# 3DQ-S1

# User Manual V1.0

2015.7

AERITECH

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* Please read "Waring" carefully at first

# Flight Control

## 1 Prepare Vehicle

### 1.1 Flight Control System Description

3DQ-S1 Flight Control System is designed for Multi-Rotor aircraft, it has good handling performance and stability.

| System modules | Function |
|---|---|
| MCU Board | Core of system,control all other modules. |
| IMU | Perception aircraft attitude and position. |
| BEC | Power the system. |
| LED | Prompt the system status with light. |

### Tunning and Update

Install"3DQ_Flight_Assistant"software,connect PC to BEC board with microUSB cabel.
You can tuning and update firmware according to the software.
Software download:  http://www.aeritech-uav.com

### 1.2 LED Status Instructions

| BEC LED Status | Statu | Note |
|---|---|---|
| Red flash | System error | RC not calibrated or other error. |
| Green slow flash | System is healthy | You can operate normally. |
| Red slow flash | Low power | Power below the threshold. |
| Yellow light always | Processing the data | Motor is accelerating. |
| White slow flash | Normal flying condition | you can take off. |

[1]When Red flash status,please check remote control is opened and battery voltage.
[2]When Yellow light always,please don't move throttle stick until white slow flash.

# Preparing

## 1 Prepare Remote Control

### 1.1 Supported RC

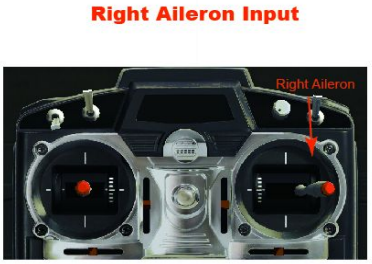
Our product support "PPM","PWM"and "S-BUS" receiver,You can choose receiver type according to software. At least 6-channel remote control.

### 1.2 RC Setting

You need to set the remote in Acro mode.
Then calibrate your remote control by using the software.

## 2 Before Flying

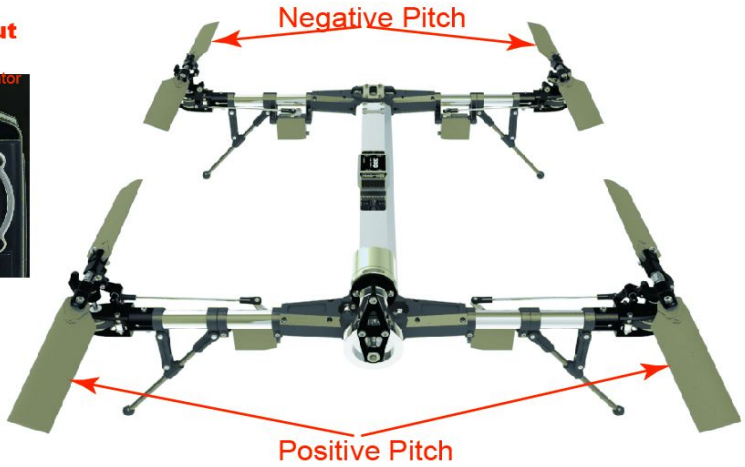
### 2.1 Check Control Direction




ROLL

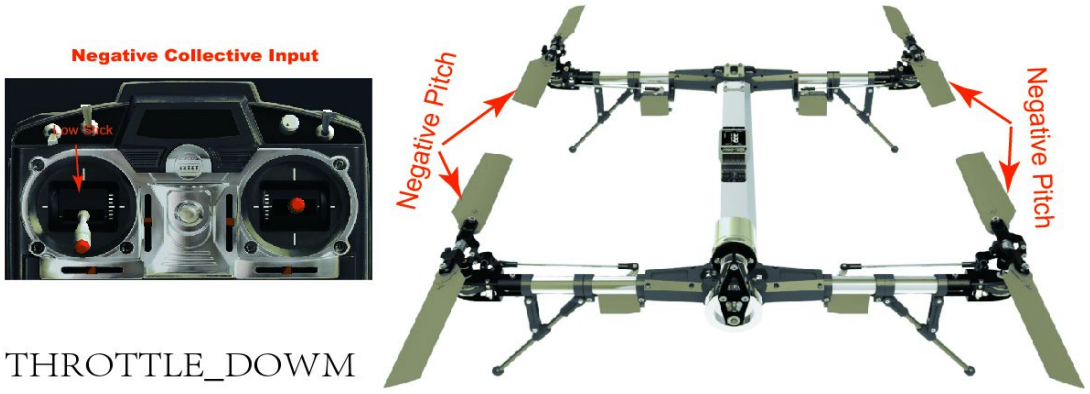


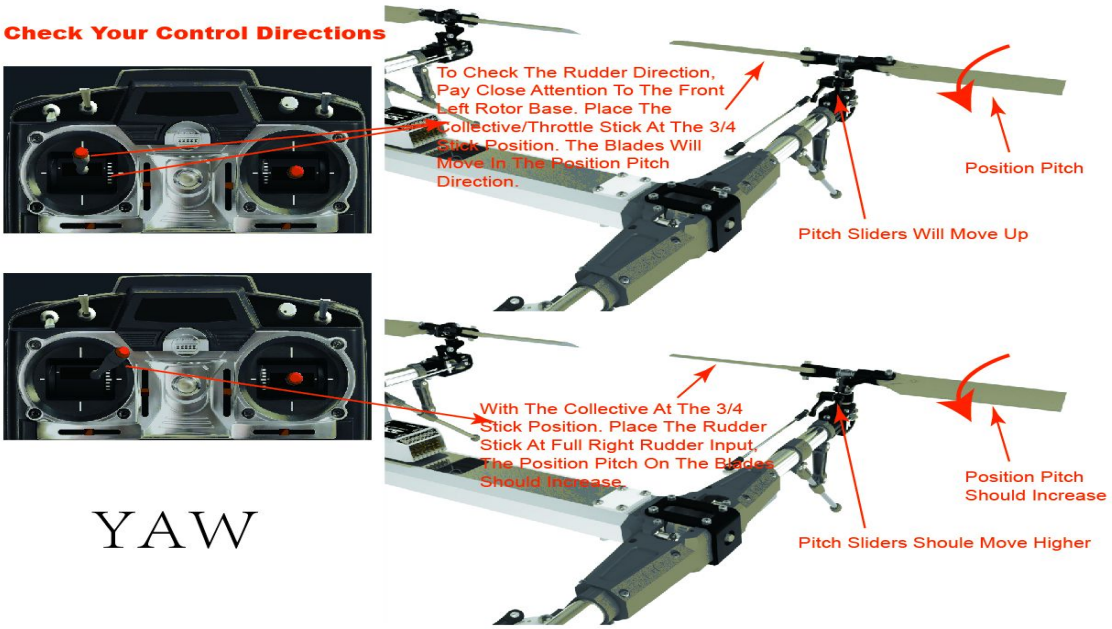
Pitch



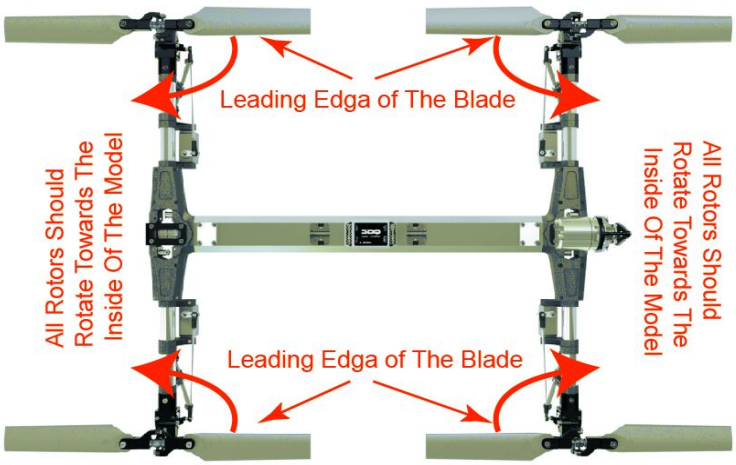


THROTTLE_UP




## 2.2 Check Motor Direction



# Operation In Flying

## 1 Operation Process

### 1.1 Power the System

Please confirm that your remote control is opened and aircraft is locked before power the aircraft.
Or aircraft will be alerted(Red flash).

### 1.2 Aircraft Unlock

Check control direction and motor direction.Wait for Green flash and you can unlock the aircraft.
Afer unlock,LED change into yellow,indicate that motor is accelerating.Please don't move throttle stick during this process. You can take off after LED change into White flash.

### 1.3 Aircraft Lock

After aircraft descend to the ground,lock the aircraft,motor slow down until stop.LED change into Green flash.

### 1.4 Change Flight Mode

You can switch flightmode during the flight.Recommends that keep your vehicle stable and it is located in safe altitude during switching flightmode. In 3D Mode,if your aircraft lose control during the flight, you can switch into Attitude Mode.Attitude Mode helps you stabilize the vehicle.
AltitudeHold Mode is easy to control, you can take off directly in this Mode.

※ Don't move it after power the vehicle,until Green falsh.

## 2 Flight Mode

### 2.1 Attitude Mode

Aircraft can maintain attitude stabilization by itself in this Mode.

### 2.2 3D Mode1

You can operate aircraft flexibly in this Mode,rolls,inverted flight and so on.
This requires that you have a wealth of flight experience.

### 2.3 3D Mode2

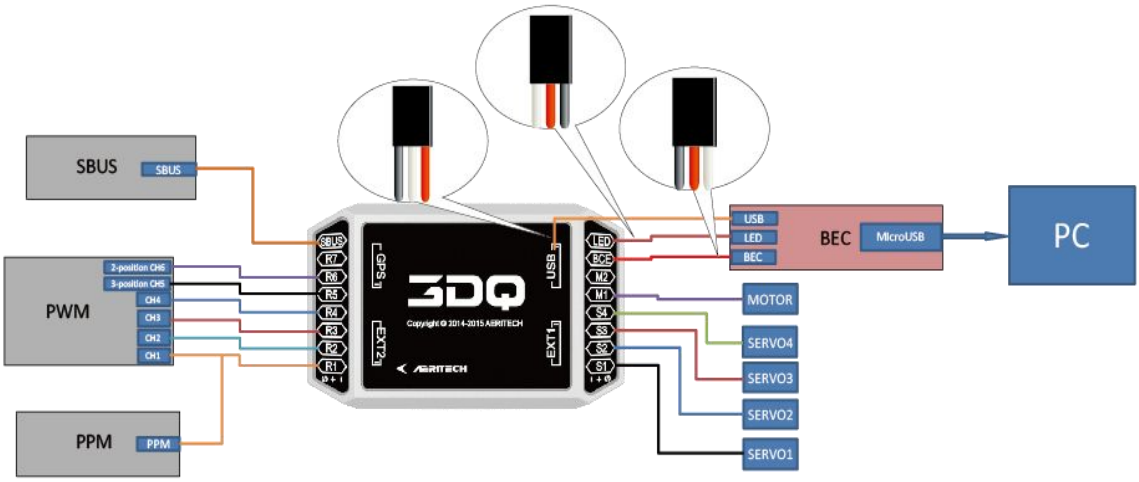
This Mode's curve is Smoother than 3D Mode1,it is suitable for practing your 3D flying skills.

### 2.4 AltitudeHold Mode

Aircraft can maintain attitude and altitude by itself in this Mode, When throttle stick in the middle position, the aircraft will remain in current height.Move stick up,vehicle rise up.Move stick down, vehicle drop to the ground.

※ You can switch into any Mode during the flight,Recommends that keep your vehicle stable and it is located in safe altitude during switching flightmode.

## Flight Control Connection Diagram




### Warning

This radio controlled model is not a toy!It is a precision machine requring proper assembly and setup to avoid accidents.It is the responsobolity of the owner to operate this product in a safe manner, as itcan inflict serious injury and or death.It is recommended that if you are in any doubt of your abilities, seek assitance from experienced radio control helicopter modelers and associations.As the manufacturer, we assume no liability for the use of this product.