 2. Try repositioning the camera, receiver or both to improve the reception quality. 3. If a camera is positioned close to the receiver, point antenna away from the receiver. 4. Reposition other nearby equipment transmitting on 2.4 GHz frequency

Audio problems	1. Ensure the volume is turned up sufficiently on the TV.
	2. Make sure the sound is within the microphone range.
	3. If the unit emits a loud wailing sound (feeds back), try moving the camera away from the receiver or angle the receiver differently.

SPECIFICATIONS	
Camera	
TV System	PAL or NTSC
Integrated Lens	4.3mm, F2.0 fixed focus
Resolution	360 horizontal TV Lines
Signal/Noise Ratio	48db
High-Speed Electronic Shutter	1/60 - 1/15,000 sec
Image Sensor	1/4î CMOS
Min. Illumination	0.5 lux
Current Consumption	200mA
Overall Size	3.25îLx1.2îDiameter (antenna not included)
Frequency Range	2.41- 2.47 GHz
Modulation	FM
Video Signal/Noise Ratio	48db
Audio Signal/Noise Ratio	45db
Channel Selection	Electronic tuning with PLL
Case Finish	Metal Aluminum case, suited for indoor or outdoor use
Receiver	
Frequency Range	2.41- 2.47 GHz
Signal/Noise Ratio	40dB
Operating Temperature	-10^{0}C to +40^{0}C
Output	Audio/Video
Humidity	Less than 85%
Current Consumption	Approx. 180 mA
Overall Size	3.25î W x 1.0î H x 5.0î D

FCC NOTE:

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.