

1. Easy way to start the device

1.1 Operating steps and instructions

1.1.1 Transmitter

- Install the antenna.

In order to guarantee the wireless signal omnidirectional coverage, it is recommended to install the antenna in front and behind. Please refer to section 1.2 for details.

- Install the camera. *Note that one side of the camera cable port with label connect to the transmitter and the other side connect to the camera.*
- Connect transmitter to the power. There should be below instructions:

- a) After 15 seconds of power on, the WORK light will display the breathing effect, and the WORK light will loop from on to off on display.
- b) CAM light turn-on.
- c) LINK light turn-on if the transmitter connect to receiver.

1.1.2 Receiver

- Install the antenna.
- Install the monitor by HDMI cable. (optional)
- Turn off the receiver power button, then connect to the power (12V-DC power).
- Turn on the power.

There should be below instructions:

- a) WORK light flash regularly
- b) HDMI light turn-on (if installed the HDMI monitor).
- c) LINK light turn-on if the receiver connect to transmitter.
- d) HDMI monitor displays (if installed the HDMI monitor).
- e) The monitor shows logo "NEXG1" after receiver connect to the power.
After that, the monitor shows progress bar: Start-up / Selfcheck / Link.
- f) Monitor real-time display the camera video when the transmitter connect to the receiver.

1.1.3 Mobile

Please install APP on your phone first. In App store, search "r2teck" and download on iOS device.

- The mobile connects to the Wi-Fi network which name is the same as the device number, **Wi-Fi password is "12345688"**.

- Run the APP "NEXG1".
- the MOBILE light on the receiver turn-on.

Currently only allow working one mobile, if want to change the mobile, please follow below process:

- a) Disconnect the mobile with receiver Wi-Fi network.
- b) Wait receiver MOBILE light turn off.
- c) Repeat the above 3 steps.

Note: If you need to download on the iPad, please choose " iPhone Only". In addition, it is recommended to use systems above IOS 9.0.

1.2 Antenna installation

1.2.1 Transmitter

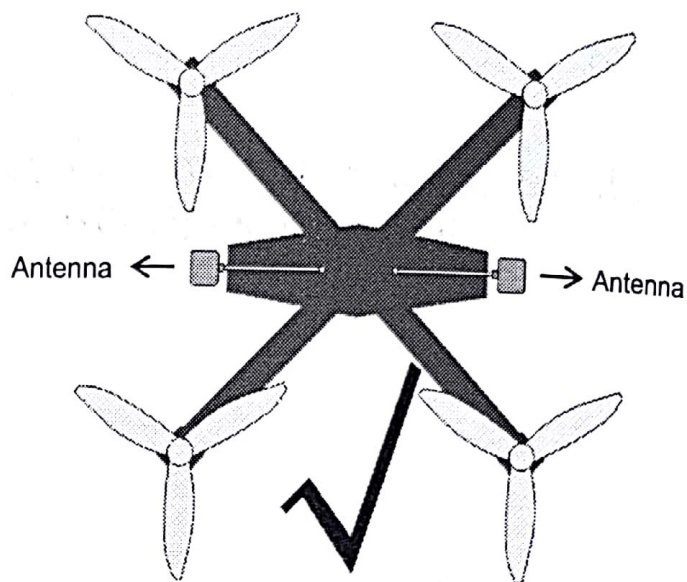
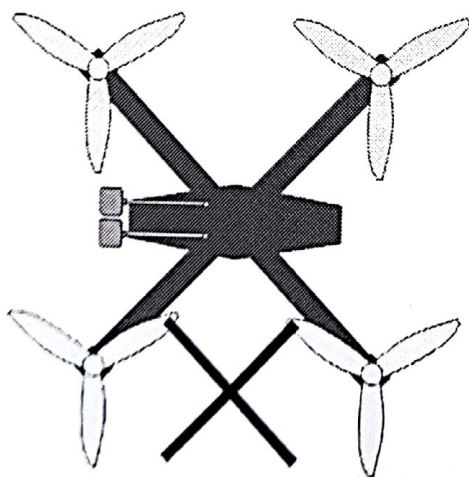


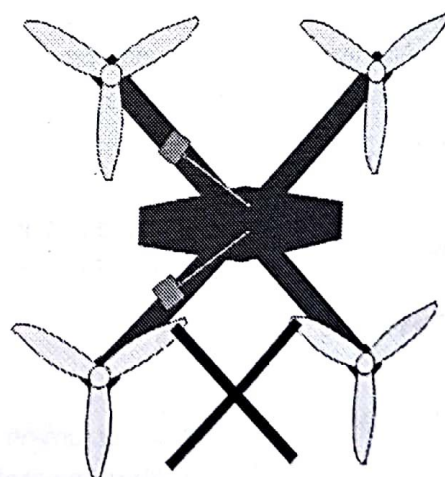
Fig.1.2.1.1 Transmitter antenna recommended installation

- In order to obtain the best transmission effect, it is recommended to install the transmitter antenna as shown in Fig.1.2.1.
- Transmitter antenna shall be installed one in front and the other in rear to ensure 360-degree omnidirectional coverage of the transmitting signal.
- Transmitter antenna need to be fixed to avoid radiation angle changes caused by antenna shaking.

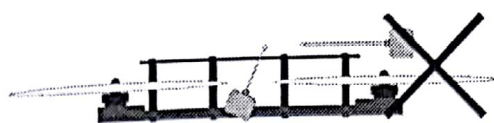
Note: The following is not recommended for antenna installation.



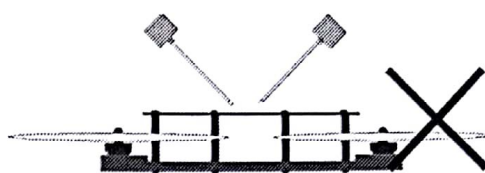
Error example 1



Error example 2



Error example 3



Error example 4

1.2.2 Receiver

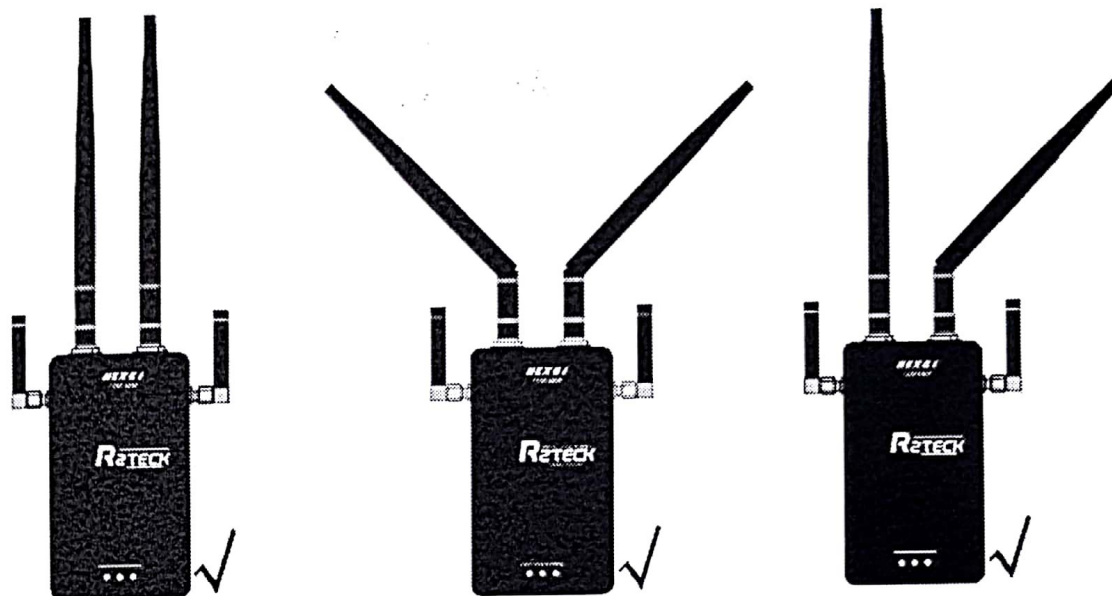


Fig.1.2.2.1 Installation of receiver antenna

If the drone flies high or the air route crosses the top of the receiver, please refer to the second one to install the antenna.

1.2.3 Relative position description

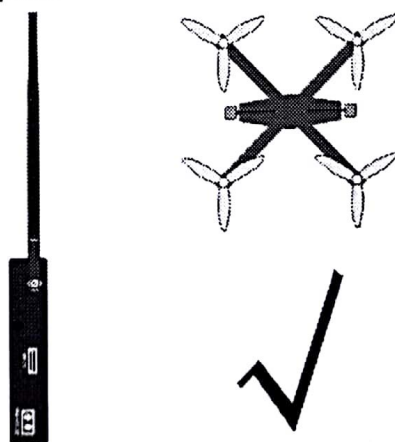


Fig.1.2.3.1 correct antenna orientation of the receiver

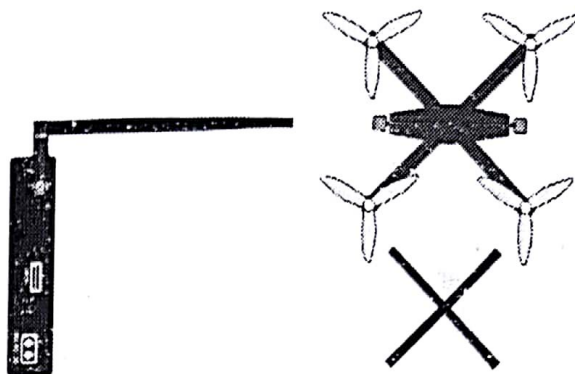


Fig.1.2.4.1 wrong antenna orientation of receiver

The receiving mast face is the best signal receiving direction, and the mast face should be towards the transmitter in use.

2. Specification

Here list the detailed specification about NEXG1, as shown in Table 2.1.1.

Tab.2.1.1 List of specification

Function specification	
Video Resolution	720P/480P
Communication distance (outdoor, no obstruction)	≥600m(480P) / 300m(720P)
Latency	30-50ms screen to screen
Receiving sensitivity	-95dbm±2dbm
Physics specification	
Operating Temperature	-10~60°C
Storage Temperature	-20~50°C
Size (Include shell, no antenna)	Transmitter: L.60mm×W. 36 mm×H.10 mm Receiver: L.105 mm×W. 74 mm×H.26 mm
Weight (Include shell, no antenna)	Transmitter: 16g Receiver: 174g
Hardware function support	
Transmitter working voltage	3s-6s, the current is greater than 1.5A, otherwise it will affect the system performance
Receiver working voltage	12v-24v, make sure the current is greater than 1A, otherwise it will affect the system performance

Transmitting Power 25mw-200mw adjustable

3. Introduction

3.1 Disclaimer

Thanks for purchasing the NEXG1 from Wuxi R2TECK. Everyone needs to read and understand this disclaimer before using the NEXG1. You are supposed to be accepted the disclaimer once the product is started to use. Please comply with the installation and using process indicated in this use manual. Wuxi R2TECK will not be responsible for the consequence of the improper use, improper install, improper modify.

The product name, brand mentioned here are belong to R2TECK.

3.2 Profile

This use manual as the instruction of Zero Delay HD digital video transmission system NEXG1, the components and functions mentioned here may not be the standard spec. please check the enclosed list with the product, please contact with the dealer if you have any question.

The right of the manual lay out, modify and release only belong to Wuxi R2TECK, Without the authorization of Wuxi R2TECK, this use manual could not be copied or modified or released.

The information in this manual is only for NEXG1 Zero Delay HD digital video transmission system.

This manual is subject to change without prior notice.

3.3 Intended usage

NEXG1 use for Zero Delay wireless HD digital video transmission.

3.4 Caution



The effectiveness of the use product is subject to if comply with operate and maintain direction in this manual.

Before starting the product, the staff must make sure the operate process and condition is correct. Specially to check the product cables are good or not, if the cable is damaged, please change it before starting the product.



NEXG1 is intended to use on racing drones or FPV fixed wing planes and other HD digital video transmission. NEXG1 may not be reached the defined function if it works in the improper temperature, improper humidity and improver air pressure.

NEXG1 should not work when it is wet. Have to make sure it is dry when you use it.



NEXG1 is the high precise product, it is forbidden to beat and clash.



Product life time is 2 years, quality warranty is 1 year.



Manufacture and dealer are responsible for the product maintenance, without the authorization, please don't fix the product and don't modify the product.

4. Port definition

4.1 Transmitter port

4.1.1 Back side port

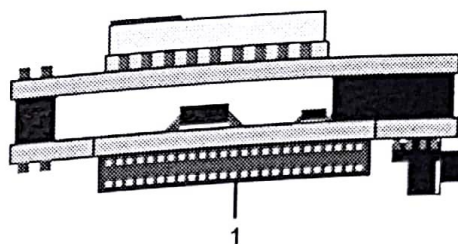


Fig.4.1.1.1 schematic diagram of back side port

[1]: Camera port: For connect the camera.

4.1.2 Side 1 port

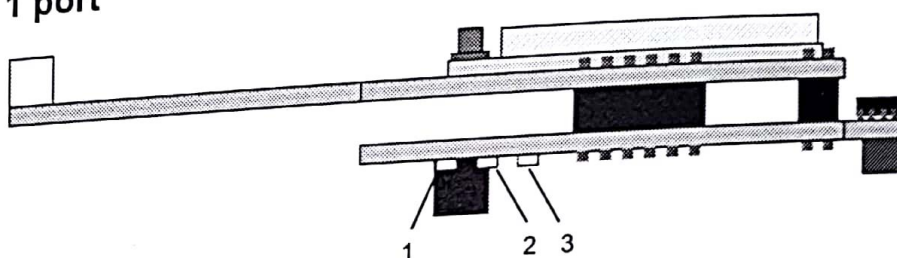


Fig.4.1.2.1 schematic diagram of side 1 port

[1]: Work light, For monitoring the transmitter operating status.

Light status	Description	Operation
Flash regularly	Transmitter works well	NA
Other status	Transmitter does not work	Connect the system to the power again, or contact with the customer service.

[2]: Link light, For monitoring the status of connect with the receiver.

Light status	Description	Operation
Turn-on	Connect with receiver well	NA
Turn-off	Does not connect with receiver	1. Please wait for connecting 2. Make sure the receiver is connected the power. 3. Connect the power again 4. Bind the Transmitter and receiver again

[3]: CAM light: For monitoring the status of connect with the camera.

Light status	Description	Operation
Turn-on	Connect with camera well	NA

Turn-off	Does not connect with camera	Check whether the camera is well connected.
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4.1.3 Side 2 port

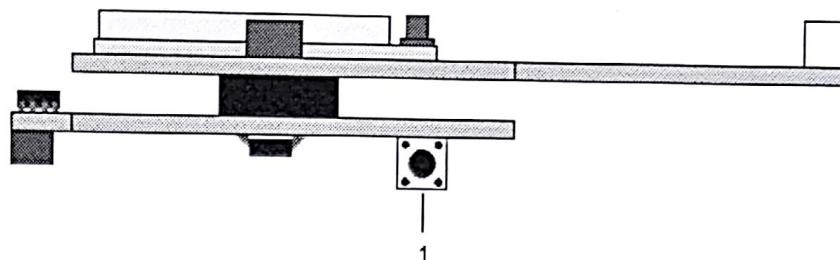


Fig.4.1.3.1 schematic diagram of side 2 port

[1]: Bind button, For bind the transmitter and receiver. (Both the transmitter and receiver are required to operate simultaneously, for details see Chapter 5).

4.1.4 Bottom side port

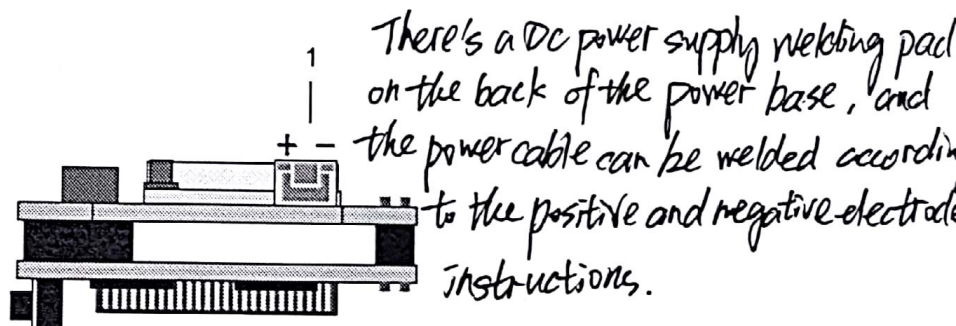


Fig.4.1.4.1 schematic diagram of bottom side port

[1]: Power port, For power supply, the positive and negative poles are shown above, connect with 9V~16V DC power supply, the maximum power is 12W.

4.2 Receiver port *Note: The power supply can only choose either-or, cannot use two way power supply.*

4.2.1 Bottom side port

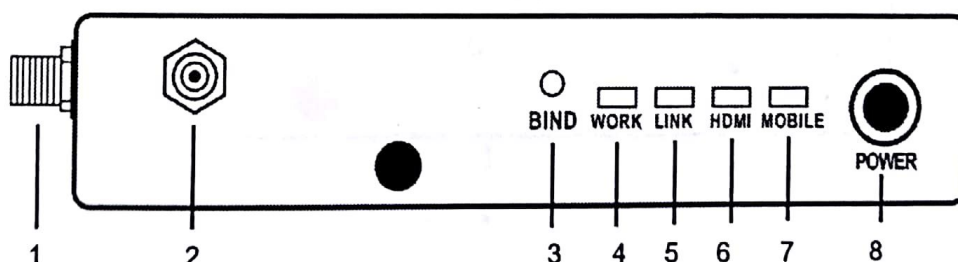


Fig.4.2.1.1 schematic diagram of bottom side port

[1]: Antenna interface, For data communication with transmitter, refer to the long antenna in the packing list.

[2]: Mobile antenna interface, refer to the small antenna with 90° angle in fitting.

- [3]: BIND button, For bind transmitter and receiver, for details in Chapter 5.
 [4]: WORK light, For monitor the receiver operating status.

Light status	Description	Operation
Flash regularly	Receiver works well	NA
Other status	Receiver does not work well	Connect the power again or contact with the customer service

- [5]: LINK light, For monitor Transmitter and receiver connect status.

Light status	Description	Operation
Turn-on	Connect with Transmitter	NA
Turn-off	Does not connect with Transmitter	1. Please wait for connecting 2. Make sure the Transmitter is connecting the power. 3. Connect the power again 4. Bind the Transmitter and receiver again.

- [6]: HDMI light, For monitor the display device status.

Light status	Description	Operation
Turn-on	Display device connect well	NA
Turn-off	Display device does not connect	Check whether the display device connect correctly.

- [7]: MOBILE light, For monitor mobile(iPhone、iPad) connect status.

Light status	Description	Operation
Turn-on	Mobile connect well	NA
Turn-off	No mobile connect	Mobile connect to device Wi-Fi network.

- [8]: POWER button, For turn on/off the power supply.

4.2.2 Right side port

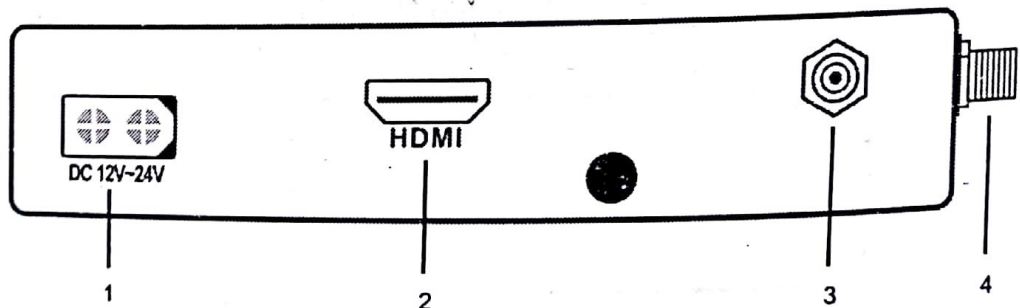


Fig.4.2.2.1 schematic diagram of right side port

- [1]: DC 12V~24V port, For power supply, plug in 3S~6S battery, Compatible with dc 12V~24V, the maximum power is 12W,
 [2]: HDMI port, For connect with the monitor, TYPE-A(Standard).

[3]: Mobile antenna interface, refer to the small antenna with 90°angle in fitting.

[4]: Antenna interface, For data communication with transmitter, refer to the long antenna in the packing list.

6. Troubles solution

Below is the device maintenances about NEXG1, to help the users whom don't have professional testing equipments and technology to solve the simply troubles.

6.1 Trouble symptoms / diagnosis / solution

Tab.6.1.1 Trouble symptoms / diagnosis / solution

Symptoms	Diagnosis		Solution
No video	Did not follow the process		Follow the process as Chapter 1
	Transmitter	CAM light turn-off	Camera HDMI cable is bad contacted, connect the HDMI cable again.
		WOR Klight is abnormal (not flash regularly)	Connect the power again.
		LINK light turn-off	Connect the power again.
	Receiver	HDMI light turn-off	Monitor HDMI cable is bad connected, connect the HDMI cable again.
		WORK light is abnormal (not flash regularly)	Connect the power again.
		LINK light turn-off	Connect the power again. If restart doesn't work, please operate the bind process (Action and instruction as Chapter 5). If the problem has not been solved, please contact with the local dealer.
Video pause	HDMI cable problem		Replug or Change a new HDMI cable
	Out of allowed distance		Back to the allowed distance.

If the above solutions do not work, please contact with the customer service.

7. Contact info

Thanks for purchasing our device again. If you have any suggestion or need technical support, please visit our website or send us the email, also welcome to call us.

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