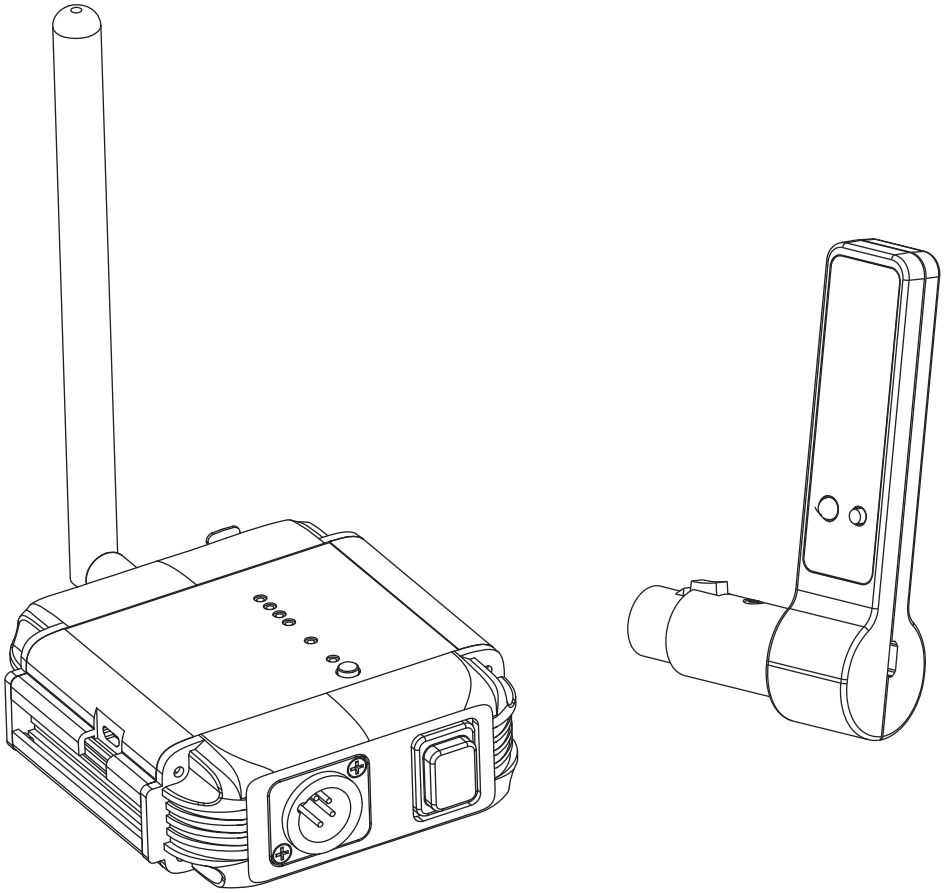
SWIT®

SWIT Electronics Co., Ltd.

Model: RadioLux Tx
RadioLux Rx

500m/1600ftWireless DMX Converter



User Manual

Thank you for choosing our products,
please read this manual carefully before use.

Ver:B

Statment

Any internal technology of this product (including hardware devices, software design, product trademarks) are protected by law, and any infringement of the intellectual property rights of this product will be held legally responsible.

All brands and trademarks of our company in this product are protected by law. All brands and trademarks of other companies involved in the product are subject to the legal protection of their owners.

In order to better serve our users, our products will be continuously improved and developed, and we reserve the right to modify and improve the products described in this manual without prior notice.

The warranty period of this product is two years, and the following cases are not covered by the warranty:

(1) Man-made damage such as wear and tear of appearance;

(2) Failure to use, maintain and store the product in accordance with the requirements of the manual resulting in failure or damage;

(3) Use in a special environment, resulting in the attenuation of signal quality;

(4) The use of non-product matching power adapter and lead to product damage;

(5) Other non-product design, technology, manufacturing, quality and other problems caused by the failure or unauthorised and private disassembly, maintenance or replacement of parts and other operations.

Users find problems in the process of use or have suggestions and requirements for our products, please contact us by phone, fax, e-mail and other ways.

SWIT Electronics Co., Ltd.

Address: 10 Hengtong Road, Nanjing Economic and Technological Development Zone, Nanjing 210038, P.R.China

Tel: +86-25-85805753

Fax: +86-25-85805296

Email: contact@swit.cc

http://www.swit.cc

Safety Precautions

Please observe the safety precautions in this manual and operate it in the correct way, we guarantee that this product will last for a long time, but it does not include the following conditions:

Unauthorised disassembly, repair or replacement of parts.

Damage caused by accidents, including but not limited to lightning, fire, exposure to rain or moisture.

Use of a type of power supply that is not within the permissible voltage range of this product.

Caution

- Do not allow any liquids to spill on the product.
- To avoid electric shock, do not block or tape the ventilation holes on the product, do not remove the outer cover of the product, or put large pins, wires, or foreign objects into the gaps in the ventilation openings.
- To reduce the risk of electric shock or fire, do not leave this product in the rain or in a damp place.

Danger

- Before connecting to any device, switch off the power before operation.
- Power outlet: To avoid short-circuit electric shock or fire, make sure that the type of power outlet used is within the permissible voltage range of this product.
- Power cable: Do not press any objects and heavy objects on the power cable to avoid the power cable being pressed or pulled tight.
- Power load : Do not exceed the loads on wall outlets, extension cords, or other multi-outlet receptacles to avoid fire or electric shock situations.
- Lightning: To avoid lightning or when the product is not to be used for a long time, unplug/connect the battery.

Operating environment

- Do not place this product in an unstable location; this product may be severely damaged by dropping.
- Do not place this product near equipment that is too hot, too cold, or too wet and that causes strong magnetic fields.
- Do not place this product on a shelf made of metal, as this may hinder wireless communication.

Packing list

No.	Packing details	Quantity
1	Transmitter	x 1
2	Receiver	x 1
3	Antenna	x 2
4	Power adapter	x 1
5	Warranty card	x 1
6	USB Adapter	x 1

1. Product Brief

Wireless DMX converter box is divided into transmitter and receiver, support full-channel DMX512 protocol wireless transmission, support automatic frequency switching, DC XLR DC power supply interface power supply. The wireless transmission distance reaches 500 metres under the condition of visibility, compact size, powerful function, easy to carry, stable signal quality.

2. Product Feature

◉ **DMX wireless transmission**
Supports full-channel DMX512 protocol for wireless transmission.

◉ **500 metres transmission distance**
The effective wireless transmission distance can reach 500 metres under outdoor visibility conditions.

◉ **Wireless Frequency**
This system supports wireless frequency range of 863MHz-928Mhz, the product will set the corresponding frequency band according to different regions, and supports automatic jumping to the optimal frequency point when power on.

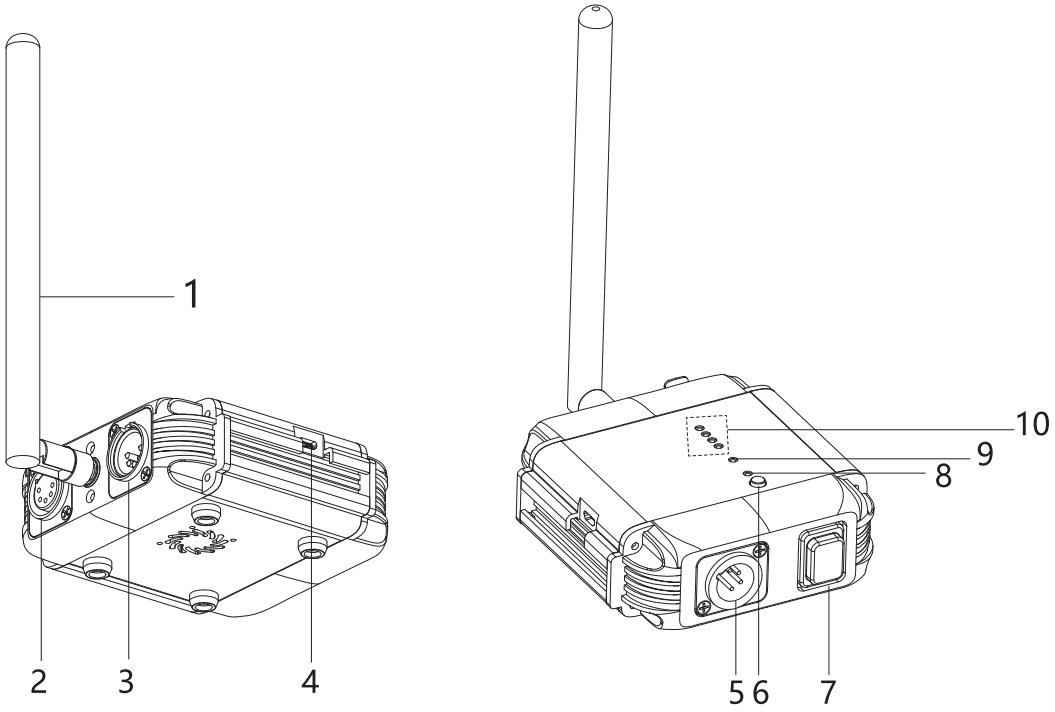
◉ **Connection Mode**
Supports manual pairing and unbundling of transmitters and multiple sets of receivers at the same time, as well as pairing and unbundling of individual receivers and transmitters.

Caveat:

1. The effective transmission distance is related to the site conditions, wireless environment, and obstructions. This system does not guarantee that the nominal transmission distance can be achieved in any environment.
2. This system operates in the 863Mhz-928Mhz wireless band. If there are other 863Mhz-928Mhz wireless devices operating at the same time at the work site, it may interfere with the transmission quality of this system.
3. The quality of wireless transmission may be affected by the placement of the transmitter and receiver, height, angle, etc. If the wireless signal is unstable, please try to adjust the position to get a stable transmission signal.
4. During the use of this product, please adjust the antenna into a vertical state, and elevate the receiver, more conducive to the transmission distance and quality of wireless communication.

3. Apperacnce

Transmitter



(1) Antennae
(2) DMX OUT：DMX signal loop out.
(3) DMX IN：DMX signal input
(4) Firmware：Firmware upgrade port.
(5) DC IN: Supports 7 to 24V wide voltage input.
(6) Press-Link/Long-UnLink：Pairing/Unpairing button.
(7) ON /OFF：Power Switch
(8) LED Indicator
(9) DMX IN：DMX Signal indicator
(10) RSSI:Signal strength indicator

Description of Status Indicators

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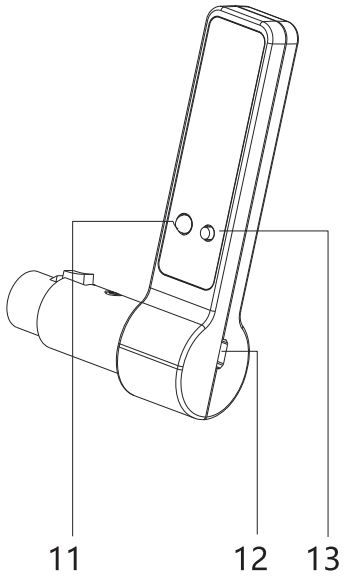
Equipment	Indicator	Statuses	Description
Transmitter	Channel Light	Constant brightness	Power on
		Extinguish	Power disconnection
		Slow flash	unwind
		FLash	matched pair
	DMX IN	Constant brightness	Recognisable DMX signal input available
		Extinguish	No recognisable DMX signal input
		Flash	DMX signal input unstable
	RSSI	3-4 Frame Signal	Signal strength normal
		1-2 Frame signal	Low signal strength

Receiver



(11) Channel status indicator.
(12) Micro USB-DC 5V power input connector.
(13) Unbundle button

Description of Status Indicators

Equipment	Indicator	Statuses	Description
Transmitter	channel status light	Constant brightness	Successful connection between receiver and transmitter with DMX data transmission
		Extinguish	Power disconnection
		Blue Breathing Light	Successful connection between receiver and transmitter with DMX data transmission
		Flashing	matched pair
		Slow flash	Successful connection between receiver and transmitter but no DMX signal transmission
		Cycle	paired but not connected state

4. Pairing method

(1) Turn on the power of RadioLux transmitter/receiver, the "channel" light on the transmitter side is always on, and the "channel" light on the receiver side is a blue breathing light.

(2) Short press the transmitter pairing button to enter the pairing mode, the receiver will be in automatic pairing mode in the case of unpaired, during the pairing process the channel lights of the transmitter and receiver will flash fast for 10 s. After pairing is successful, the channel lights will stop flashing fast.

(3) Long press the transmitter pairing button to unbundle all the connected receivers, in the process of unbundling, the transmitter channel light first flashes for 5S and then lights up, and the channel light of the unbundled receivers is in the state of blue breathing light.

⑷ Long press the pairing button of the receiving end to unbind the current receiving end from the transmitting end, whether the channel light of the transmitting end is in the state of blinking and then always on during the unbinding process, and the channel light of the receiving end is in the state of blue breathing light.

Note：

1. To pair, simply press the pairing button on the transmitter side and the receiver side will automatically pair.
2. Ensure that the wireless device you are using has been paired and paired successfully during normal use.
3. If the channel light on the receiving end is not in the blue breathing light unpaired state you need to unpair before pairing.
4. The paired receiver and transmitter will be connected automatically after switching on the power, no need to pair again.

5. Mounting

⑴ Connect the DMX IN connector of the RadioLux transmitter to the DMX OUT of the light console.

⑵ Connect the DMX OUT connector of the RadioLux transmitter to the DMX IN of the fixture under test.

⑶ Connect the DMX OUT connector of the RadioLux receiver to the DMX IN of the fixture under test.

⑷ Turn on the RadioLux transmitter/receiver, the "Channel" light is always on. After the transmitter is connected to the DMX signal, the DMX IN signal lamp is always on in green and the SSI signal strength indicator lamp is always on in green.

Note：

1. After connecting the RadioLux transmitter to the power supply, you need to turn the power switch on the product to "ON" in order to supply power.
2. If the RadioLux transmitter is switched on and the RSSI signal strength indicator green light shows only one frame, it means that there is interference on the current channel and it is necessary to switch on and off the transmitter again for an automatic frequency sweep.

6. How to get the best wireless transmission

(1) Keep the antenna angles of the transmitter and receiver in a vertical upward state (Figure 1) to extend the transmission distance and stabilise the transmission quality.

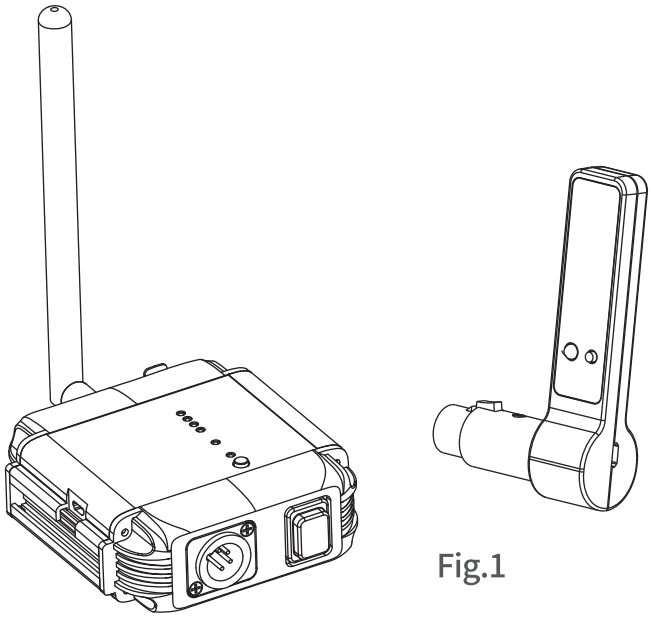


Fig.1

(2) Try to elevate the receiver as high as possible in relation to the fixture under test to minimise interference on the transmission route.

7. Fault Resolution

In the process of using the product, if the signal output from the receiver cannot be displayed normally, the general possible causes and solutions are shown in the following table

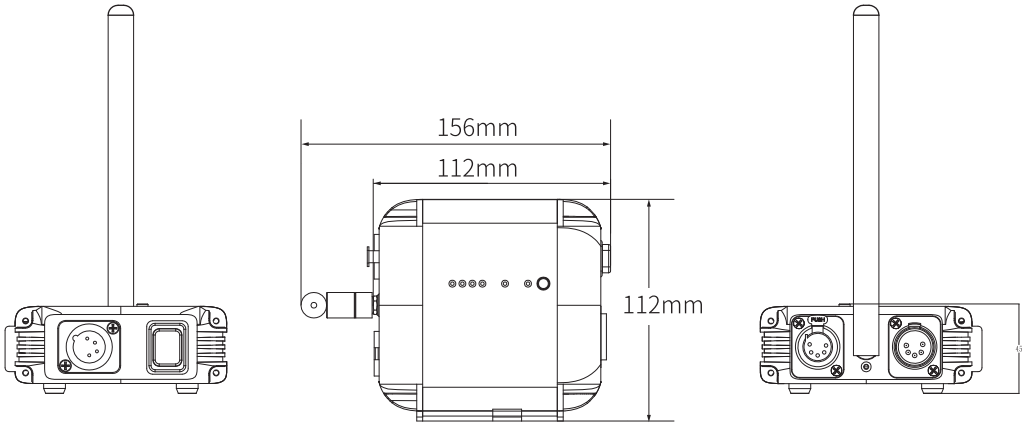
Terminal display	Possible causes of failure	Methods of handling
No DMX signal	Transmitter, receiver not powered on	Connect the transmitter and receiver to the power supply
	Transmitter not connected to light console DMX cable	Reliably reconnect
	The DMX address output from the light console is not compatible with this product.	Change the DMX address of the light console, this product only supports 1-512 channels.
Signal connection interruption	The transmitter is not connected to the DMX cable of the light console.	Reliably reconnect
	Interference from equipment in the same operating frequency band during product operation	Wait 1 minute or re-power on the transmitter for re-sweeping
	Transmitter or receiver antenna not mounted, tightened	Assemble and tighten the antenna
	Transmitter and receiver are too far apart	Closer distance between transmitter and receiver

8. Technical Parameters

Model	RadioLux Transmitter	RadioLux Receiver
Supported DMX Cnannels	1-512	
Terminal-to-terminal DMX delay	30-110ms	
Supported wireless channels	7 channels	
operating frequency	863Mhz-928Mhz	
DMX Interface	DMX Input*1 DMX Output*1	DMX Input*1
radiated power	14dBm	/
Power Supply	DC 7-24V	Micro USB DC 5V
Power Consumption	⩽5.5W	⩽0.5W
Operating temperatures	-10°C～50°C	
Dimensions (W*H*D) without antennae	112 x 123 x 45	Figure below
Weight (without antenna)	379g	48.3g
visibility conditions	500meters	

9. Overall Size

Transmitter:



Receiver: