

User Manual

Ver:V1.0V01

Please read this User Manual
throughout before using.

Preface

Congratulations on your purchase of this product. Please read this user manual carefully.

1. All internal technologies of this product are protected, including device, software and trademark. Reproduction in whole or in part without written permission is prohibited.
2. All brands and trademarks of SWIT Electronics Co., Ltd. are protected and other relative trademarks in this user manual are the property of their respective owners.
3. Due to constant effort of product development, SWIT reserves the right to make changes and improvements to the product described in this manual without prior notice.
4. The warranty period of this product is 2 years, and does not cover the following:
 - (1) Physical damage to the products;
 - (2) Any damage or breakdown caused by use, maintenance, or storage not according to the user manual's instructions;
 - (3) The attenuation of signal quality resulting from being used in any special environments;
 - (4) Any damage caused by not powering the product by package supplied power adaptor.
 - (5) Any damage or breakdown not caused by the product's design, workmanship, or manufacturing quality, etc.
5. For any suggestions and requirements on this product, please contact us through phone, fax, Email, etc.

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For Your Safety

Before start, please follow the safety precautions below

Do not try the followings:

1. Unauthorized repairs or parts replacement or other operations.
2. Inappropriate placement including but not limited to lighting, fire, exposure to rain, water or gas.
3. Switch to the power not in the voltage allowable range

- **The product**

1. Do not use the products near water or in high humidity environments.
2. Do not block the ventilation openings or get substances inside, in order to avoid short circuit, fire or electric shock.
3. Switch the power off if any liquid or substance gets inside the product.

- **The power**

The products can be powered by battery or 4-pin XLR power adaptor.

When the batteries are attached to the products, please make sure they are correctly and firmly locked.

Please use the package supplied power adapter. For third party 4-pin XLR adaptor, please make sure the voltage is within the specified range and the polarity connection is correct.

Please disconnect the power cable under the following situations:

1. If you do not operate this monitor for a period of time;
2. If the power cable or power adaptor is damaged;
3. If the product housing is broken.

- **Working Environment**

1. Please don't lay this product on the unstable place.
2. Please don't lay the product on metal shelf, in order to ensure the effective wireless transmission.
3. Please don't use the products in a place with lots of moisture, soot or dust.

About the radio waves

The products adopt 5.1-5.9GHz wireless frequency, with the low antenna power specified under international and U.S. FCC radio wave regulations. Therefore a license for radio station use is not required to operate this product.

1. Product Introduction

This broadcast industry wireless system includes S-4903T transmitter and S-4903R receiver, adopts WHDI (OFDM) technology, supports uncompressed 3G/HD-SDI wirelessly transmitted in 200 meters scale, and with less than 1ms latency, which is widely used in on-site shooting and director monitoring.

2. Features

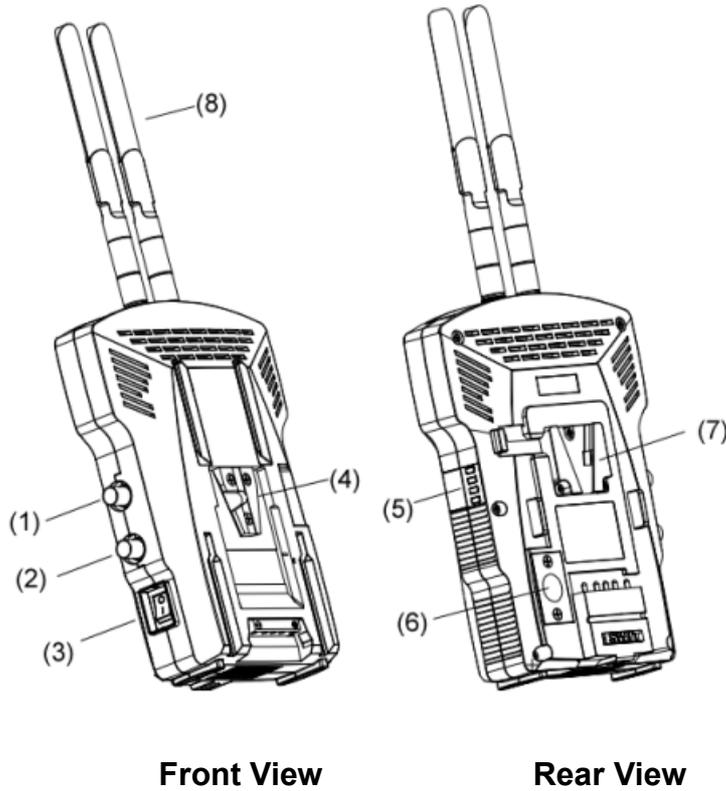
- ◆ **Uncompressed 3Gb/s SDI transmission**
Support up to 1080p 50/60 uncompressed SDI wireless transmission
- ◆ **200 meters transmission distance**
In open outdoor area, the effective transmission distance is approx 200 meters.
- ◆ **Less than 1ms latency**
There's no discernible video delay and you can use it as real time on-location monitoring.
- ◆ **License free operation frequency**
The wireless frequency is 5.1-5.9GHz, license free operated.
- ◆ **Transmitting frequencies**
The system will auto select from 4-ch frequencies, to ensure the effective transmission. In the same location, it supports 4-pair transmissions at most.
- ◆ **SDI embedded audio transmission**
Support CH-1 and CH-2 SDI embedded audio wireless transmission
- ◆ **Encryption**
Support AES 128-bit encryption to protect the transmission.
- ◆ **V-mount fit and power**
Both the transmitter S-4903T and receiver S-4903R are equipped with male and female V-mount, for V-mount camera mounting and V-mount battery powering.
- ◆ **Simple connection**
The wireless system is plug-and-play designed, without any software connection and configuration.

Remark:

1. The transmission distance may be different, and depend on surroundings, radio wave conditions, buildings, etc., the 200 meters transmission distance may be not guaranteed.
2. The wireless transmission might be interrupt if there're many other devices of 5GHz wireless bandwidth operated in the in the same location.
3. Signal reception may be affected by the position, height and angle of devices. If reception video is not stable, please physically adjust placement for the optimized signal.
4. Set the antennas at 45° to each other will enhance the transmission efficiency.
5. The product offers the AES 128-bit encryption to protect the wireless transmission. Anyway, please be ware of the intentional capture from third person.

3. Product Instruction

Transmitter S-4903T

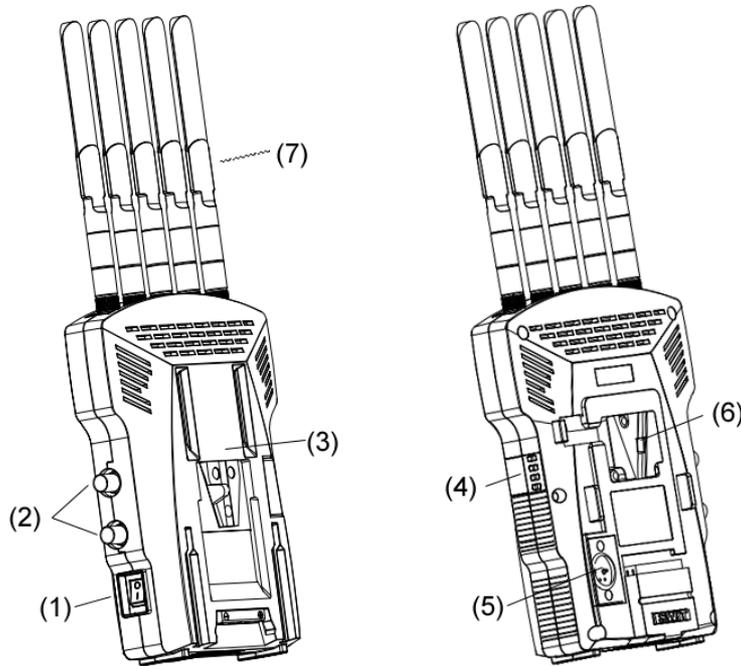


- (1) **SDI IN:** 3G/HD-SDI input (BNC connector)
- (2) **SDI LOOP:** 3G/HD-SDI loop through output (BNC connector)
- (3) **Power:** Switch the power on/off
- (4) **V-mount power adaptor**
Connect the S-4903T to V-mount cameras or devices, and supply DC power
- (5) **LED status indicators**
Including Power, Video Signal and Wireless connection condition indicators
- (6) **DC-IN**
Power the S-4903T via 4-pin XLR adaptor.
Voltage range: DC 7-17V; Pin assign: No.1: negative, No. 4: positive
- (7) **V-mount plate**
Connect V-mount battery to S-4903T to supply power
- (8) **Antenna**

The description of LED status indicator

Device	Indicators	Status	Description
S-4903T Transmitter	NET	Constant On	Wireless connected with the receiver
		Normal Flashing	Searching the connection with the receiver
		Fast Flashing	System fault (Meanwhile the VIDEO indicator is fast flashing as well)
	Reserved	Off	Reserved function
	Video	Constant On	The receiver S-4903R has got SDI Video output
		Normal Flashing	No SDI Video output at the receiver
		Fast Flashing	System fault (Meanwhile the NET indicator is fast flashing as well)
	Power	Constant On	Power connected and switched on
		Off	Power disconnected or switched off

S-4903R Receiver



Front View

Rear View

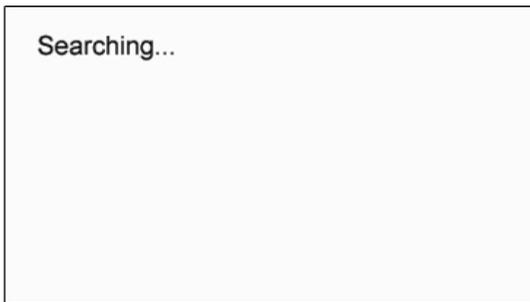
- (1) **Power:** Switch the power on/off
- (2) **SDI OUT:** 3G/HD-SDI output x2 (BNC connector)
- (3) **V-mount power adaptor**
Connect the S-4903R to V-mount devices, and supply DC power
- (4) **LED status indicators**
Including Power, Video Signal and Wireless connection condition indicators
- (5) **DC-IN**
Power the S-4903R via 4-pin XLR adaptor.
Voltage range: DC 8-17V; Pin assign: No.1: negative, No. 4: positive
- (6) **V-mount plate**
Connect V-mount battery to S-4903R to supply power
- (7) **Antenna**

The description of LED status indicator

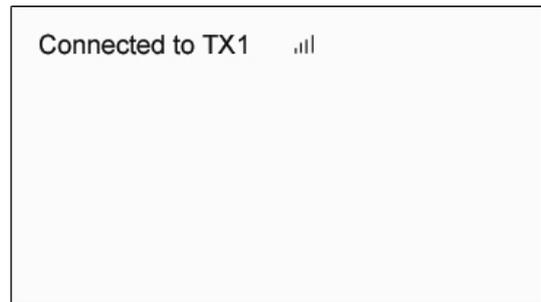
Device	Indicators	Status	Description
S-4903R Receiver	Power	Constant On	Power connected and switched on
		Off	Power disconnected or switched off
	Video	Constant On	The receiver S-4903R has got SDI Video output
		Fast Flashing	System fault (Meanwhile the NET indicator is fast flashing as well)
	NET	Constant On	Wireless connected with the transmitter
		Normal Flashing	Searching the connection with the transmitter
		Fast Flashing	System fault (Meanwhile the VIDEO indicator is fast flashing as well)
Reserved	Constant On	Reserved function	

4. System Connection

1. Check the match codes on the products. The S-4903T and S-4903R with same match codes are allowed to transmit. (For example: match the S-4903T with “TRANSMITTER ***801” code and the S-4903R with “RECEIVER ***801” code.)
2. Connect the SDI video source with the “SDI IN” port of S-4903T transmitter.
3. Connect the “SDI OUT” port of S-4903R receiver with SDI monitor or receiving devices.
4. Power on the S-4903T and S-4903R by battery or 4-pin XLR DC cable, and the system will search wireless connection automatically, and display OSD as Pic (1).
5. After 10-20 seconds, the wireless will be connected and the receiver will display OSD as Pic (2).



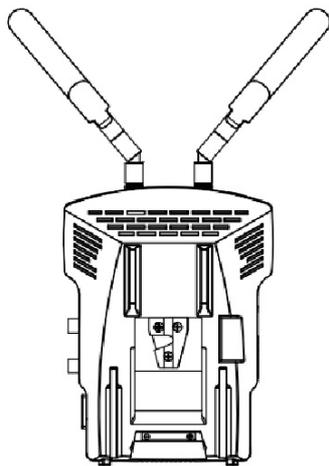
Pic (1)



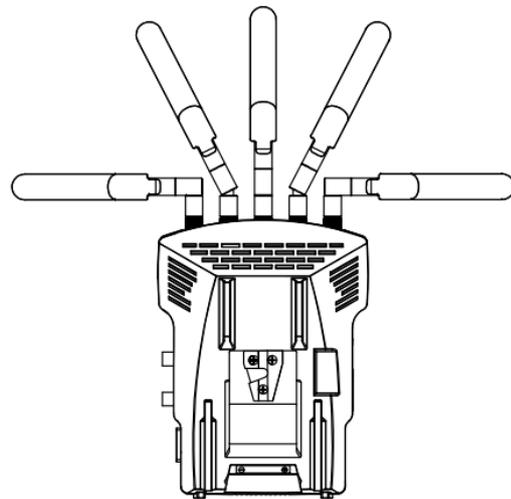
Pic (2)

Recommended antenna position:

To ensure the transmission efficiency, it is recommended to adjust the antennas at 45° to each other. See Pic (3) and Pic (4).



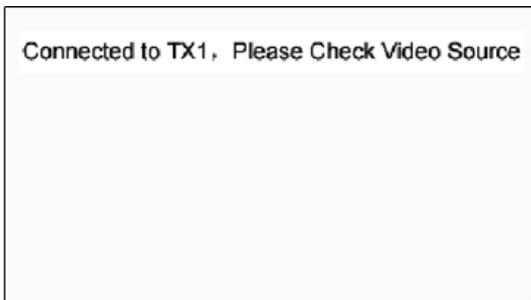
Pic (3)



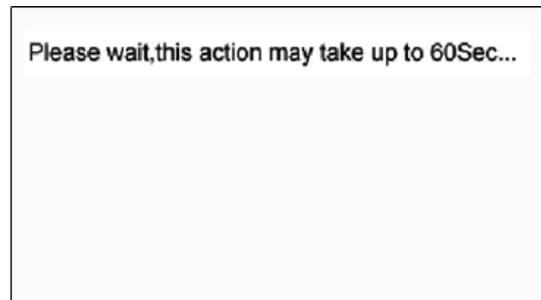
Pic (4)

5. Trouble-Shooting

If the receiver failed to output video correctly, and OSD displayed as Pic (5) or Pic (6), please find the solution from following chart:



Pic (5)



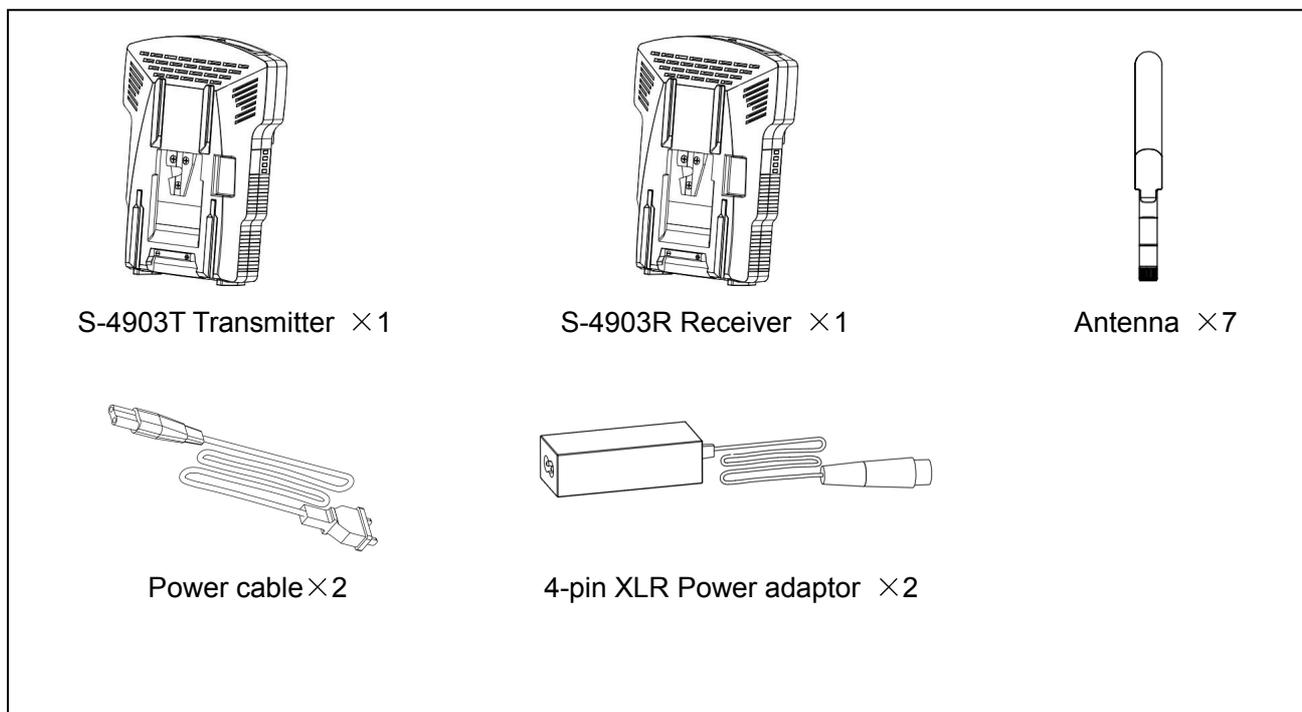
Pic (6)

OSD Display	Possible Causes	Solution
Searching...	The transmitter S-4903T is powered off	Check the power supply of the transmitter.
	Antenna unconnected of either transmitter or receiver	Fix on the antennas to both transmitter and receiver, and check the connection conditions.
	The transmission distance is out of effective range.	Try the wireless transmission at a closer distance.
	There're obstacles between transmitter and receiver, and blocked the signal transmission.	Try to get rid of the obstacles, or operate at a closer transmission distance
Connected to TX1, Please Check Video Source	There's no recognized video input at transmitter side.	Check the SDI video source and cable connections of S-4903T transmitter. (See the supported SDI format at 6. Specifications)
Please wait, this action may take up to 60Sec...	The wireless transmission is disturbed by environment, such as other electronic devices in the same location.	Wait 60 seconds or restart the transmitter and receiver
	The transmission distance is out of effective range.	Try the wireless transmission at a closer distance.

6. Specifications

Model	S-4903T		S-4903R
Input	3G/HD-SDI input×1		Wireless receiving
Output	3G/HD-SDI loop output ×1 Wireless transmitting		3G/HD-SDI output ×2
SDI Format	SMPTE-425M	1080p (60 / 59.94 / 50)	
	SMPTE-RP211	1080psf (30 / 29.97 / 25 / 24 / 23.98)	
	SMPTE-274M	1080p (30 / 29.97 / 25 / 24 / 23.98)	
		1080i (60 / 59.94 / 50)	
SMPTE-296M	720p (60 / 59.94 / 50)		
Wireless frequency	5.1 ~ 5.9GHz License-free		
Radio modules	OFDM		
Max Transmission distance	Approx 200m		
Latency	≤ 1ms		
Power consumption	≤ 10W		
Radio power	≤ 63mW	/	
Input voltage	DC 7~17V	DC 8~17V	
Working environment	Temperature: 0°C ~+40°C		
Dimension	146×344×58 (with antenna)		
Net weight	624g (with antenna)	655g (with antenna)	

7. Packing List



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