



PRO Z

Zero Latency Channel Scan
Wireless Video Transmission System



EU Environmental Protection

Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice.



SHENZHEN CRYSTAL VIDEO TECHNOLOGY CO.,LTD

ADD: F12, F518 Idea Land, Baoyuan Road, Baoan Central Area, Shenzhen, China

Post code: 518102

Fax: +86-755-29188427

Tel: +86-755-27750518-6652

www.cv-hd.com

E-mail: Sales@cv-hd.com

E-mail: Marketing@cv-hd.com

USER MANUAL

This user manual applies to:

Transmitter: 7118

Receiver: 3118





Version: 1.0
2021.09.16

Important Information

Please read this user manual before you use this product, it contains all the notes and important things regarding operating this product. In accordance with the safety precautions and operating instructions listed on this user manual, our applies provided the product is handled properly for its intended use, but may not apply to below cases:

- Repairs or product modification and alterations have been executed by unauthorized personnel.
- The damages are caused by accidents including but not limited to lightning, fire, exposed to rain or water, and moisture.
- Do not use provided power adapter with specific power voltage which are not compliant with the rated voltage range in the attached label of the power adapter in package.
- The model label on the product has been modified or the warranty tag has been removed by unauthorized personnel.

Safety Precaution

 Danger! High voltage	To reduce the risks of electricity, do not remove or open the cover. No user-serviceable parts are inside. Please return to original factory for maintenance
 Beware of hot surfaces!	The high temperature in the process of operating the device may cause the high risk of scalding.
 Caution!	Please use our standard power adapter. Detailed information Please refer to the rated voltage range showed on the label at the back of package's power adapter.
 Fragile	Handle with care!

Danger: Be careful with electricity.

- As connecting any equipment (such as any player or TV , etc.), please turn off the power to the product before any operation is undertaken.
- Power outlet: To prevent electric shock or fire, short circuit, please make sure the type of electrical plug used on the receiver's and transmitter's power cord are compliant with the rated voltage range in the attached label of the power adapter in package.
- Power cord: Do not place any heavy articles above on the power cord. To avoid being stepped on or pinched by heavy items, the power cord should not be located on the place where people pass by frequently.
- Power overloading: Avoid overloading wall's electrical outlets and extension cord or other multi-socket; otherwise could result in electric shock or fire.
- Lightning: For protection from lightning or when the product is left unattended for a long period, please disconnect it from the power source.

- Please disconnect the power cord from the power outlet when you are not using the receiver and transmitter, this will reduce the risk of electric shock or fire.

Warning

- This product should not be exposed to dripping or splashing. Do not place any object filled with liquid on the product (eg. vases).
- To avoid electric shock, please do not block or stick anything on the air vent of product; do not remove the cover or put the object just like pins, steel wire into the gap of the air vent.
- Please place the receiver/transmitter on a flat with hard and stable surface.
- Ventilation: please do not block the air vents on the receiver/transmitter or place any heavy object on top of them . Blocking the air flow can damage the product itself. Please make sure that there is adequate ventilation distance between the receiver and TV, and also put the product away from direct sunlight or any source of heat.
- Water Exposure: To reduce the risk of electric shock or fire , please do not expose the receiver/transmitter to rain or moisture.
- We assume no responsibility for any damage or result caused by using other adapters instead of our standard adapters

Special Notice

- Although the product has provided the function of data encryption when transmitting, you still need to pay attention to deliberate signal interception. There will be the Possibility of a third party intentionally intercept the transmission signal since the product adopt wireless communication. Please do not use the product on confidential and important communications, or life-related communications The main concern is that the content of wireless communication might be received by the third party's wireless devices deliberately or accidentally.
- The impact of radio waves (such as the following environment may cause the abnormal audio and video (blocked image, noise ...etc.).
 - 1) Transmit near the wall which is hard for the radio waves to get through.
 - 2) Quite close to the refrigerator, metal fitment and appliances, or next to the crowded situation.
- This product has been tested and manufactured to comply with national electrical safety rules, however, there will be noise caused by the interference with other machines in rare cases. If the interference is happened, please keep a certain distance away from other machines.
- The product is susceptible to interference from 5GHz wireless local area network or other wireless devices.
- Optimal range between transmitter and receiver is between 1 meter and 50 meters within line of sight indoor.
- Please do not set up the transmitter and receiver in metal shelf, or it will hinder the wireless communications.
- 1080P/60 Hz Wireless transmitting.
- It will take 15-20 seconds to boot the system before wireless communication start, the media receiver can not be operated during this time.

Contents

About the User Manual	01
Overview	01
Features	01
Packing List	02
Specification.....	03
Structure & Interface.....	04
Transmitter: 7118	04
Receiver: 3118	06
Mounting	08
Transmitter: 7118	08
Receiver: 3118	11
Power Supply and Start-Up.....	14
OLED Display Description.....	18
Channel Switching Operation.....	20
Precautions.....	22
Troubleshooting	25

About the User Manual

- Please read this manual carefully before you use this product and retain it properly for future reference.
- If there is any question or difficulty about the operation of product, please feel free to contact us or the dealer.
- The company reserves the authority to modify the instruction manuals.

Overview

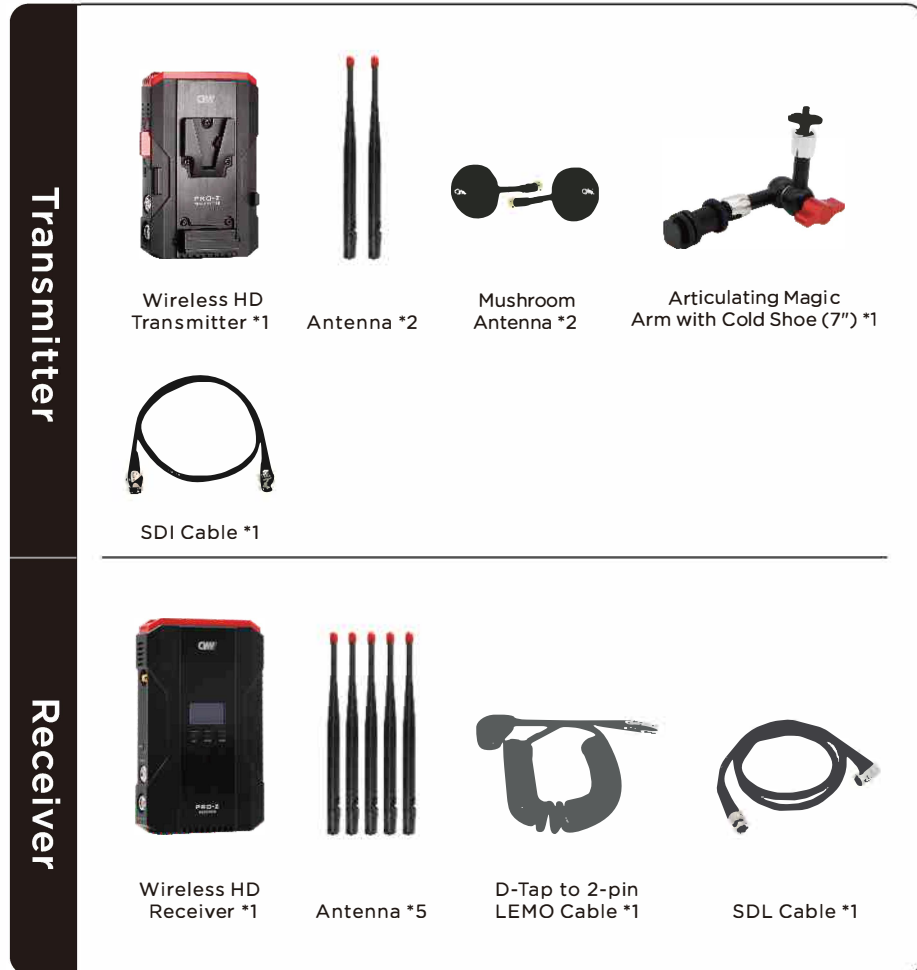
As film & TV production has increasingly more widespread applications, many problems occur during the process of filming, such as the high cost and short-life usage of the cable, insufficient on-site protection, and easy to trip over. This may impact filming performance and could even cause big accidents. PRO Z provides you with more convenient and safe solutions for filming scenarios. This long-distance video transmission system could be compatible with large-capacity lithium-ion batteries. Its plug-and-play setting and channel scanning feature fully meet a variety of indoor and outdoor filming needs, especially its wiring-free feature that provides a safer and more professional experience.

Features

- Zero latency & uncompressed video transmission
- Up to 1080P60, 10-bit with 4:2:2 chroma sampling
- Channel scan to select the best channel
- 800m/2600ft (LoS) transmission range
- HDMI in/out, SDI loop out, dual 3G-SDI out
- 5.1-5.8GHz licence-free operation frequency
- Multicast mode: 1-TX to multi-RX, meeting multiple monitoring requirements
- Support V-mount battery slot
- AES128-bit encryption
- Support time code (ATC_VITC and ATC_LTC formats)
- Smart cooling design, manual or auto mode

Packing List

Please check the packing list carefully after unpacking. If any of them is missing, please contact your seller.

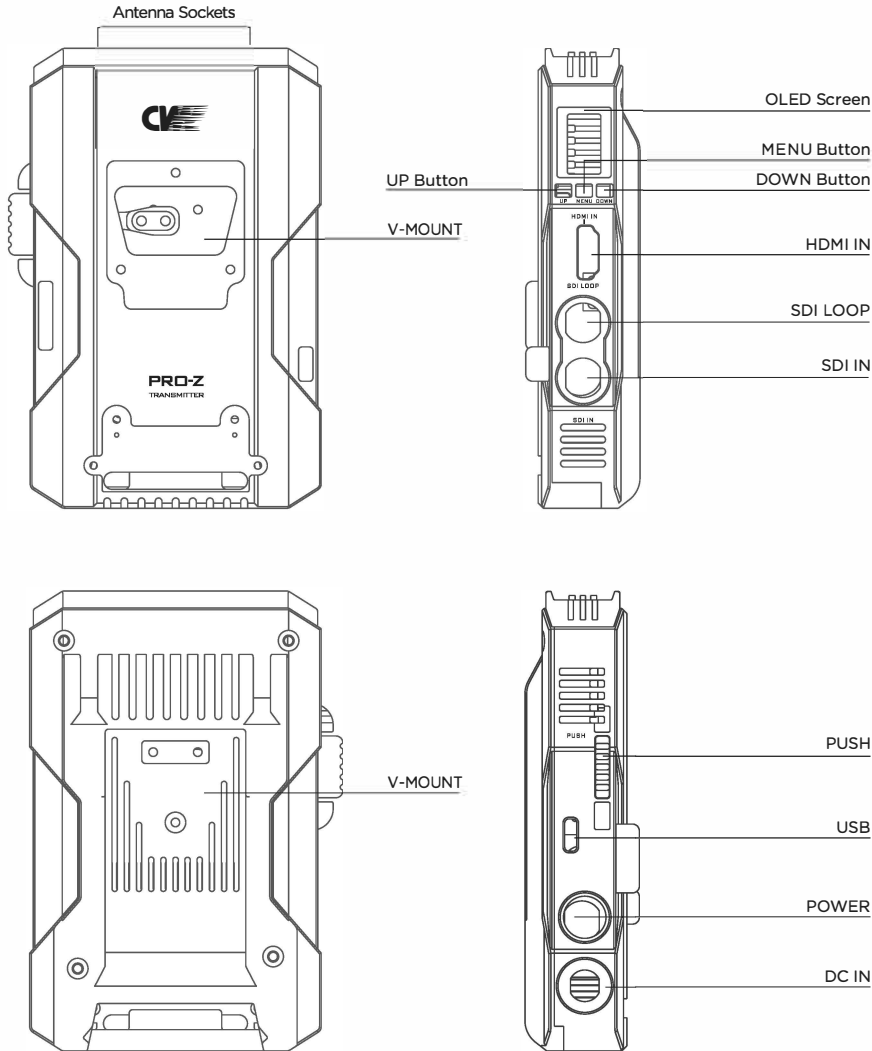


Structure & Interface

TX

Transmitter: 7118

Transmitter Interface Description



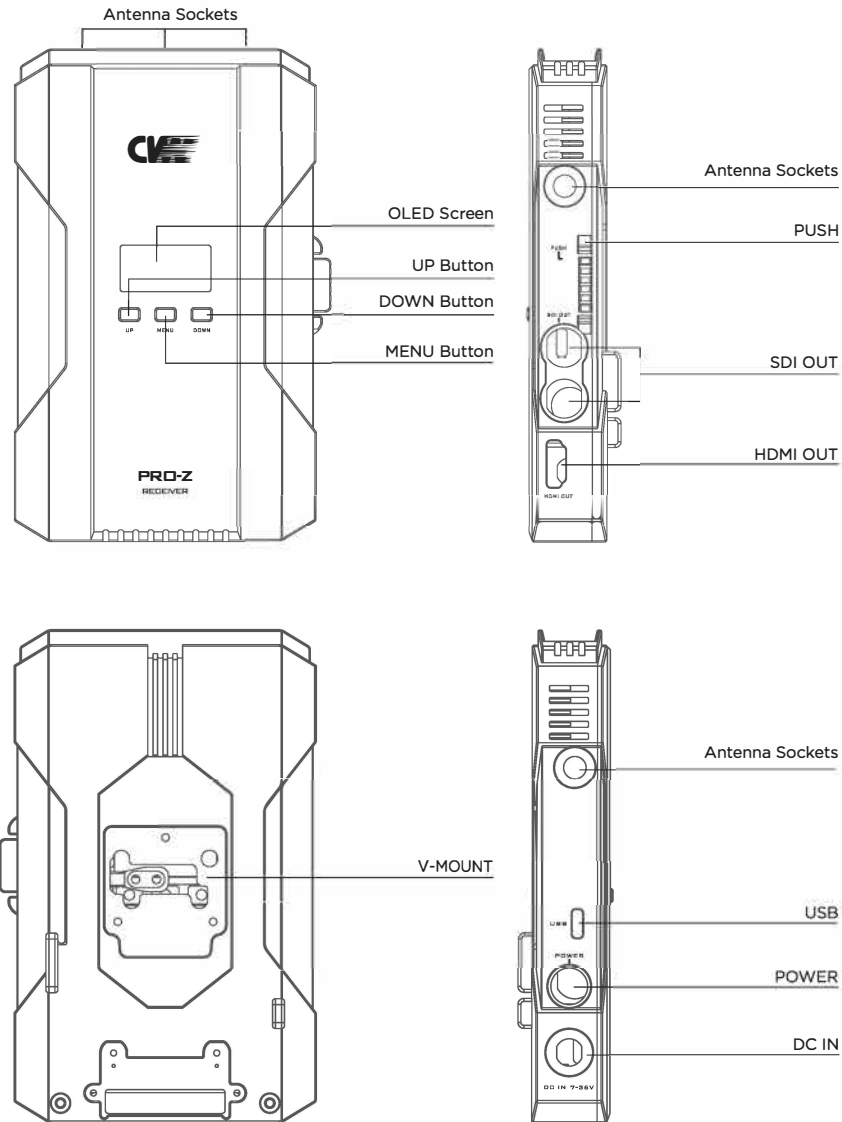
Name	Function
OLED Screen	Displays Channel info, video format, battery capacity, fan status, and other information.
UP Button	Channel switching (+)
MENU Button	Menu interface
Down Button	Channel switching (-)
HDMI IN	HDMI signal input
SDI LOOP	SDI signal loop output
SDI IN	SDI signal input
PUSH	V-Mount button (To remove the V-mount battery)
USB	Type-C (for firmware updating)
POWER	Power switch
DC IN	Power input (LEMO 2-pin); Supports 7-36V

Structure & Interface

Receiver: 3118

RX

Receiver Interface Description

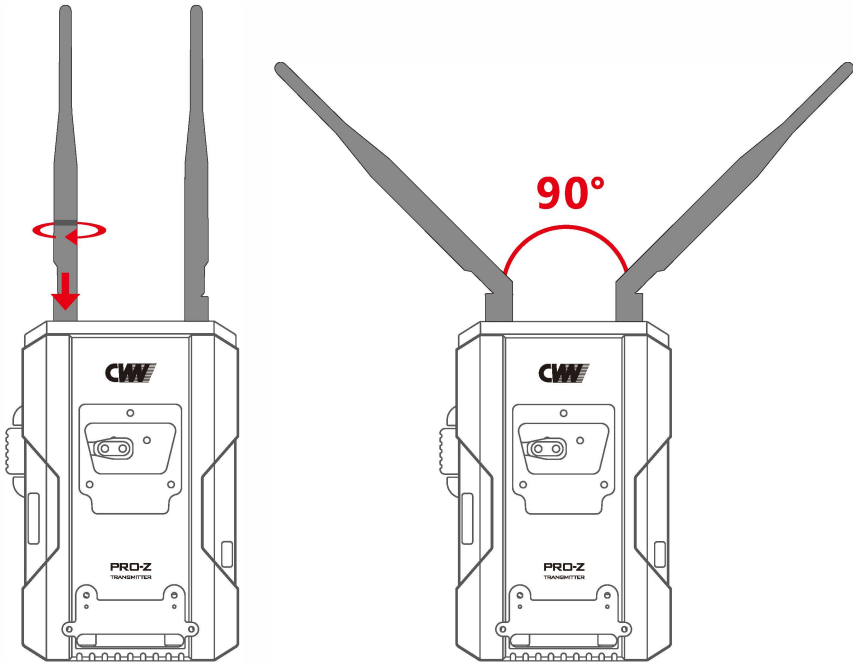


Name	Function
OLED Screen	Displays Channel info, video format, battery capacity, fan status, and other information.
UP Button	Channel switching (+)
MENU Button	Menu interface
Down Button	Channel switching (-)
PUSH	V-Mount button (To remove the V-mount battery)
SDI OUT	SDI signal output
HDMI OUT	HDMI signal output
USB	Type-C (for firmware updating)
POWER	Power switch
DC IN	Power input (LEMO 2-pin); Supports 7-36V

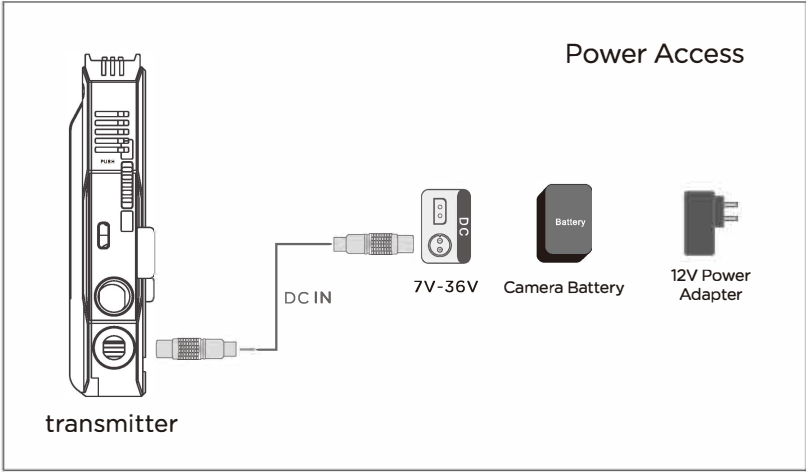
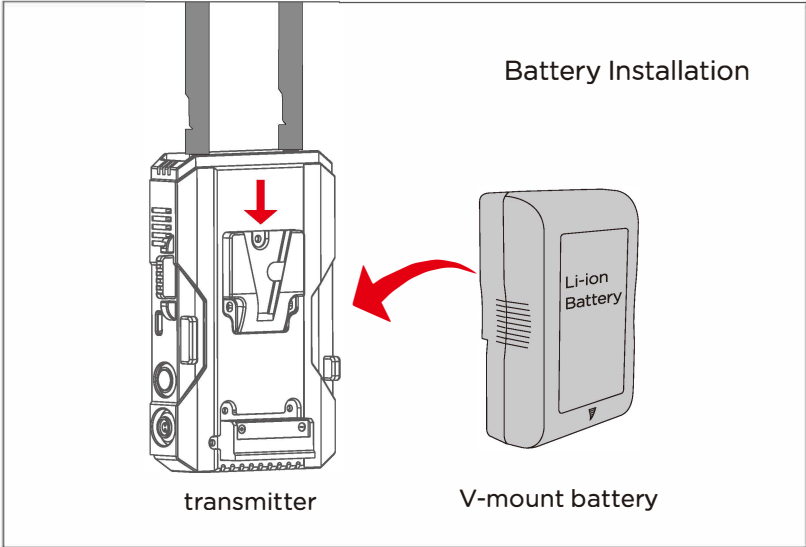
Mounting

For transmitter 7118

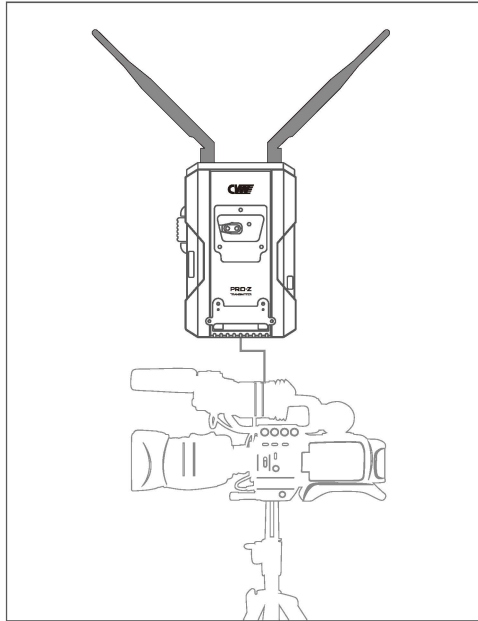
1. Install the antennas and make sure they are tightened. The angle between the transmitter's two antennas should be perpendicular to achieve the best wireless transmission performance. See below:



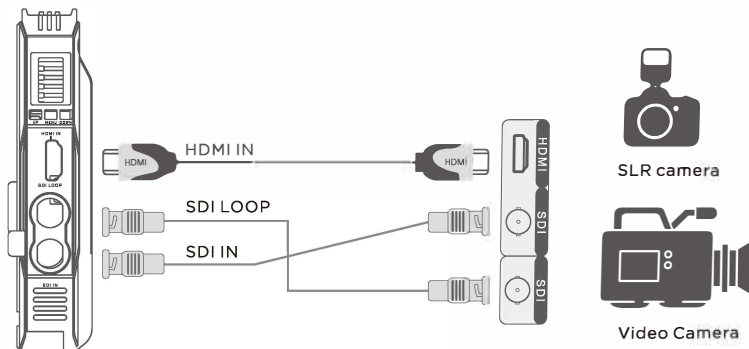
2. Powered by the V-mount battery or DC power input. See below:



3. The transmitter can be installed on camera with the V-Mount or via 1/4 screw threads at the bottom.

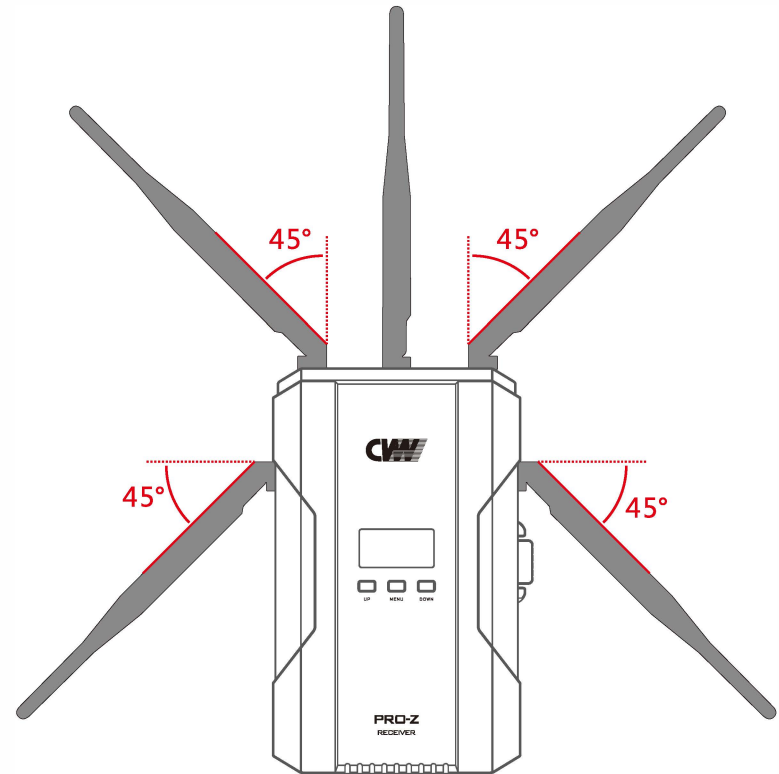


4. Connect the transmitter to the video camera/SLR camera with HDMI/SDI cable. See below:

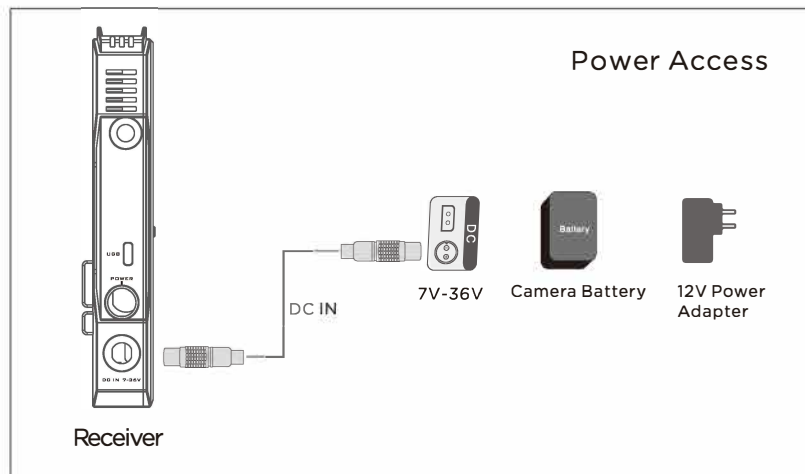
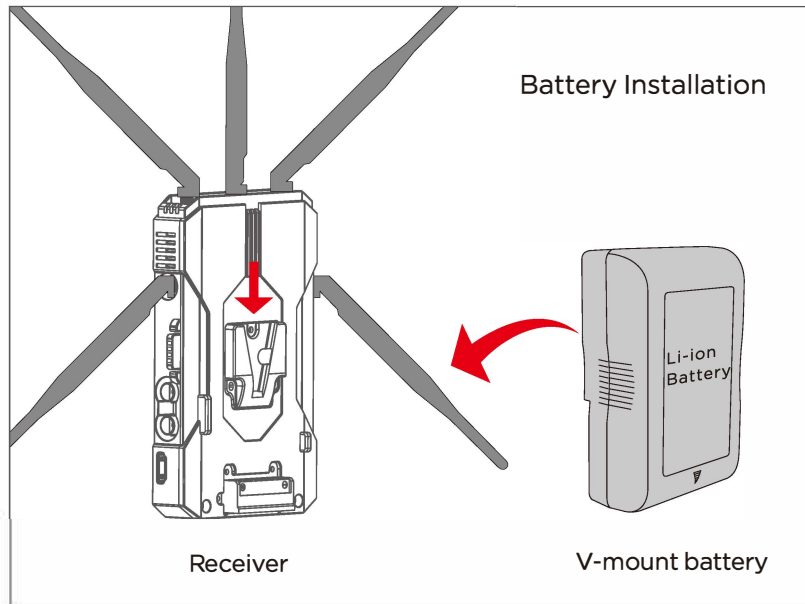


For receiver 3118

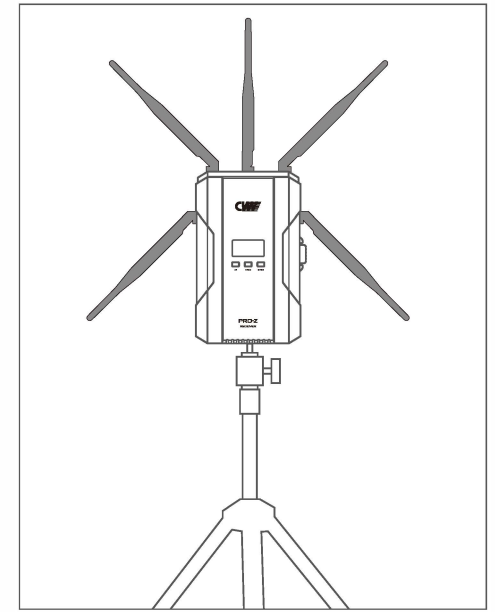
1. Install the antennas and make sure they are tightened. The angle between the receiver's two antennas should be adjusted to a 45° angle to achieve the best wireless transmission performance. See below:



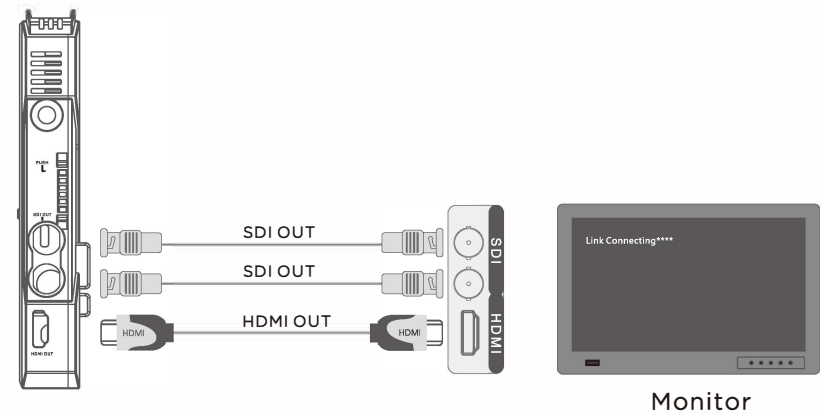
2. Powered by the V-mount battery or DC power input. See below:



3. The receiver can be attached to the tripod with the 1/4 or 3/8 screw thread, or it can be attached to the monitor with the magic arm.



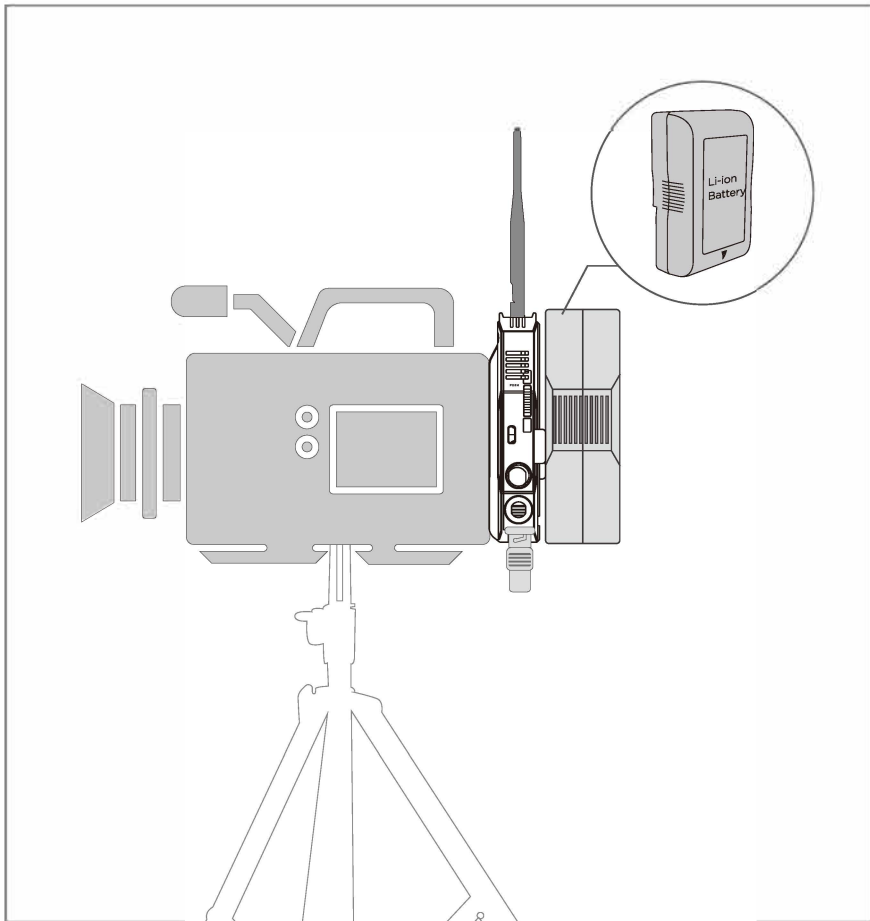
4. Connect the receiver to the monitor or other monitor equipment with HDMI/SDI cable. See below:



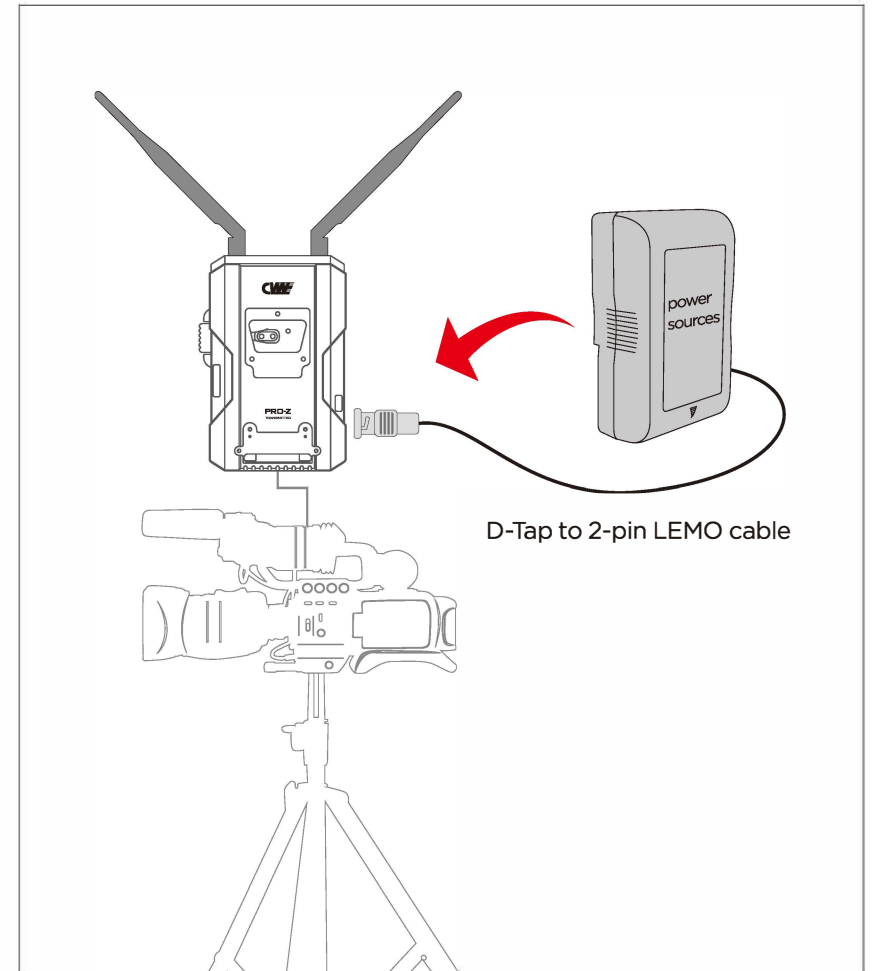
Power Supply and Start-Up

1. The transmitter can be powered with the following methods:

- a. Install the V-Mount battery on the back of the transmitter. Both the camera and the transmitter can be powered by the V-mount battery.

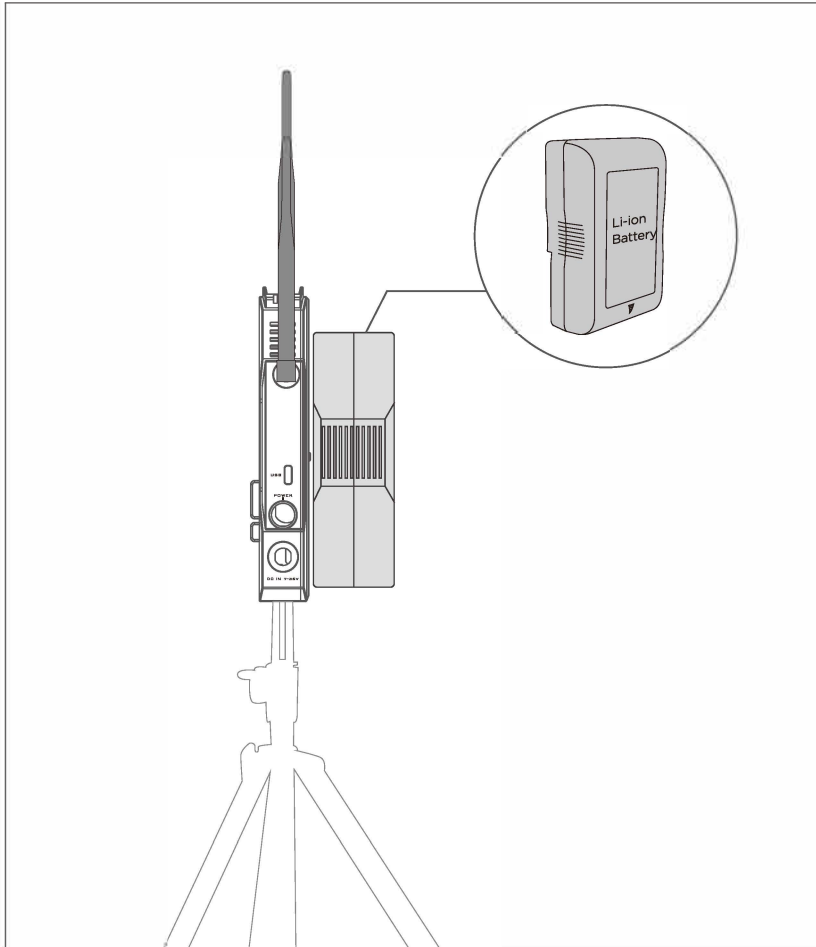


- b. Powered by D-Tap to 2-pin LEMO cable via other power sources.

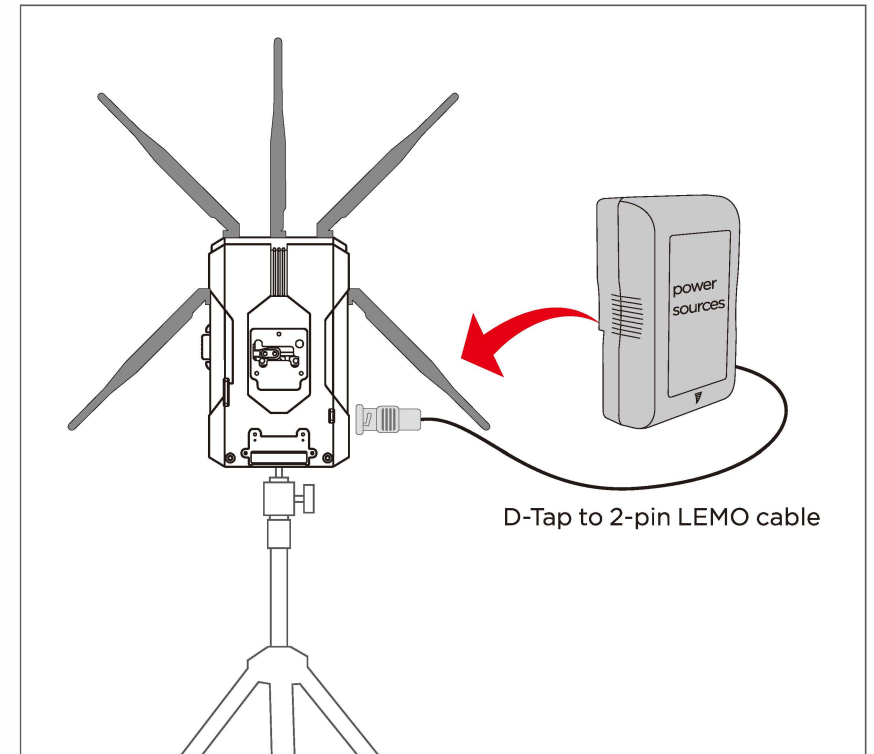


2. The receiver can be powered with the following methods:

a. Powered by V-mount battery.



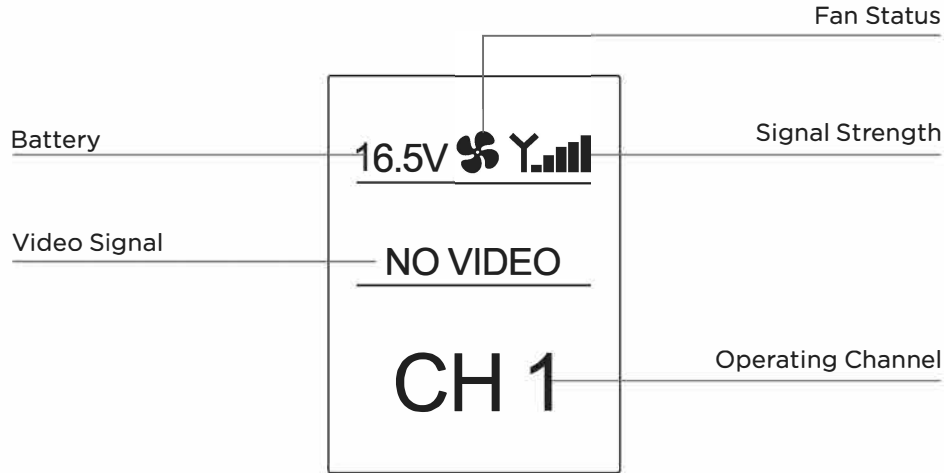
b. Powered by D-tap to LEMO power cable via other power sources.



3. After power is in use, the transmitter and the receiver takes approximate 10s to start up. When this kit boots up, it will automatically connect by default.

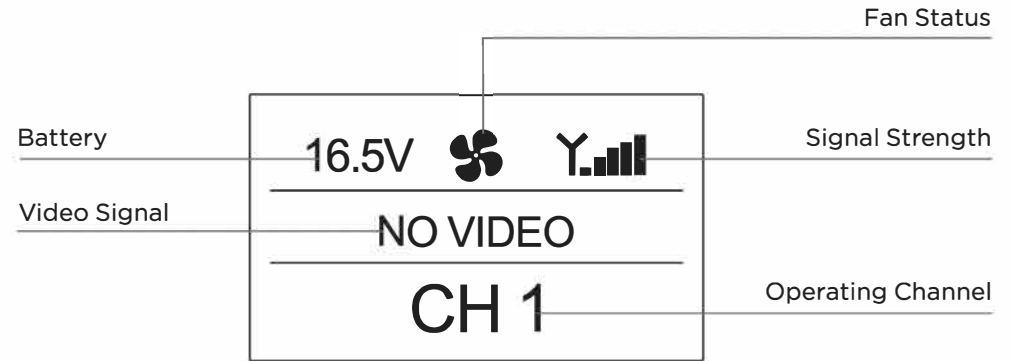
OLED Display Description

7118 OLED Status



Item	Status
Battery	Displays battery voltage
Fan Status	When the fan is on, it displays rotating fan blades; When the fan is off, it displays non-rotating fan blades.
Signal Strength	When the network is not connected, it displays "x"; When the network is connected, it displays the signal strength status.
Video Signal	When no signal is recognized, it displays 'No Video'; When the signal is recognized, it displays the video format.
Operating Channel	Displays the current operating channel

3118 OLED Status



Item	Status
Battery	Displays battery voltage
Fan Status	When the fan is on, it displays rotating fan blades; When the fan is off, it displays non-rotating fan blades.
Signal Strength	When the network is not connected, it displays "x"; When the network is connected, it displays the signal strength status.
Video Signal	When no signal is recognized, it displays 'No Video'; When the signal is recognized, it displays the video format.
Operating Channel	Displays the current operating channel

Channel Switching Operation

1. Press the Up or Down Button
2. Then press the Menu button to confirm.

Important Reminder: When switching channels, please note that the transmitter and the receiver must be set to the same channel so they can stay connected.

Transmitter's Menu Button:

Long-press for 3 seconds and enter the menu interface. The configurable settings are: fan status, languages, firmware version number.

Fan Status:

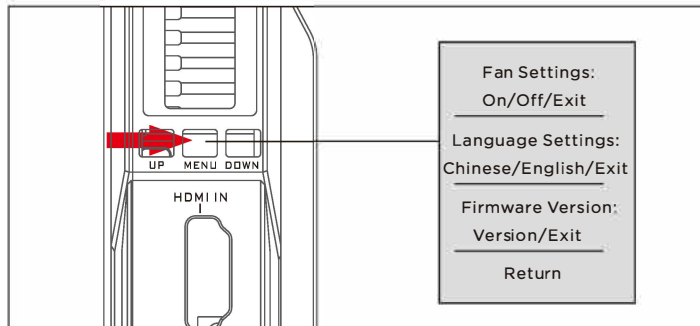
Manual mode: ON/OFF.

Auto mode:

The fan can be auto adjusted in accordance with the internal heat status.
Important Reminder:

- a. When the transmitter is overheated, the fan will auto start up to avoid high temperature to damage to the machine.
- b. The fan can be triggered to off when you are recording.

Language: Chinese/English



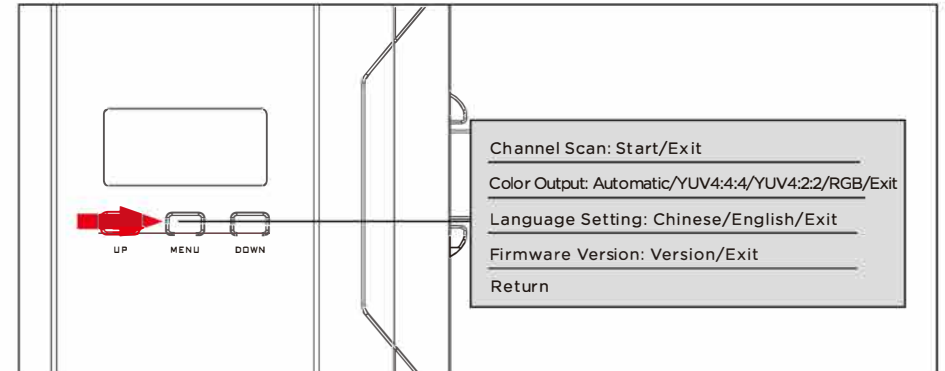
Receiver's Menu Button:

Long-press for 3 seconds to enter the menu interface. The configurable settings are: channel scan, color space output, language settings, firmware version number.

Channel Scan: Scan the existing channels and manually select the available one based on the displayed results.

Color Space Output: Automatic/YUV444/YUV422/RGB (default automatic, which is set as the receiver's HDMI signal output setting)

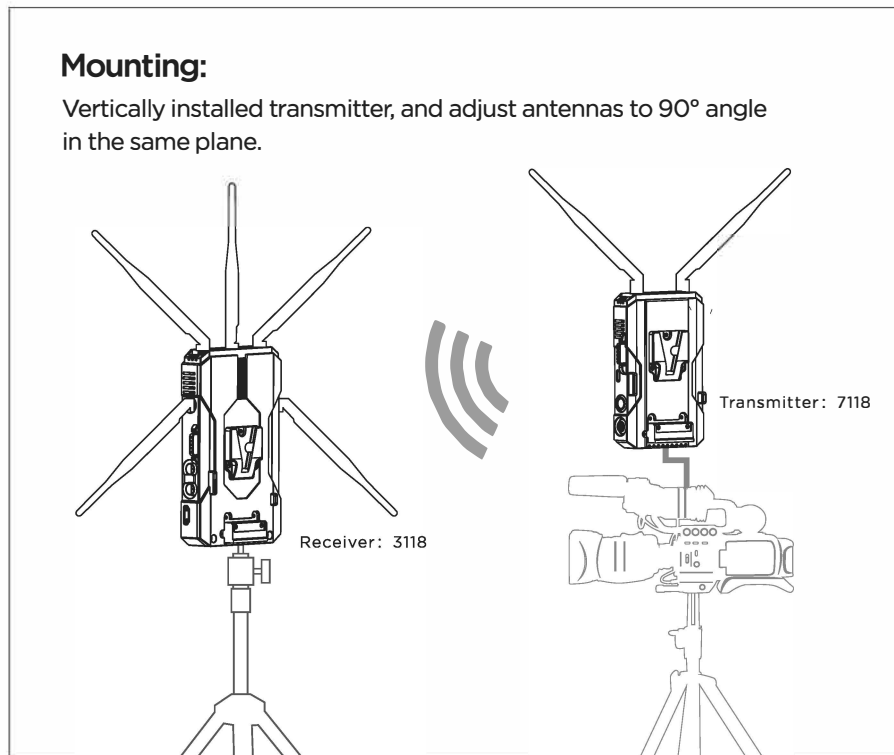
Language: Chinese/English



Precautions

Installation Height and Distance

- a. The transmission range is up to 800m in wide-open, unobstructed, and optimal antenna installation condition. This distance is shortened in non-optimal installation conditions. If multiple kits are operating simultaneously, each of their transmitters and receivers must be separated from each other at least 2 meters apart.
- b. This kit's operating channel is 5GHz. In order to ensure stable wireless signal transmission, it is recommended that the transmitter's height should be at least 1.5 meters above the ground, while the receiver's height should be at least 2 meters above the ground.



- c. When this kit and other wireless devices are operating simultaneously, in order to stop this kit from interference, please adjust distance at least 2 meters.

Channel Settings

Suppose the kit you own support 18 channels

- a. When the kit is in use, it is recommended to set CH5-CH9 or CH12-CH18 as the operating channel, as these channels will allow for less overlap with other device signal.
- b. When multiple kits are in use simultaneously, they must be set to different channels and it is recommended to keep them at least one channel apart. For example, if kit 1 is on CH5, kit 2 could be on CH7. In addition, the transmitters and the receivers of each kit shall be at least 2 meters apart.

HDMI/SDI Connection and Antenna Installation Recommendations

- a. First connect the HDMI/SDI cable, and then switch on the power source.
- b. These antennas are demountable. Install the antennas and make sure they are tightened. Then start up the power source. If turning on the power source before installing the antennas will damage the product.
- c. This product comes with a V-Mount plate and a magic arm that can be installed and fixed in accordance with the compatible devices.
- d. In order to get the best wireless transmission performance, all the transmitter antennas toward the receiver antennas shall be face-to-face.

Battery Endurance

Note: The following values are only for reference. Battery power density, usage environment, and other factors can impact battery endurance. Using V-Mount 95Wh battery as an example, a transmitter with 12W of power consumption and a receiver with 8W of power consumption, it can be operated with the transmitter for about 6-7 hours and with the receiver for about 9-10 hours.

Troubleshooting

Problem	Reason	Solution
No signal input	Transmitter and receiver cannot establish a connection	Examine whether the product's antenna is installed.
		Examine whether the power adapter or battery input meets the product's specification requirements.
		Examine the product to check whether it can start up normally; Whether the screen can display normally.
		Examine whether the product's transmitter and receiver's channels are compatible.
	The image is blurry or frozen	Confirm the product's channel, switch the channel to CH5-CH9 to verify
		The image is blurry or frozen Confirm the transmission distance and environment; Try decreasing the distance or increasing the tripod's height.
Confirm whether multiple sets are operating simultaneously. In this situation, please set them at 1 or more channels apart. For example, set one of them at CH5, another at CH7, and each of their transmitters and receivers must be 2 or more meters apart.		
Image	No image output (receiver connect to the switch console or monitor)	Confirm whether other wireless products such as wireless intercoms are on-site. Please adjust the distance between this product and other wireless devices based on the on-site situation (recommended distance is 2 or more meters apart).
		Examine whether the power adapter or battery input meets the product's specification requirements.
	Output image is a green flashing screen	Confirm whether the transmitter and receiver have established a network connection successfully. It could be confirmed by viewing the signal strength icon on the display screen.
		Confirm whether the transmitter and receiver have successfully established a network connection. Can confirm this by viewing the signal strength icon on the display screen.
		Confirm whether the transmitter's display screen detects the video format. If it does not, confirm whether the video source and transmitter are correctly connected with the video signal cable.
Confirm whether the receiver's display screen detects the video format. If it does not, switch the video source and format to verify. For example, use a format such as 1080 p60 or 1080 i50. If it detects a video format, confirm that the video signal cable has established a normal connection between the switch console, monitor, and receiver.		
Confirm whether the transmitter or receiver's video signal cable has a good connection.		
SDI/HDMI is a digital signal with a fast transmission speed, and it is recommended to use brand-name cables.		

* If the preceding solutions cannot quickly resolve these problems, please contact the distributor or manufacturer for technical support.

FCC Warning

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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: 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.

Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.