



300M WIRELESS HDMI/SDI VIDEO TRANSMISSION SYSTEM

MANUAL BOOK



■ Trademarks

Ghost-Eye Wireless Video Transmission Systems™ are trademarks of Cine Gears Inc. Web Interface.

■ Statement of Conditions

In the interest of improving internal design, operational function, and/or reliability, Cine Gears Inc. reserves the right to make changes to the products described in this document without notice.

Cine Gears Inc. does not assume any liability that may occur due to the use or application of the product(s) or circuit layout(s) described herein.

■ FCC Compliance Notice: Radio Frequency Notice

The device has met the FCC 15.247 requirement. In order to comply with the FCC RF exposure requirement, the user must keep 20cm away from the antenna.

This device 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 device 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 device 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.

■ Information to the user

The user's manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. In cases where the manual is provided only in a form other than paper, such as on a computer disk or over the Internet, the information required by this section may be included in the manual in that alternative form, provided the user can reasonably be expected to have the capability to access information in that form.

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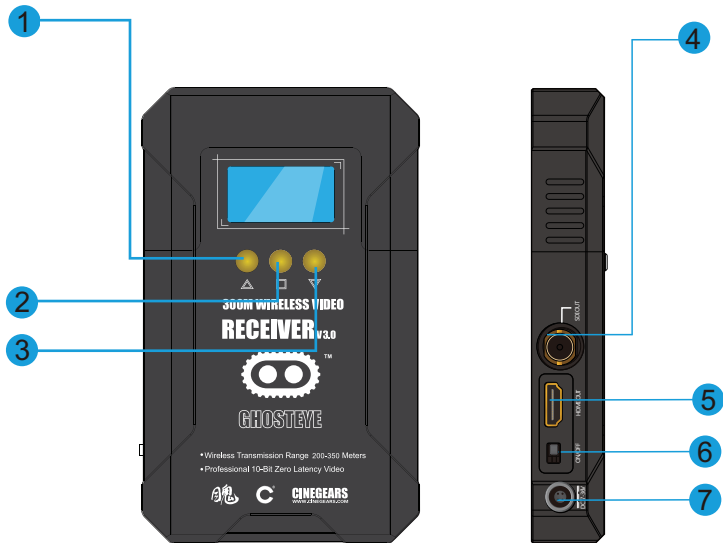
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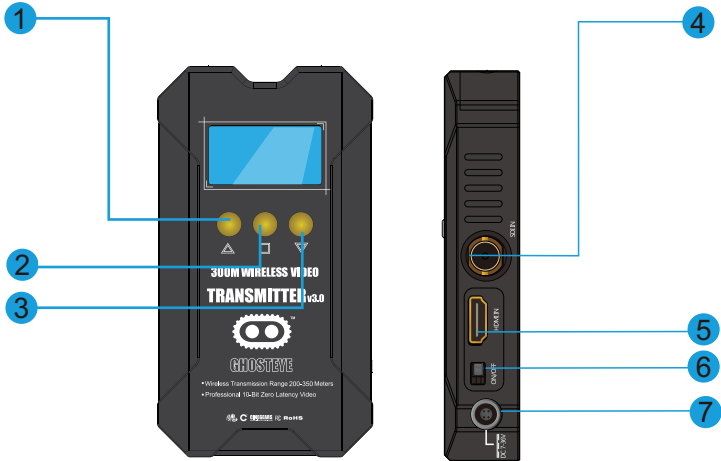
- . Uses License-Free 5GHz ISM frequency band, maximum 10 frequency channels selection, coexist with WIFI.
- . Highest resolution 10 bits color depth 4:4:4, 1080p 60FPS HDMI and SD/HD/3G SDI input and output, HDMI SDI cross conversion is supported.
- . Support wireless 10 bit HD video with no compression and no delay up to 1150FT(350M).
- . Uncompromised picture quality with very low latency, <1ms.
- . Supports point to point, and point to multi points network topology, one transmitter can be connected up to 4 receivers.
- . Support professional audio formats include Dolby True HD, DTS-master, etc.
- . AES-128/256 encryption with air interface HD video data stream.
- . Wide range power voltage input, compatible with most kinds of camera batteries.
- . Sony F970 battery buckle, convenient for field battery install and replacement.
- . All input and output ports have +8 kV ESD protection level(HBM, contact discharge).
- . Plug & Play – no software is required.
- . Professional standard 4-pin LEMO power plugs.
- . Each RX(receiver) paired to the unique TX(transmitter) in factory.
- . industrial metal and plastic case with robust cooling and durability.
- . RX built-in directional antenna.
- . OLED screen display power status, Temperature, Fan on/off, RSSI, Frequency Channel, Resolution, Video Status.
- . The hard carrying case provide water and shock proof to product



Receiver:

- | | |
|--|------------------|
| 1: Frequency Channel Up | 4 : SDI Output |
| 2: Frequency Channel Confirm
(press and hold to turn on or off the fan) | 5 : HDMI Output |
| 3: Frequency Channel Down | 6 : Power On/Off |
| | 7 : DC Input |

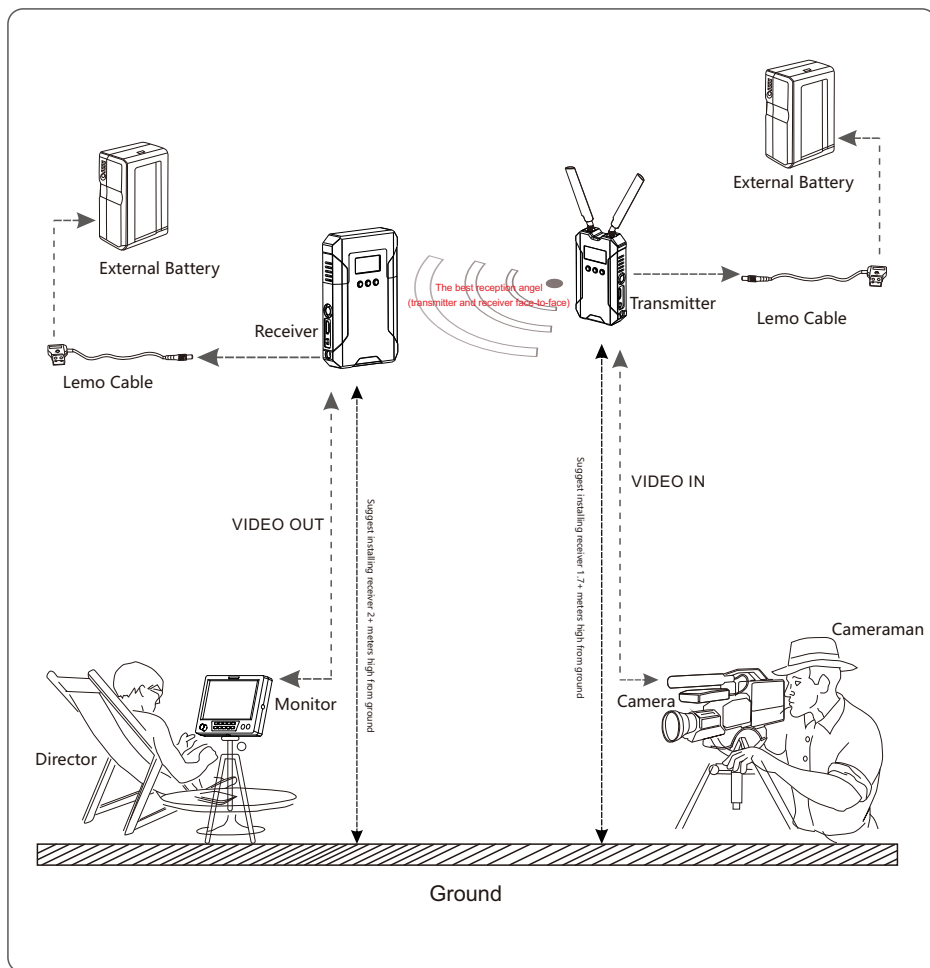
Transmitter Diagram

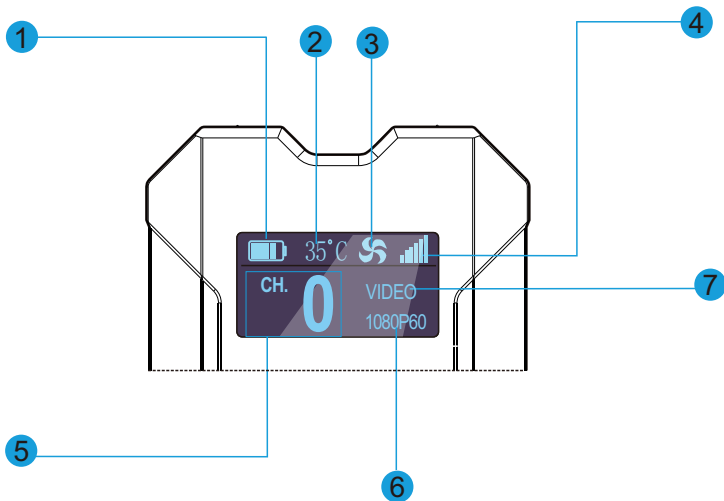


Transmitter :

- | | |
|--|------------------|
| 1: Frequency Channel Up | 4 : SDI Input |
| 2: Frequency Channel Confirm
(press and hold to turn on or off the fan) | 5 : HDMI Input |
| 3: Frequency Channel Down | 6 : Power On/Off |
| | 7 : DC Input |

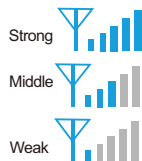
Installation





Menu description :

- | | |
|-------------------------|-----------------------|
| 1 : Battery Level | 5 : Frequency Channel |
| 2 : Working Temperature | 6 : Resolution |
| 3 : Fan status | 7 : Video Status |
| 4 : RSSI | |



Troubleshooting Guide

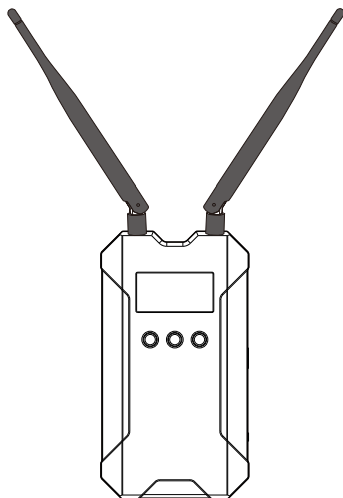
If the transmission system worked well at short distance but has problem at long distance or the video quality is not good. Please follow instructions as below.

	Step 1	Step 2	Step 3	Step 4
The system can't establish link	If the transmission system can't establish link at long distance but works well at shorter distance. Please check if the transmitter and receiver under specified working distance. And if the transmitter and receiver set at the same frequency.	If the problem is not solved after step 1. Please restart the transmitter and receiver.	If the problem is not solved after step 2. Please shorten distance and check the link status.	If established link at shorter distance. Please go to next guide.
The working distance can't reach 150M	If established link at shorter distance. Please check if the antennas are screwed tightly. The transmitter and receiver are NOT parallel to each other. The 2 TX antennas' angle is 45°. Make sure no big obstacle between transmitter and receiver.	If the problem is not solved after step 1. Please change the frequency and check the link status. If the link is improved. The problem is caused by interference.	If the problem is not solved after step 2. Please replace the antennas with new ones and try again.	If the problem is not solved after step 3. Please contact with us for RMA.
The video quality is bad	Please make sure the distance is within the maximum working distance. The transmitter and receiver are NOT parallel to each other. The 2 TX antennas' angle is 45°. If there is big obstacle between transmitter and receiver, please shorten distance.	If the RSSI on receiver has more than 3 lights on, please go to next step. If the RSSI has less than 3 lights on. Please change the frequency and check the video quality.	If the video quality is not improved after changing frequency. Please replace antennas with new ones or try other system with good performance before.	If the other system has the same problem. Please move to other place and try again. If the old system works well and the new system still has problem after changing place. Please contact with us for RMA.
The RSSI is good but the video quality is bad	The RSSI is good but the video quality is bad. Please make sure the distance is within the maximum working distance and the 2 TX antennas' angle is 45°, the transmitter and receiver are NOT parallel to each other.	If the problem is not solved after step 1. Please check the input video resolution. Downgrade the resolution and check again. 1080i's working distance is longer than 1080p with the same video quality.	If the video quality is not improved after downgrading resolution. Please shorten distance by half. If the video quality is improved. Please record the distance when the video quality becoming bad.	If the video quality is not improved after shortening distance. Please change the frequency. If it's still not improved. Please contact with us for RMA.


Specification

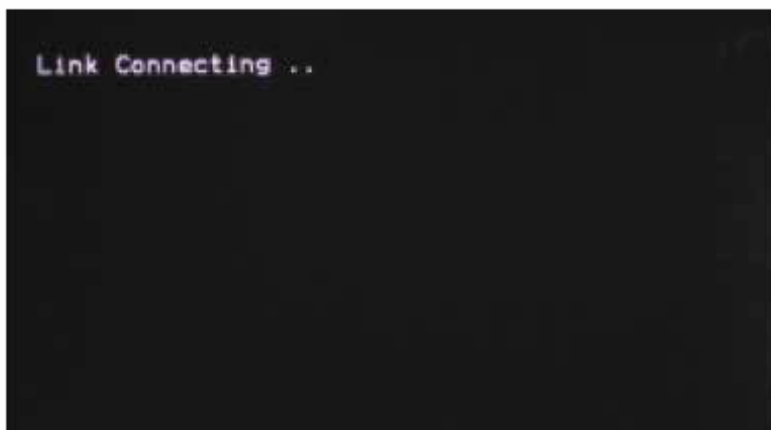
	Transmitter	Receiver
Interface	SDI Input(BNC female); HDMI Input(Type A female); 2 Antenna port(RP-SMA male); DC input(4pin LEMO female)	SDI Output(BNC female); HDMI Output(Type A female); DC input(4pin LEMO female)
Supply Voltage Range	7-36V DC	7-36V DC
Transmission Range	Optimal range 800FT/244M Maximum range:1150FT(350M)	Optimal range 800FT/244M Maximum range: 1150FT(350M)
Power Consumption	<6.5W	<6W
Size	(L x W x H): 67*122.2*25.3mm	(L x W x H): 95.4*152.2*26mm
Weight	250g	300g
Input Video Format	SDI:3G, HD, and SD-SDI(Auto-Selected); HDMI: 525i, 625i, 720p 50/59.94/60, 1080i 50/59.94/60, 1080p23.98/24/25/29.9/ 30/50/59.94/60;	/
Output Video Format	/	SDI:3G, HD, and SD-SDI(Auto-Selected): HDMI: 525i, 625i, 720p 50/59.94/60, 1080i 50/59.94/60, 1080p23.98/24/25 /29.9/30/50/59.94/60;
Frequency Band	5.1-5.9GHz,configurable with China, North America, Europe, etc	5.1-5.9GHz,configurable with China, North America, Europe, etc
Modulation Mode	OFDM 16QAM	OFDM 16QAM
Transmission Power	Maximum 16dBm	/
Receiver Sensitivity	/	-75dBm
Occupied Bandwidth	20/40MHz	20/40MHz
Temperature Range	0-40°C(working temperature); -20-60°C(storage temperature)	0-40°C(working temperature); -20-60°C(storage temperature)

- 1) Ensure the video source output of the camera is OK, and the HD monitor is powered on and switched to connected video input port.
- 2) Ensure 2 TX antennas are installed. For optimal results set the dual antennas in the form of a "V" and maintain unobstructed line of sight between transmitter and receiver. Below figure for your reference.



- 3) Ensure all input, output SDI or HDMI cables are connected.
- 4) Ensure both transmitter and receiver are powered via battery or DC input. Then turn on power switch of the transmitter and receiver respectively. The screen will light.
- 5) Ensure the transmitter and receiver is set with the same frequency.
- 6) If the camera is on and video input is OK, TX screen will show HDMI or SDI.

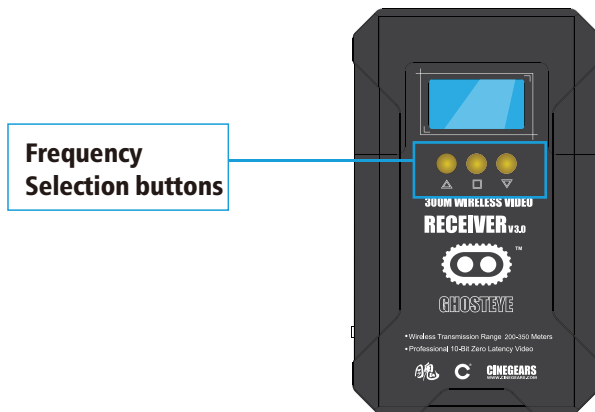
- 7) Before RX finished wireless link with TX, the RX screen displays  and NO VIDEO; when wireless link is done, RSSI indicators will indicate the signal strength. If the receiver detects wireless video signal, the screen will display VIDEO. Before that, If SDI or HDMI video out port of the receiver has HD monitor connected, it will display an OSD of Link connecting..... as in the figure below.



- 8) The system will spend 10 seconds constructing the link, depending on link strength and the signal channel condition. When wireless link is established the screen will display the current wireless signal strength, VIDEO, and the connected HD monitor will be playing the real-time video and audio.

Frequency Selection

The wireless transmission system works in the 5.1-5.9GHz frequency band and can be flexibly configured to other licensed or ISM bands to accommodate different global regions. The front panel of the transmitter and receiver features frequency channel selection and confirmation buttons (see below illustration), which provides a maximum of 10 workable frequency channels, and supports a maximum of 4 simultaneous receiver units.



Warning

- Do not expose this device to extreme hot, cold, dusty or humid environment.
- Do not scratch the device with sharp objects.
- Do not drop this device from high place, as this may cause hardware damage.
- This device is designed for non-waterproofing. Please do not allow any liquid to penetrate into the device.
- Do not attempt to dismantle, open or repair this device yourself, as this may cause permanent damage to the device.

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■ FCC Statement

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- 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.

To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example use only shielded interface cables when connecting to computer or peripheral devices).

FCC Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This equipment complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.

- (2) This device must accept any interference received, including interference that may cause undesired operation.

Cautions

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

■ Terms and Conditions

Congratulations on purchasing your new CINEGEARS product. Please read this manual carefully before using the product. By using this product, you hereby agree to this disclaimer and signify that you have read it in full. You agree that you are responsible for your own conduct and any content created while using CINEGEARS products, and for any consequence thereof. You agree to use this product only for purposes that are proper and in accordance with local regulations, terms and any applicable policies and guidelines.

By reading this disclaimer, you also agree:

1. Any part of this disclaimer is subject to change without prior notice. Refer to WWW.CINEGEARS.COM for the latest version.
2. CINEGEARS reserves the right of final interpretation of this disclaimer.

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Cine Gears Inc. is an industry leading company that designs and manufactures digital wireless follow focus systems, lens control systems, camera motion control systems and accessories for film and broadcast industry. As a big believer in the power of creativity and ideas, we designed the Pegasus cablecam, the wireless motor drive that integrated a built in wireless transmitter, and the wireless finger wheel controller. The Cine Gears Inc. wireless lens control system has the international CE certification on all its equipment. Cine Gears lens control system can achieve the finest minutia of focus pulling, with extreme accuracy and control. This very same technology is what drives the Pegasus for ultra-smooth, highly controlled, programmed movement.

We have been working from Vancouver, B.C. for five years and our equipment has been used on hundreds of movies. Filmmakers of all experience levels will benefit greatly from a simple, professional, and well rounded follow focus system. The Single Axis and Multi Axis models provide greater ease, with less crew, and less wires. You can achieve professional film quality scenes on a shoestring budget. Camera operators, assistant camera operators, and jib operators can use the wireless follow focus to attain that perfect shot.

Customer Support



If you encounter any issues with any of our products please contact us directly via the details provided below. DO NOT CONTACT THE RETAIL STORE.

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