# Installing Manual

# Wireless DVR

Wireless Scanner/Lens Control System

Wireless Audio&Video Transmitter System

# Wireless --- Audio/Video/Scanner/Lens/DVR Operation Manual

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# 12 Channels Wireless AV Receiver

Digital Display, receive sensitive, many working channels, convenience, credibility, suit for wireless surveillance projects.

1.Performance Parameter: Voltage: DC 7-12V Output Current: 250mA Video Output: 1Vp-p Audio Output: 1Vp-p

# 2.Frequency:

1.2G Series: 0.910G 0.980G 1.010G 1.040G 1.080G 1.120G 1.160G 1.200G 1.240G 1.280G 1.320G 1.360G 1.5G Series: 1.405G 1.430G 1.455G 1.480G 1.505G 1.530G 1.555G 1.580G 1.605G 1.630G 1.655G 1.680G 2.4G Series: 2.410G 2.430G 2.450G 2.470G 2.490G 2.510G 2.390G 2.370G 2.350G 2.330G 2.310G 2.290G



3.Installing:

A.Use 12V 800mA power;

- B.On the receiver's face, have a digital display, it's show receiver's frequency; on this digital; display, 0,1,2,3 is means 0.9G CH1,CH2,CH3,CH4,and 4,5,6,7 is means 1.2G CH1, CH2, CH3, CH4, and 8,9,H,C is means 1.3G CH1,CH2,CH3,CH4;
- C.Push the CONTROL button, can change the receive frequency and channel:
- D.Make sure the transmitter and receiver are set to the same Channel.

Change Va	Change /		
Survey Audio/Video/Scanner/Lens/DVR Operation Manual	Wireless Audio/Video/Scanner/Lens/DVR Operation lanur,		
<b>Contract</b> <sup>20</sup> than one transmitter is to be installed and used one receiver:	Mini 4 Channels Wireless AV Receiver		
Set transmitter Channel: Set transmitter A to CH1 and set transmitter B to CH2	Digital play mini wireless AV receiver, have low consume of function, cabinet shape, convenience, perfect audio & radio.		
<ul> <li>Set receiver Channel:</li> <li>A: Push the CONTROL button, to Ch1 and MIDDLE lighting, then push the CONTROL button two sec. to AUTO lighting;</li> <li>B: Push the CONTROL button, to Ch2 and MIDDLE lighting, then push the CONTROL button two sec. to</li> </ul>	1.Performance Parameter: Voltage: DC 8V Output Current: 150mA Video Output: 1Vp-p Audio Output: 1Vp-p DIGIT DISPLAY		
AUTO lighting; C:Push the CONTROL button, to AUTO lighting , and now the receiver can auto change the AV signal from transmitter A transmitter B.	2.Frequency: A:1.080G 1.120G 1.160G 1.200G B:1.240G 1.280G 1.320G 1.360G C:1.505G 1.530G 1.555G 1.580G D:2.410G 2.430G 2.450G 2.470G		
	3.Installing: A.Using a point of AV line to insert receiver, Another connect monitor(or TV);		
	B.Insert DV 8V power supply;		
	C.Opening and ending up the antenna of receiver.		
	D.On the receiver's face, have a digital display, it's show receiver's channel when electrify: 1,2,3,4.		
	E: Push the CONTROL button, can change the channel of receiver.		
Wireless Audio/Video/Scanner/Lens/DVR Operation Manual	Wireless Audio/Video/Scanner/Lens/DVR Operation Manual		
4 Channels 100mW Wireless AV Transmitter	8/12 CH 400mW Wireless AV Transmitter		
Cabinet bulk, perfect shape, credibility, use for near distance A/V transmitting.	1. Performance Parameter: Voltage: DC 12V Output Current: 250mA Output Power: 1.2G / 400Mw 2.4G / 700mW Video Output: 1Vp-p(FM)		
Voltage: DC 12V Output Current: 100mA Output Power: 100mW Video Output: 1Vp-p(FM) Audio Output: 1Vp-p(FM)	Audio Output: 1Vp-p(FM) Audio carrier ware: 5.5M 6.0M		
Audio carrier ware: 5.5M 6.0M	1.2G / 8CH		
2. Frequency:	1.080G 1.120G 1.160G 1.200G 1.240G 1.280G 1.320G 1.360G		
1.605G 1.630G 1.655G 1.680G 2.410G 2.430G 2.450G 2.470G 2.490G 2.510G 2.390G 2.370G 2.350G 2.330G 2.310G 2.290G	2.4G/12CH 2.410G 2.430G 2.450G 2.470G 2.490G 2.510G 2.390G 2.370G 2.350G 2.330G 2.310G 2.290G		
3. Installing:	3. Installing:		
A. The line has 5 plugs for connecting transmitter, camera and power supply. One of the line's points connecting transmitter, another have 4 plugs(red,yellow,white,black).Red plug connect DC 12V/1000mA, can also connect battery. White and yellow plug connect camera's audio and video apart. And black plug connect camera's power input jack.	A. The line has 5 plugs for connecting transmitter, camera and power supply. One of the line's points connecting transmitter, another have 4 plugs(red,yellow,white,black).Red plug connect DC 12V/1000mA, can also connect battery. White and yellow plug connect camera's audio and video apart. And black plug connect camera's power input jack.		
B.Push the CONTROL button, can change the channel of receiver.	B.Push the CONTROL button, can change the channel of		
C.Setting the same channel with transmitter and receiver.	Receiver Meanwhile nuch it and last several seconds		
	Receiver. Meanwhile, push it and last several seconds, can close the Digital play and turn into saving time model. Then push it Again, can replay. The function can be able to lock Channel, so as to avoid mistake operation.		
	can close the Digital play and turn into saving time model.		
4	can close the Digital play and turn into saving time model. Then push it Again, can replay. The function can be able to lock Channel, so as to avoid mistake operation.		

Chauge Control of the	Wireless Audio/Video/Scanner/Lens/DVR Operative Manuse
Channels 800mW Wireless AV Transmitter	8/12 Channels 1W / 1.5W Wireless AV Trans.
<text></text>	<ul> <li>1. Performance Parameter: Voltage: DC 12V Output Current: 600mA Output Power: 1500mW Video Output: 1Vp-p(FM) Audio Output: 1Vp-p(FM) Audio carrier ware: 5.5M 6.0M</li> <li>2. Frequency:</li> <li>1.2G / 8CH</li> <li>1.080G 1.120G 1.160G 1.200G</li> <li>1.240G 1.280G 1.320G 1.360G</li> <li>1.5G / 1.2CH</li> <li>1.405G 1.430G 1.455G 1.480G</li> <li>1.605G 1.630G 1.655G 1.680G</li> <li>2.4G / 12CH</li> <li>2.410G 2.430G 2.450G 2.470G</li> <li>2.490G 2.510G 2.390G 2.370G</li> <li>3.50G 2.330G 2.310G 2.290G</li> <li>3. Operation:</li> <li>A. The line has 5 plugs for connecting transmitter, camera and power supply. One of the line' s points connecting transmitter, another have 4 plugs(red,yellow,white,black). Red plug connect DC 12V/1000mA, can also connect battery. White and yellow plug connect camera's quote input jack.</li> <li>B. Push the CONTROL button, can change the channel of receiver. Meanwhile, push it and last several seconds, can close the digital play and turn into saving time model. Then push it again, can replay. The function can be able to lock channel, so as to avoid mistake operation.</li> <li>C.Setting the same channel with transmitter And receiver.</li> </ul>
Wireless Audio/Video/Scanner/Lens/DVR Operation Manual 8 Channels 2.5W Wireless AV Transmitter	Wireless Audio/Video/Scanner/Lens/DVR Operation Manual
Digital play, equipped fan in it, large output power, convenience and flexible, high quality and good price. 1. Performance Parameter: Voltage: DC 12V Output Current: 900mA Output Power: 2500mW Video Output: 1Vp-p(FM) Audio Output: 1Vp-p(FM) Audio carrier ware: 5.5M 6.0M 2. Frequency: 4: 1.080G 5: 1.120G 6: 1.160G 7: 1.200G 8: 1.240G 9: 1.280G H1:1.320G C: 1.360G	Wireless AV Transmitter(2W / 3W / 5W)         Large output frequency, equipped fan in it, credibility, use for long distance wireless transmit projects.         1. Performance Parameter:         Voltage: DC 12V         Output Current: 1.5A         Output power: 2W 3W 5W         Video Output: 1Vp-p(FM)         Audio carrier ware: 5.5M 6.0M         2. Frequency:         1.2G : 1.08G 1.12G 1.16G 1.20G         1.3G : 1.24G 1.28G 1.32G 1.36G         3. Installing:         A.The suit have two wires :one is Audio & Video         Connect wire, connecting receiver to the monitor or TV. Another wire



Audio/Video/Scanner/Lens/DVR Operation Manual

u-track.co ER	Transmission Distance with Oper Space
100mW	100 ~ 300 M
400mW	800 ~ 1500 M
700mW	1000 ~ 2000 M
800mW	1500 ~ 3000 M
1500mW	2 ~ 4 Km
2000mW	3 ~ 10 Km
3000mW	$4 \sim 15 \text{ Km}$
5000mW	$5 \sim 20 \text{ Km}$
$10 \sim 30W$	30 ~ 80 Km

		1.	2G		
СН 0	СН 1	СН 2	CH 3	CH 4	СН 5
0.910 G	0.980 G	1.010 G	1.040 G	1.080 G	1.120 G
CH 6	СН 7	CH 8	СН 9	СН Н	СН С
1.160 G	1.200 G	1.240 G	1.280 G	1.320 G	1.360 G
		1.	5G		
CH 0	CH 1	CH 2	CH 3	CH 4	CH 5
1.405 G	1.430 G	1.455 G	1.480 G	1.505 G	1.530 G
CH 6	CH 7	CH 8	СН 9	СН Н	СНС
1.555 G	1.580 G	1.605 G	1.630 G	1.655 G	1.680 G
		2.	4G		
СН 0	CH 1	СН 2	CH 3	CH 4	CH 5
2.410 G	2.430 G	2.450 G	2.470 G	2.490 G	2.510 G
СН 6	CH 7	CH 8	CH 9	СН Н	СНС
2.390 G	2.370 G	2.350 G	2.330 G	2.310 G	2.290 G

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Definition of HRC-6 connecting terminal

HRC-6 can supply one 9-pin connector (JP1), and its definitions as well as connection method for terminals are shown in Table 1.

Table 1: Definition of connecting pins and connection methodSketch map of connection between HRC-6 and terminal equipment (see below)





## Wireless DVR & Digital Decode Controlle

#### 1. Purpose:

Can wireless transmit Digital Video Record signal to Digital Decode controller, and through Digital Decode controller to control Scanner and Lens, and record.

Features:

- 1. ISM frequency band, requiring no application of frequency point.Carrier frequency of 433MHz, also capable of providing 315/868/915MHz carrier frequency.
- 2. High anti-interference and low BER.
- 3.Long transmission distance
- 4. Transparent transmission

5.Multi-channel

6.Dual serial port, 3 interface modes:

HRC-6 provides 2 serial ports and 3 interfaces, with COM1 as the TTL level UART interface and COM2 as user defined standard RS-232/RS-485 interface (user only needs to plug/pull 1 bit short circuiter and energize it to make the definition).monolithic processor and other UART components for application. The schematic circuit of HRC-6 is shown below:

7.Large buffer zone. Interface baud rate is 1200/2400/9600bps with format of 8N1/8E1 and user self-definition, 8.Application of series HRC-6 ultra low power wireless DVR &Digital Decode Controller. How to use series HRC-6 wireless DVR & Digital Decode Controller Series HRC-6 ultra low power wireless -transfer module provides three interface modes including standard RS-232, RS-485 and UART/TTL levels allowing direct connection with computer, user's RS-485 device, monolithic processor and other UART components for application. The schematic circuit of HRC-6 is shown below:

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## **YAGI Beamed Antenna**

Frequency: 1.2G / 2.4G Length: 400mm Plus: 11db How to use: Direct connect the Beamed Ant to transmitter or receiver

## All Direction Antenna

Frequency: 1.2G Diameter: 400mm Plus: 5.5 db How to use: Direct connect the Beamed Ant to transmitter or receiver

#### All Direction Antenna

Frequency: 1.2G Length: 1200mm Plus: 11db How to use: Direct connect the Beamed Ant to transmitter or receiver;

Wireleg Audio/Video/Scanner/Lens/DVR Operation Manual	Wireless Audio/Video/Scanner/Lens/DVR Operation
<ul> <li>A gradient of the source of the sou</li></ul>	<ul> <li>Question &amp; Answer</li> <li>The following are the most frequently asked questions(Q-01); they are also the most difficult to answer.</li> <li>Q-01: As indicated in your brochure, the transmission range is specified in an empty space free of barriers. However, with barriers, what is the transmission range? How many floors or how many walls can be penetrated? What is the transmission range for a 2000mW transmitter In a city? Why does it only transmit 200 meters while the labeled transmission range varies greatly with environment. Barriers differ in height, walls in thickness, woods in density, etc. If a 2000mW transmitte can transmit 2-5 km, in places where there are many buildings it is possible to transmist a few tens to a few hundreds of meters; it is also possible for transmission as high as possible and in line-of-sight; the maximum transmission range.</li> <li>Q-02: How do I test a newly purchased wireless audio-video transceiver system?</li> <li>A: STEP A: Connect the video camera to a power source, connect it to the TV monitor, and make sure that the camera and the monitor are working properly. STEP B: Make sure that the power sources used in the transmitt and the receiver can provide enough current; usually an off-the-shelf transformer will specify 1000mA when the output is only 700mA. Normally, the receiver requires 12V/600mA or more (1W transmitter 12V/2A or more and 2W transmitter 12V/3A or more). You can also use rechargeable or storage batteries. STEP C: Connect the camera, the transmitter and</li> </ul>
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the power source properly; similarly connect the monitor, the receiver and the power source. Adjust the dials on the receiver to select the proper channel, making sure that it is the same on the transmitter. The system should then function normally.

- Q-03: During testing, how come I can only transmit tens of meters if you specify the transmission range to be several thousand meters?
- A: Due to the limitation of power sources, people often place the transmitter and receiver in different rooms where transformers are used to supply power. This inadvertently creates the largest barrier between the transmitter and the receiver, as steel-reinforced concrete is the strongest barrier for radio wave. During testing, please make sure that there are as little barrier as possible between the transmitter and the receiver; you can extend the connection wires so that there is light-of-sight between the transmitter and receiver antennas. This way, the true transmission range of the system can be determined.

Q-04: Why do I see rolling black lines on the monitor while using the wireless audio-video transceiver system?

A: This is usually caused by insufficient current from the power source of the transmitter or the receiver, or by a low-quality transformer. Switching to a proper transformer will usually suffice. Note that off-the-shelf transformers that are labeled 12V/800mA usually output only around 300 400mA.

Q-05: What's the resolution of your wireless audio-video transceiver system? Why are my transmitted images blurry?

- A: The system does not alter image resolution. Resolution is determined by the video camera. If your received images are blurry, please check your video camera.
- Q-06: Can interference occur if another transceiver system is being used in the vicinity?

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- A: As far as we know, there are four channels available in transceivers manufactured by other companies while there are twelve channels available in our system. It is therefore possible forOur system to avoid using the same channel as others. If you select a channel other than the normal four, then there will not be any interference.
- Q-07: When using your wireless audio-video transceiver system, can other people receive my transmission? Can you provide encryption services?
- A: If others are using our wireless audio-video transceiver system in your area, then it is possible for them to receive your signals. If you have special requirements, we can provide encrypted audiovideo transceiver service.
- Q-08: Your receiver has twelve channels, but your transmitter has only either seven or four channels. Can you provide twelvechannel transmitters?
- A: Due to size limitation, our transmitters come with only four or seven channels. If you require the use of all twelve channels in the same location, we can provide transmitters with three different frequency ranges: 0.9GHz (four-channel), 1.2GHz (four-channel), 1.3GHz (four-channel), with a total of twelve channels. Our receiver can receive all the above frequencies.

Q-09: Using your system, how many units can be used in the same area? In other words, how many transceiver points are allowed?

A: Our civilian-class wireless audio-video transceiver system can provide twelve channels, thus twelve units can be used. Our military-class system can provide thirty channels, in other words, in the same area 30 points are allowed. However, these need to be custom-ordered.

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different uses?

A: There are generally two types of antennas in wireless audiovideo transceiver systems: directional and omni-directional. As the names suggest, directional antennas transmit radio signals in some specified direction, and omni-directional antennas transmit radio signals in all directions. Usually, directional antennas are used in point-to-point transmission while omni-directional antennas are used in point-to-many transmission.

Q-11: Are external antennas used on the transmitter or the receiver? A: Both, although usually it is used on the transmitter. Of course, the system functions even better if antennas are used on both the transmitter and the receiver.

Q-12: Which system models require an external antenna? What is the actual effect of using an external antenna? Why do I get a shorter transmission range after I connected an external antenna compared to using the small built-in antenna?

A: In normal situations, wireless audio-video transceiver systems with transmission power larger than 300mW can use an external antenna; this can increase transmission range by 30% - 70% in an open environment without barriers. When using the external antenna, if the system does not function as well as using the small built-in antenna, then the only possibility is that the external antenna has not been connected properly. This includes the connections among the connectors on the antenna, as well as the connection between the antenna and the transmitter. Especially, the center-pin of the external antenna connector must be precisely inserted into the small hole in the transmitter's connector, otherwise the external antenna will not function at all.

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- Q-15: What is the difference between the wireless camera platform/lens transceiver system and the hard-disk video recorder/matrix wireless transceiver system (Wireless 485/232 Command transceiver system)?
- A: These two systems function nearly identically. The differences are that the wireless camera platform/lens transceiver system operates independently, and can not be connected to a hard-disk video recorder; it also has a built-in proprietary protocol, a decoder, and a keyboard. On the other hand, the hard-disk video recorder/matrix wireless transceiver system (Wireless 485/232 command transceiver system) operates in combination with the hard-disk video recorder, the matrix, and other computer equipment; it does not have a built-in keyboard or decoder.
- Q-16: Why does the hard-disk video recorder/matrix wireless transceiver system (Wireless 485/232 command transceiver system) is completely dysfunctional?

A: It is almost certain that the connections are not set up properly. When using the system, please first directly connect the hard-disk video recorder with the camera platform/lens. Once you are sure both are function normally, remove the direct connection and connect the wireless system. The system should then function normally.



- Q-13: What is the function of the wireless camera platfor deputted transceiver system? How many camera platform/lens can it control? What protocols does it support? Does it have built-in decoders? Can it control the on-off switch, the wiper, or the heater switch?
- A: The wireless camera platform/lens transceiver system is used in areas where it may not be convenient to place wires. It remotely and wirelessly controls the up, down, left, right, left-up, leftdown, right-up, and right-down motion of the camera platform, as well as

the aperture, focal length, and focus of the electric zoom lens. It can control 100 units of platform/lens. It supports a built-in proprietary protocol and no other protocols. The system's receiver itself is a decoder, with a built-in keyboard. It can control the onoff switch, the wiper, and the heater switch.

- Q-14: What is the function of the hard-disk video recorder/matrix wireless transceiver system (Wireless 485/232 command transceiver system)? How many camera platform/lens can it control? What protocols does it support? Does it have built-in decoders? What transmission speed does it support? Can it control the on-off switch, the wiper, or the heater switch?
- A: Simply, the wireless hard-disk video recorder transceiver system removes the wire connection between the hard-disk video recorder and the video camera. Its function is identical to the wireless camera platform/lens transceiver system, with the added functionality of video recording. Other functions are determined and supported by the decoder. There is no limitation to the number of platform/lens units it can control. It supports protocols from major manufacturers such as PELCO, PHILIPS, Panasonic, VICON, etc. It does not have a built-in decoder. Supported speeds are 1200, 2400, 4800 and 9600 baud.

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