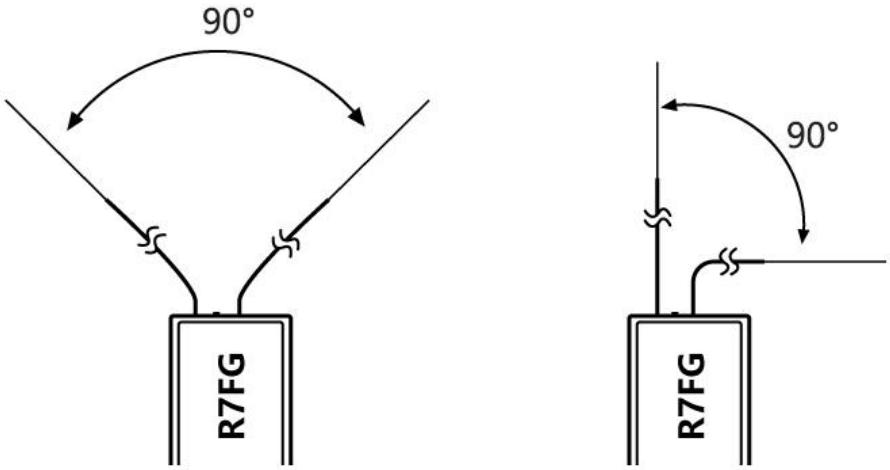
Troubleshooting of RC4GS/RC4GS V2/RC4GS/V3 RC6GS/RC6GS V2 RC6GS V3

Q1: much too close distance, signal loss, power off and restart, get out of control

1. The installation of the receiver. Wrong installation location and method will affect the signal transmission between transmitter and receiver.

1）The antenna of the receiver should be set upright, because car models run on the ground and the boats on the water. Double antennas should be set at a 90 degree angle like below:



2）Do not keep the antenna close to metal parts, electric machine, ESC or other electronic devices.

2. Check if the antenna of the receiver is in good condition. If not, replace it. Because broken or damaged antenna will affect signal transmission.

1）Check the antenna of the receiver: The antenna of the receive is the transparent antenna at the top which is 5 centimeters long. The antenna in the middle is not the real antenna, but the feeder. Check if the antenna and feeder are in good condition. As below:



2）Check if the antenna of the controller is loose.

3. Judge if it is communication module fault by testing RSSI value.

If the remote-control distance of cars and transmitter is close, please refer to this instruction to test the transmitter. This instruction will introduce the test procedure of the transmitter RSSI value and the solution to the abnormal RSSI value. It is suitable for transmitter.

RSSI test method:

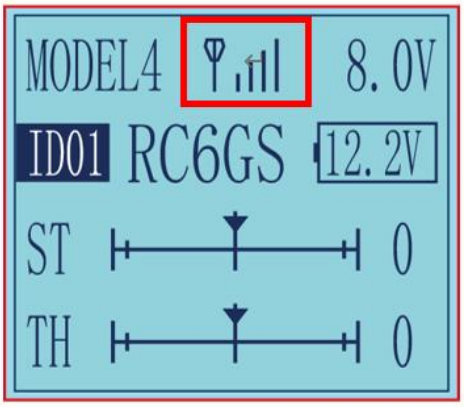


Figure 1



Figure 2

- Turn on the transmitter and power on the receiver at the same time, and then the transmitter and receiver will be connected (if not connected, you need to bind again), the signal mark in the red box in Figure 1 appears on the transmitter interface, indicating that the binding is successful.
- Short press the Exit button twice to enter the return information interface, the top of the interface is the RSSI value (Figure 2).
- Make the receiver antenna and transmitter antenna parallel, single antenna and dual antenna receivers need to keep a distance from the transmitter(as shown below).





Observe the RSSI value of the return interface of the transmitter.

① receivers with one antenna, such as R6FG, R6F, R4FGM, R4FGM, R8EF

When the distance between the transmitter and the receiver is 20 centimeters, it is normal that RSSI value is within the range of 0 to -30dBm. The closer the value is to 0, the stronger the signal is.

② receivers with dual antenna, such as R7FG, R8F, R8FG:
When the distance between the transmitter and the receiver is 50 centimeters, it is normal that RSSI value is within the range of 0 to -30dBm. The closer the value is to 0, the stronger the signal is.

The range of RSSI value of RadioLink transmitters is from 0 to -99dBm. The larger the absolute value of the RSSI value is, the weaker the signal is.

Abnormal Signal Strength Solution:
Check whether the antennas of the receiver and transmitter are damaged. Most signal strength degradation is caused by antenna damage. If it is damaged, the antenna needs to be replaced. If there is no damage, you can test the transmitter and receiver for malfunctions by replacing the receiver. If the equipment is faulty, the faulty equipment can be sent back for inspection and repair.

1）If RSSI value is normal, the problem is caused by BEC power supply.
2）If RSSI value is abnormal, test it again with a new transmitter. The normal RSSI value with a new transmitter shows communication module fault of the old transmitter. The abnormal RSSI value with a new transmitter shows transmission module fault of the old transmitter.

Insufficient BEC power supply of ESC

Fast turn of the direction requires high current and voltage, while insufficient BEC power supply will cause power failure and restart.

1）The basic introduction of BEC in ESC (Electronic Speed Control)
The full name of BEC is battery elimination circuit. It also means battery-free circuit. There is a power module in ESC, which can convert the output voltage of the battery from 12V to a range of 5V to 6V for receivers and servos. It eliminates the 5V battery. That's where BEC (battery elimination circuit) comes in. BEC operates mostly by linear regulator. The advantages of linear regulator are simple circuitry, compact size, and it can works with only a stabilivolt. While the disadvantage of linear regulator is that the energy run down fast because of its low conversion efficiency. So the stabilivolt goes hot when it works（The heat of ESC is mainly from the stabilivolt, not from MOS switch tube that controls the electric machine） The low conversion efficiency of linear regulator generates low output current, which is often 1A at most.

BEC is widely used in ESC of car and boat models. ESC controls drive and motor speed, while BEC powers receivers and servos. BEC will convert the output voltage from 12V to 5V and then power receivers and servos. If users fast turn directions or wheels meet

resistance, the servo will require high instantaneous current. In this circumstance, BEC is not able to provide sufficient power to the receiver, which may cause power failure and restart.
2）Servos and receivers are powered by BEC. The response speed of our transmitter is fast, so servos require high current when they are working, which may easily lead to insufficient BEC power supply and power failure of the receiver.

3）The response speed is related to the operating frequency of master chip of the receiver. High operating frequency requires high operating voltage. At present, the response speed of our transmitter is the fastest, so it is the most demanding for the minimum operating input voltage of BEC.

4）The judgement methods:
Raise the car up with supports under the car, and fast turn the steering of the controller. Then exert a bit opposite force to the wheels and observe if the receiver will restart. The blinking light of the receiver indicates insufficient BEC power supply. Power off and restart may not occur with transmitters from other brands, because the response time of transmitters from other brands is shorter than ours, which may provide users with less fluid experience.

5）Solutions:
A. Setting method: set STSPD in the menu and cut down the rate of TURN.
For users who are not demanding on response time, lower the response speed to avoid insufficient BEC instantaneous power supply.

B. Supply power to servos with a 1S battery separately. Do not supply power by BEC.

C. Add a UBEC voltage module as below:



Q2: Trigger throttle does not work

Calibrate ESC (electronic speed control) before first use RC4GS V3/RC6GS V3 with your car.