



GHOST EYE WIRELESS HDMI/SDI VIDEO TRANSMISSION SYSTEM 1000M

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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Warning

Please read this user introduction manual to become familiar with the features of the Ghost-Eye series products before operation. Failure to operate the product correctly can result in disturbing other film equipment on set. This product is not intended for use by children without direct adult supervision. Do not use with incompatible components, or alter this product in any way outside of the documents provided by Cinegears. These safety guidelines contain instructions for installation, operation, and maintenance. It is essential to read and follow all of the instructions in the manual, and all the notices and warnings regarding Ghost Eye series products prior to assembly, set up, or use to prevent any damage or interference.

1. Do not use this product in extreme heat, cold, humidity, or environments with dust.
2. Do not drop the unit or cause impact against hard surfaces.
3. These products are not waterproof: do not expose the units to moisture.
4. Do not dismantle, assemble, or otherwise alter the products.

Electrical Considerations

1. When this device is sharing a power supply or battery with other equipment, please ensure all signal and power cables are well connected before turning on the Ghost Eye units' power.
2. When this device is sharing a power supply or battery with other equipment, please ensure the power switch is turned off before connecting or disconnecting any signal or power cables from the Ghost Eye units.
3. When this device is sharing a power supply or battery with other equipment, please check the polarity of the power connectors of all equipment to ensure the inside conductor is positive. If the polarity of power connectors of all equipment to ensure the inside conductor is positive. If the polarity of the power connector is unknown, please check the user manual to make sure the outer conductor of the SDI or HDMI connector is connected to the negative of the power supply. Otherwise, the equipment will not be able to share the same power supply with the Ghost Eye unit.

Here at Cinegears, we supply some of the best wireless HD video transmitters and receivers available. During the development of the Ghost Eye line of products, we subjected our prototypes to rigorous testing on set with professional film crews, and took customer feedback and suggestions into serious consideration. After careful review, the Ghost Eye products have integrated all of the in-demand wireless video transmission features recommended by you, the user. The fruit of our efforts are catalogued below in the form of our unique Ghost Eye Wireless Video Transmission Kits, across the affordable price range spectrum.

Ghost Eye Wireless Video Transmission Kits each fit a different set of wireless HD video transmission needs. The most powerful video transmitters and receivers will satisfy even the most high-end professional film crew, and our lightweight models fit a more versatile brand of film set. Ghost Eye transmission kits transmit and receive 10-bit 4:4:4 video, support both HD and SD, and can broadcast with under 1 millisecond of latency.

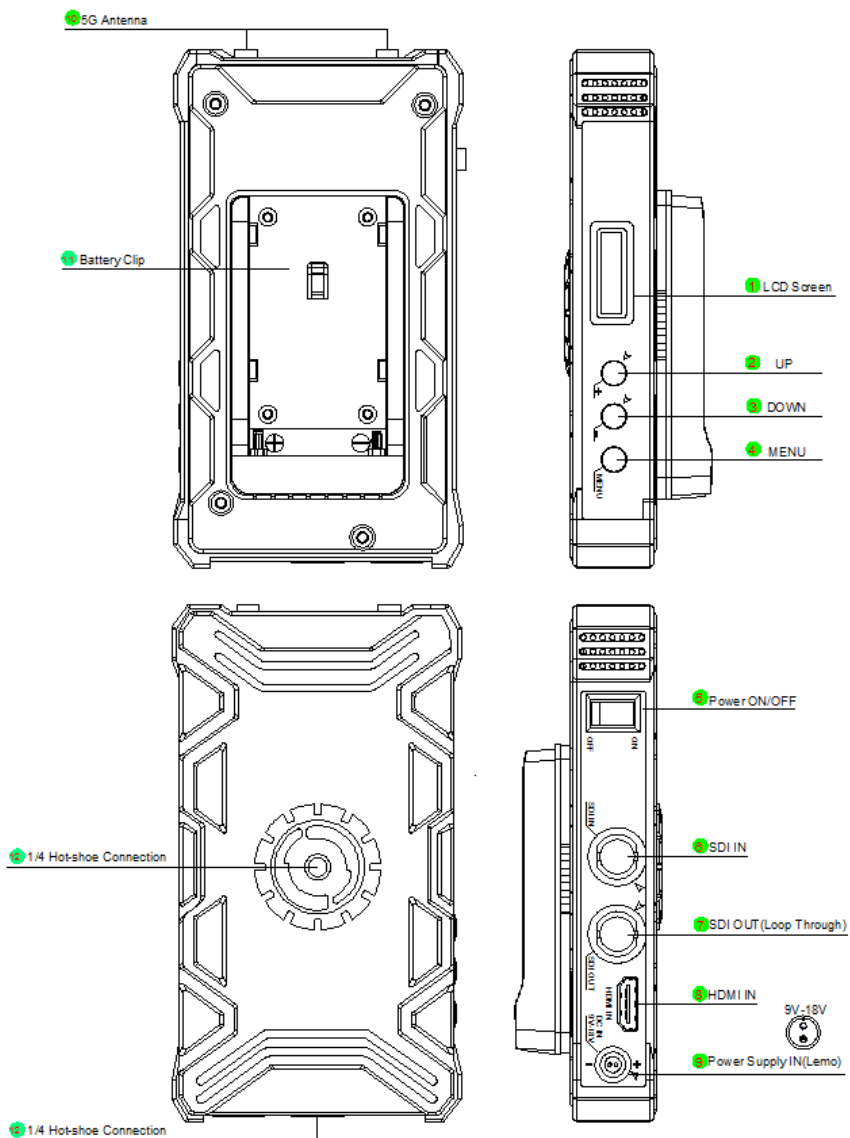
■ Specification

ITEM	Specification
Frequency	5.1-5.9(GHz)
Bandwidth	40MHz
Video Formats Supported	1080p 23.98/24/25/30/50/60 1080i 50/59.94/60 720p 50/59.94/60 576p 576i 480p 480i
Audio Formats Supported	PCM, DTS-HD, Dolby TrueHD
Time Code	SMPTE-12M
Transmission range	1000m(MAX)
Transmitter	
Antenna	External Antenna x 2 pcs
Transmission power	18dbm
Functional Interface	HDMI Input; SDI Input; SDI Loop Output; Mini USB; LEMO Power IN; Antenna RPSMA Socket; Power ON/OFF
Locating Structure	1/4" Hot-shoe connection
LCD Screen	Wireless Channel Info; SDI/HDMI Signal Info
Working Voltage	9V-18V
Power Consumption	9W
Dimensions	142.5 x 76 x 24.3 mm
Temperature	-10~60# (operating) 10%-90% humidity; -40~80# (storage) 10%-90% humidity.
Receiver	
Antenna	External Antenna x 5pcs
Receiving sensitivity	-70dBm
Functional Interface	SDI Dual Output; HDMI Output; Mini USB; LEMO Power IN; Antenna RPSMA Socket; Power ON/OFF
Locating Structure	1/4" Hot-shoe connection; V-Mount
LCD Screen	Wireless Channel Info; SDI/HDMI Signal Info
Working Voltage	9V-18V
Power Consumption	7-8W
Dimensions	169.5 x 122 x 25.2 mm
Temperature	-10~60# (operating) 10%-90% humidity; -40~80# (storage) 10%-90% humidity.

*Since the product's improving process, all the performance, design and specifications of our products are subject to minor change without prior notice.

■ Structure & Interface

Transmitter SH700M

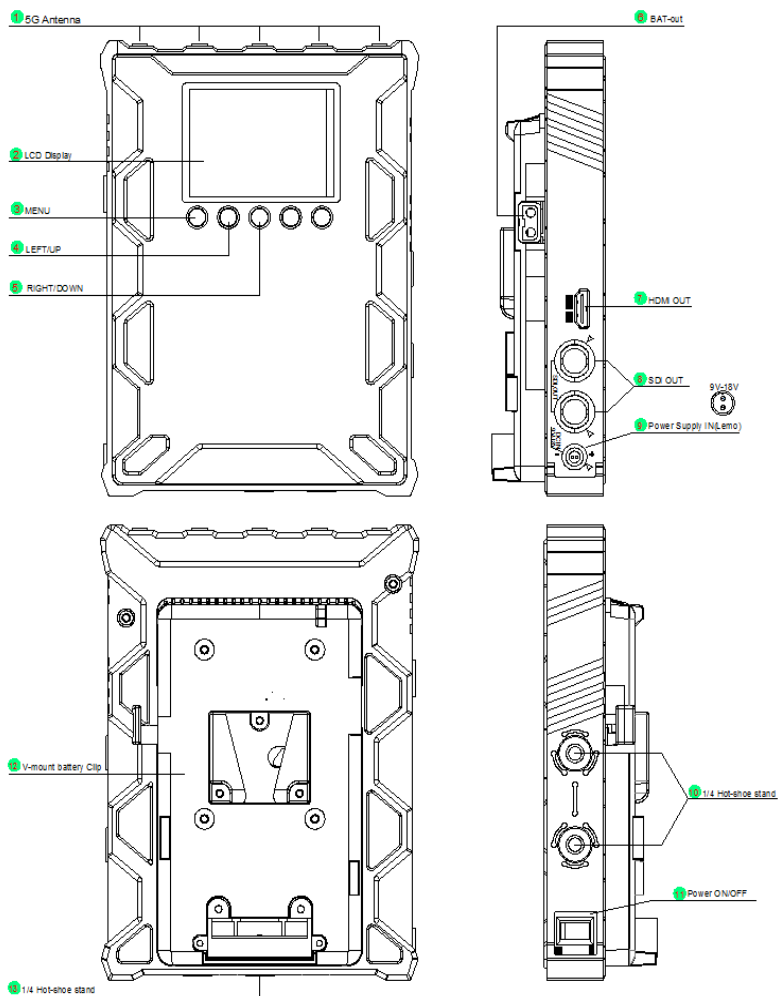


Structure	
1	LCD Screen
	Display the information about the Channel, signal input, capacity, fan control.
2	UP
	Select the correct Channel.
3	DOWN
	Select the correct Channel.
4	MENU
	Unlock the screen and confirm the selection.
5	Power ON/OFF
	Power ON/OFF
6	SDI IN
	Connect the HD camcorder which support 3G-SDI, HD-SDI
7	SDI OUT (Loop)
	Connect to the HD digital monitor which support 3G-SDI, HD-SDI
8	HDMI IN
	Connect to the HD digital camcorder with HDMI OUT
9	Power supply In (Lemo)
	Support connecting to the power supply of the camera, or power adaptor. Notice: DO make sure the Voltage (+)(-) was connect correctly.
10	Antenna Socket
	SMA socket to connect the antenna.
11	Battery Clip
	Support SONY F970/F550 battery to power supply.
12	1/4" Hot-shoe Connection
	Support to connect with more methods.

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■ Structure & Interface

Receiver SH700M

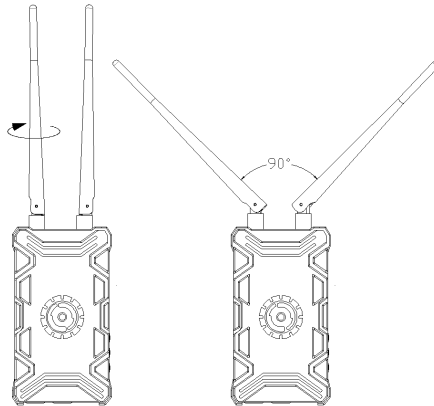


Structure	
1	Antenna socket
	SMA socket to connect the antennas.
2	LCD Screen
	Display the information about the Channel, signal input, capacity, signal status.
3	Menu
	Unlock the screen and confirm the selection.
4	Left
	Select the correct Channel.
5	Right
	Select the correct Channel.
6	BAT-out
	Btap battery power supply.
7	HDMI OUT
	Connect to the TV/Monitor via the HDMI cable.
8	SDI OUT
	Connect to the TV/Monitor via the HDMI cable.
9	Power supply In (Lemo)
	Support connecting to the power supply of the camera, or power adaptor. Notice: DO make sure the Voltage (+)(-) was connect correctly.
10, 13	1/4 Hot-shoe Connection
	Support to connect with more methods.
11	Power ON/OFF
	Power ON/OFF
12	V-mount battery Clip
	Support V-mount battery to power supply.

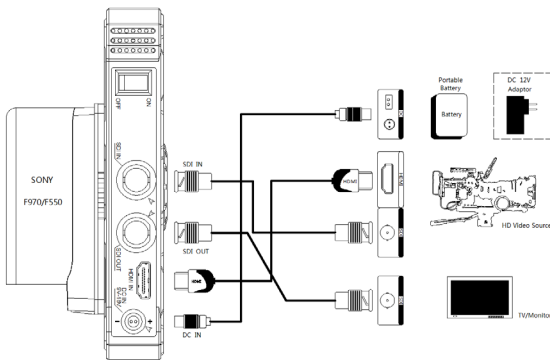
■ Installation

For Transmitter

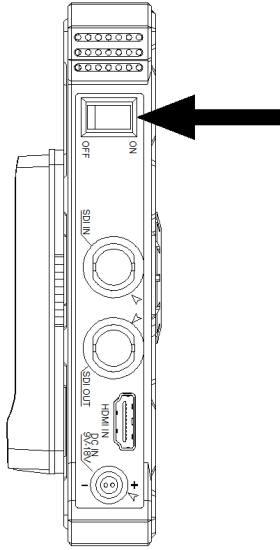
1. Fix the antennas to the transmitter, and arrange them to be right angle as figured below



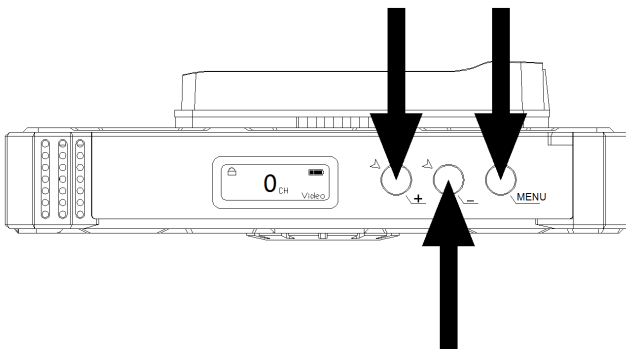
2. Connect the transmitter to the power supply via the certain power cable or SONY F970/F550 battery. Connect the SDI/HDMI cable to the HD video source.



3. Turn ON the power supply and make sure the transmitter starts to work.

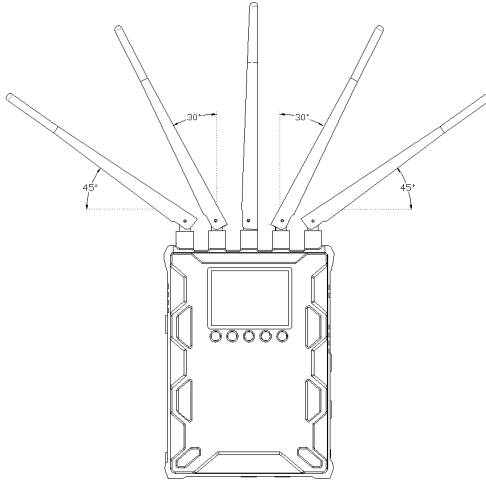


4. Long press the "MENU" button to unlock the screen and then press "+" or "-" button to select the wireless channel that corresponding to the Receiver, then press the "MENU" button to confirm. When the video signal is normally transferred, the LCD screen will display "video".

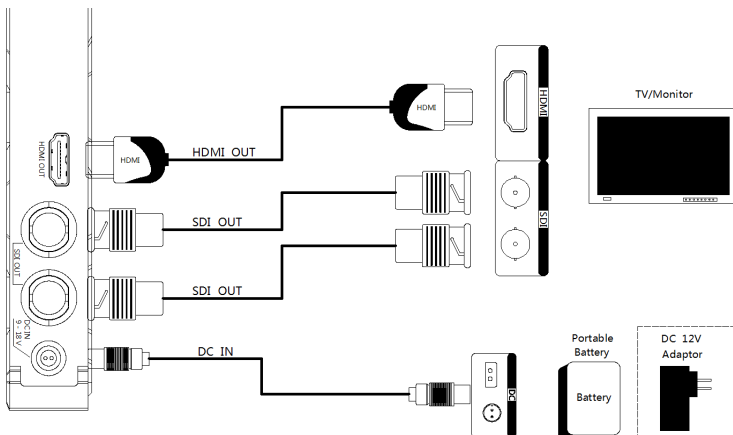


For Receiver

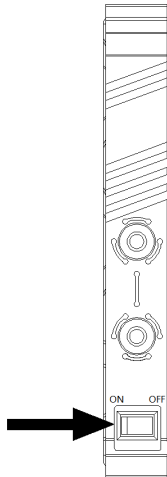
1. Fix on the antennas to the Receiver, and arrange them to be right angle as figured below.



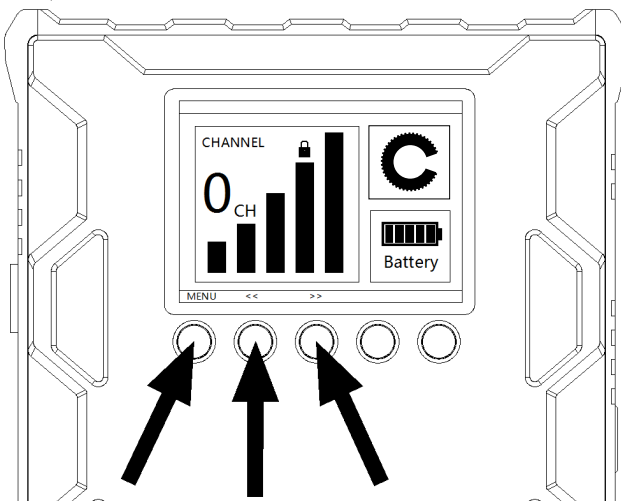
2. Connect the Receiver to the power supply via the certain power cable or V-mount battery. Connect the SDI/HDMI cable to the TV/Monitor.



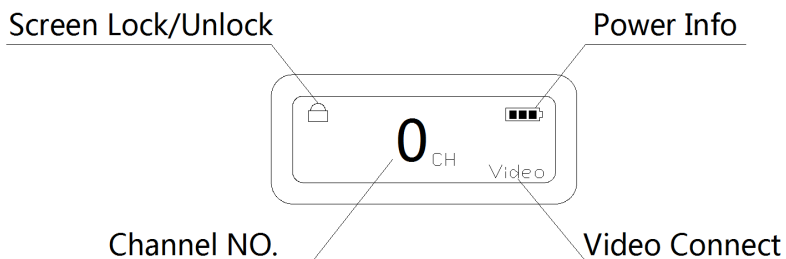
3. Turn ON the power supply and make sure the receiver start to work.



4. Long press the “MENU” button to unlock the screen and then press “LEFT” or “RIGHT” button to select the wireless channel that corresponding to the Transmitter, then press the “MENU” button for confirm. When the networking is normally connected, the LCD Screen will display signal status.



SH700M Transmitter LCD Screen



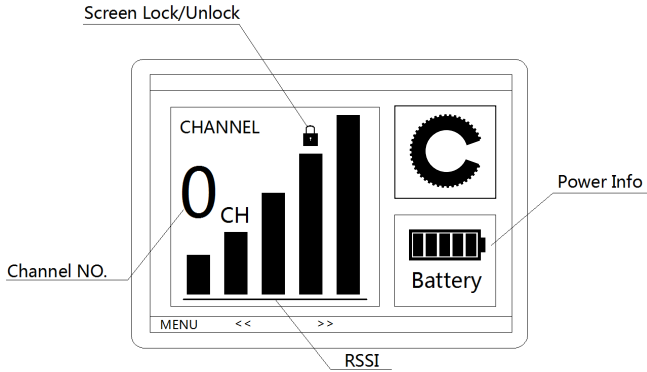
Screen Lock/Unlock : The screen will be always locked unless long press the MENU button to unlock.

Power Info : Display the current power supply status.

Channel NO. : Display the current Channel NO. of device.

Video Connect : Video means the video signal is OK.

SH700M Receiver LCD Screen



Screen Lock/Unlock : The screen will be always locked unless long press the MENU button to unlock.

Power Info : Display the current power supply status.

Channel NO. : Display the current Channel NO. of device.

RSSI : Received signal strength indication.

■ Supports full PSF resolutions

25PFS in = 25PFS out	23.98P in = 23.98P out
29.97PSF in = 29.97PSF out	24P in = 24P out
30PSF in = 30PSF out	25P in = 25P out
50i in = 50i out	29.97P in = 29.97P out
59.94i in = 59.94i out	30P in = 30P out
60i in = 60i out	

■ Transmission range introduced

The maximum transmission ranges is up to 700 meters Line of Sight when this product is in optimal installation case. -

The transmission range will drop sharply if this product in not in optimal installation and the antenna directions at the transmitter side and the receiver side do not match. -

The range can drop to as low as 150 meters in the worst case.

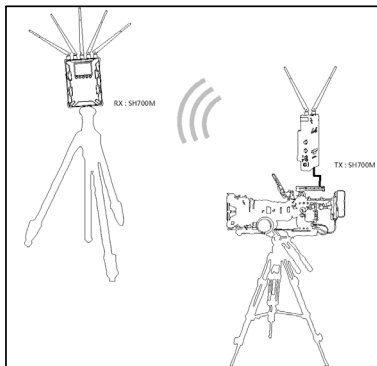
Optimal

The transmitter and receiver are both in vertical direction

The antennas at both sides are in vertical direction

The transmitter and the receiver are facing directly

Line of sight Transmission range: 500m



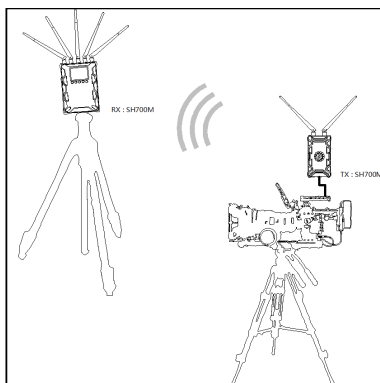
Average

The transmitter and receiver are both in vertical direction

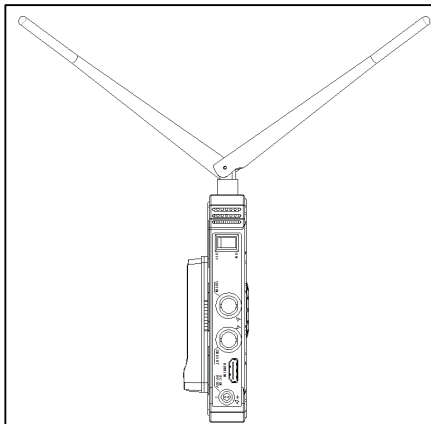
The antennas at both sides are in vertical direction

TX and RX Facing side

Line of sight transmission range: 300m



It is recommended that transmitter antennas shall be changed to cross-facing to the receiver, shown as below:



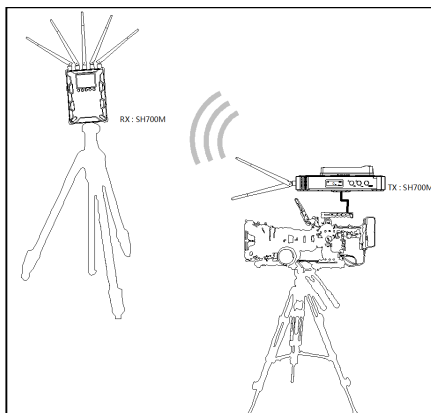
Worst

The transmitter and the antennas are in horizontal direction

The receiver and antennas are in vertical direction

Transmission range : 150m

This installation is not recommended!



■ Trouble Shooting

TROUBLES&POSSIBLE REASONS:		SOLUTION:
OSD Information on TV	Displaying “Waiting for connection...” for a long time	
	Transmitter is not powered up.	Power on the transmitter.
	Transmitter or receiver is not placed correctly.	Place the TX or RX correctly.
	The transmitter and receiver are too far away.	Move the receiver closer to the transmitter.
	Several solid wall partition on TX and RX.	Reduce the number of solid walls between TX and
	There are so many obstacles between TX and RX.	Move the receiver closer to the transmitter.
	Other transmitter is working on the same or adjacent channel.	Turn off other transmitter, or change channel.
	No Video Signal received	
	Transmitter and video source are not connected.	Connect the transmitter to video source by SDI/HDMI cable.
	The video source is turned OFF	Power ON the video source.
	Bad contact of cable of transmitter.	Remove and then re-plug the transmitter
	Abnormal working of transmitter	Reboot the transmitter
	Problem with cable between TX and video source	Change the SDI/HDMI cable
	Player NOT support the output resolution format.	Switch the output video resolution to other modes.
The TV/Monitor NOT support HDCP authentication	Replaced with HDCP-certified TV/Monitor.	
Image	No signal input to Receiver or TV/Monitor	
	Receiver is turned OFF	Power on receiver.
	Receiver and TV are not connected.	Connect receiver and TV/Monitor via SDI/HDMI input.
	TV/Monitor NOT switched to SDI/HDMI input.	Switch TV/Monitor to SDI/HDMI input.
	Bad contact of the cable of receiver or TV/Monitor.	Remove then re-plug the SDI/HDMI cable.
	TV/Monitor turn into standby mode.	Switch the TV/Monitor to normal operation mode.
	Abnormal working of receiver.	Reboot the receiver.
	No image appear on TV/Monitor	
	Bad contact of receiver or cable.	Re-plug the cable of the receiver or TV/Monitor.
	Abnormal working of receiver.	Reboot the receiver.
	Receiver failure.	Please contact your retailer.
	Abnormal color on TV screen	
	Bad contact of cable of receiver or TV/Monitor.	Unplug and then plug the HDMI cable of the receiver or TV.
	Bad contact of cable of transmitter or video source.	Unplug and then plug the HDMI cable of the TX and player.
Abnormal working of transmitter or receiver.	Reboot the transmitter and receiver.	

■ FCC Statement

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 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 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.

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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About Cinegears

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.

CINE GEARS INC. (USA)
47 East South Street, Suite 401
Frederick, Maryland 21701, USA
Tel: 1 206 462 2858
Toll Free: 1 800 693 8883

CINE GEARS INC. (Canada)
2nd floor 2010-9111 Beckwith Road
Richmond, BC V6X 1V7, Canada
Tel: 1 604 243 9995