

RISE™ RXD250



INSTRUCTION MANUAL

REQUIRED FOR COMPLETION:

6-channel Transmitter with Receiver

3S 1300mAh~2200mAh LiPo Battery

LiPo Battery Charger 5.8G Transmitter for FPV (*optional*)

FPV Camera (*optional*)

5.8G Receiver with Video Monitor or Goggles (*optional*)

WARNING

Please fully read and understand this manual and the operation and all safety aspects required of you for the safe operation of this product. Before use, if you feel this product is not for you please return it to your place of purchase.

RISE products are to be used by ages 14 and over.

Manual Specifications and Description Changes

The instruction manual, warranties and other associated documentation are subject to change without notice. Hobbico assumes no responsibility for inadvertent errors to this manual.

INTRODUCTION

Thank you for purchasing the RXD250 Racer. We want the time you spend with your new R/C quadcopter to be fun and successful so please read the entire manual before beginning setup. If for any reason you think this R/C model is not for you, return it to the dealer immediately. Your dealer cannot accept returns on any model after final assembly.

For the latest technical updates or manual corrections for the RXD250 please visit the Rise web site at www.explore-rise.com. If there is any new technical information, changes or important updates to this model, a “tech notice” box will appear on the page. Click the “tech notice” box to learn more.

SAFETY PRECAUTIONS

- Keep your face and body as well as all spectators away from the rotating plane of the blades whenever the battery is connected. Keep loose clothing, shirt sleeves, ties, scarfs, long hair or loose objects such as pencils or screwdrivers that may fall out of shirt or jacket pockets away from the rotors. The spinning blades of a model quadcopter can cause serious injury. When choosing a flying site for your RXD250, stay clear of buildings, trees and power lines. AVOID flying in or near crowded areas. DO NOT fly close to people or pets. Maintain a safe distance from the quadcopter.
- Your RXD250 should not be considered a toy. Because of its performance capabilities, the RXD250, if not operated correctly, could cause injury to you or spectators and damage to property.
- DO NOT alter or modify the model. Doing so may result in an unsafe or unflyable model.
- When and if repairs are necessary you must correctly install all components so that the model operates properly on the ground and in the air. Please check the operation of the model before every flight to insure that all equipment is operating and that the model has remained structurally sound. Be sure to check connectors and the propellers before each flight. Replace them if they show any signs of wear or fatigue.

KNOW BEFORE YOU FLY

As a new owner of an unmanned aircraft system (UAS), you are responsible for the operation of this vehicle and the safety of those around you. Please contact your local authorities to find out the latest rules and regulations.

In the United States, please visit:



knowbeforeyoufly.org



Federal Aviation
Administration

faa.gov/uas

AMA

We urge you to join the AMA (Academy of Model Aeronautics) and a local R/C club. The AMA is the governing body of model aviation and membership is required to fly at AMA clubs. Though joining the AMA provides many benefits, one of the primary reasons to join is liability protection. Coverage is not limited to flying at contests or on the club field. It even applies to flying at public demonstrations and air shows. Failure to comply with the Safety Code may endanger insurance coverage. Additionally, training programs and instructors are available at AMA club sites to help you get started the right way. There are over 2,500 AMA chartered clubs across the country. Contact the AMA at the address or toll-free phone number that follows.

Academy of Model Aeronautics
5151 East Memorial Drive
Muncie, IN 47302-9252
Tele. (800) 435-9262
Fax (765) 741-0057



Or via the Internet at: www.modelaircraft.org

IMPORTANT: Two of the most important things you can do to preserve the radio controlled aircraft hobby are to avoid flying near full-scale aircraft and avoid flying near or over groups of people.

BATTERY WARNINGS

- ALWAYS unplug your battery from either the charger or quadcopter after use. NEVER store your quadcopter with the battery plugged into the quadcopter.
- DO NOT attempt to charge your battery if it becomes swollen or hot.
- The RXD250 does not have a voltage cutoff failsafe. When the LEDs begin to flash, land the quad and disconnect the battery.
- It is best to store your batteries in a cool, dry location at 1/2 charge (11.4V). Storing a fully discharged battery may cause irreversible damage to the battery.
- NEVER disassemble, puncture or modify the battery pack in any way.
- NEVER allow the battery temperature to exceed 150° F [65° C].
- If your battery begins to swell or “puff” during charge or discharge or becomes damaged in any way, stop using it.

WARRANTY

Rise™ guarantees this kit to be free from defects in both material and workmanship at the date of purchase. This warranty does not cover any component parts damaged by use or modification. In no case shall Rise's liability exceed the original cost of the purchased kit. Further, Rise reserves the right to change or modify this warranty without notice. In that Rise has no control over the final assembly or material used for final assembly, no liability shall be assumed nor accepted for any damage resulting from the use by the user of the final user-assembled product. By the act of using the user assembled product, the user accepts all resulting liability. If the buyer is not prepared to accept the liability associated with the use of this product, the buyer is advised to return this kit immediately in new and unused condition to the place of purchase.

To make a warranty claim, send the defective part or item to Hobby Services at this address.

**Hobby Services 217-398-8970 ext#6
3002 N. Apollo Dr., Suite 1
Champaign, IL 61822 USA
productsupport@hobbyservices.com**

Include a letter stating your name, return shipping address, as much contact information as possible (daytime telephone number, fax number, e-mail address), a detailed description of the problem and a photocopy of the purchase receipt. Upon receipt of the package the problem will be evaluated as quickly as possible.

FEATURES

- 250 class racing quad
- Extremely durable foam, carbon fiber, and fiberglass frame
- 10A brushless speed controls
- 2280kV brushless motors
- Receiver Ready, no building required
- Flight Controller is pre-programmed, no setup needed

DIMENSIONS

Size: 250 mm (9.8 in) diagonally motor to motor

Width: 220 mm (8.7 in)

Length: 270 mm (10.6 in)

Blade Length: 125 mm (4.9 in)

Empty Weight: 300 g (10.6 oz) without battery and FPV system

RTF Weight: 437 g (15.4 oz) with 1300mA LiPo and FPV system

CONTENTS

- RXR Rise RXD250
- Spare Props
- Hook & Loop pads for the battery

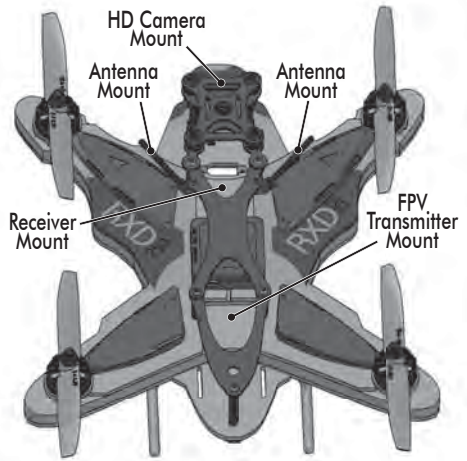
FLIGHT MODES

The RXD250 has three flight modes.

Stability Mode has limits on the tilt angle and the quadcopter will level itself when the right stick is centered.

The Rattitude Mode will center the quad and limit the tilt angle when the right stick is near center. When the stick is moved away from center, the limits are removed making the quad much more maneuverable. Flips and rolls are easily done in this mode.

Rate Mode is available for experienced pilots that want maximum maneuverability. In this mode, the quad will maintain its current pitch or heading when the right stick is released. The quadcopter's flight will be smoother and more responsive in this mode.



SETUP

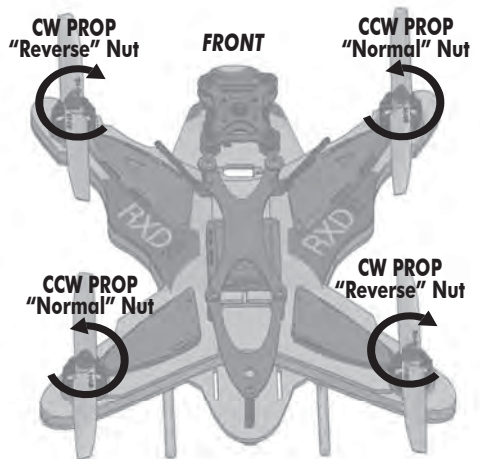
The RXD250 needs only minimal assembly. All the bolts have been set to the proper torque and have thread locking compound applied to keep them secure.

PROPELLERS

The propellers are counter rotating and must be installed correctly or the quad will not fly. When installing or replacing propellers, make sure you install the correct prop on the correct corner. Note that two of the motor shafts and nuts are "reverse" threaded.

CW= clockwise rotation when observed from the top.

CCW=counter clockwise rotation when observed from the top.



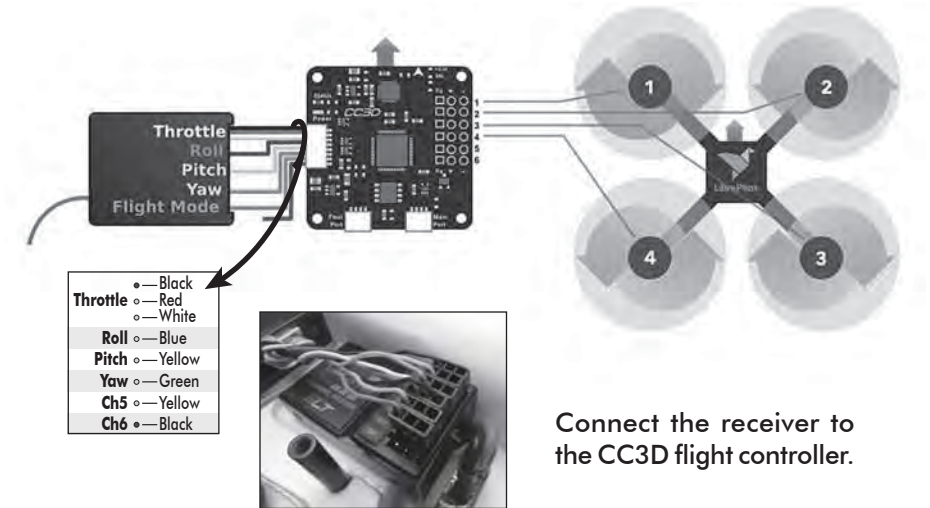
RADIO SYSTEM

Your transmitter needs to have a switch for channel 5. The setup below is typical for most transmitters. The receiver must have one port for each channel. S-bus, X-bus, and satellite receivers cannot be used with the 8 pin receiver cable.

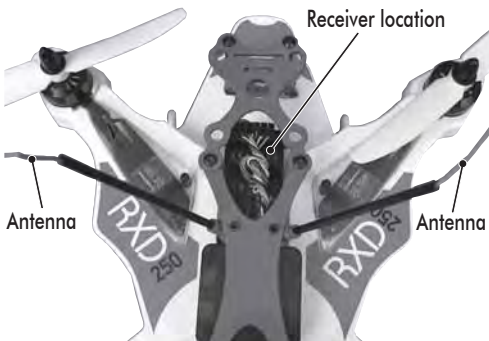
MODEL TYPE: Airplane

CHANNEL ASSIGNMENTS				
Channel	Direction	End Points	Dual Rates	Expo
Aileron	normal	100/100	80/100	-30/0
Elevator	normal	100/100	80/100	-30/0
Throttle	normal	100/100		
Rudder	normal	100/100	80/100	-30/0
Gear	normal	100/100		

SWITCH ASSIGNMENTS - Ch 5		
Gear	-100%	Stability
Gear	0%	Rattitude
Gear	+100%	Rate



Mount the receiver with double-sided tape.



Mount the receiver just in front of the flight controller. Install the antenna mounts as illustrated or run the antenna down through the frame.

FLIGHT CONTROLLER SETUP

Download the LibrePilot Ground Station app (GCS) from www.librepilot.org from the software downloads section.

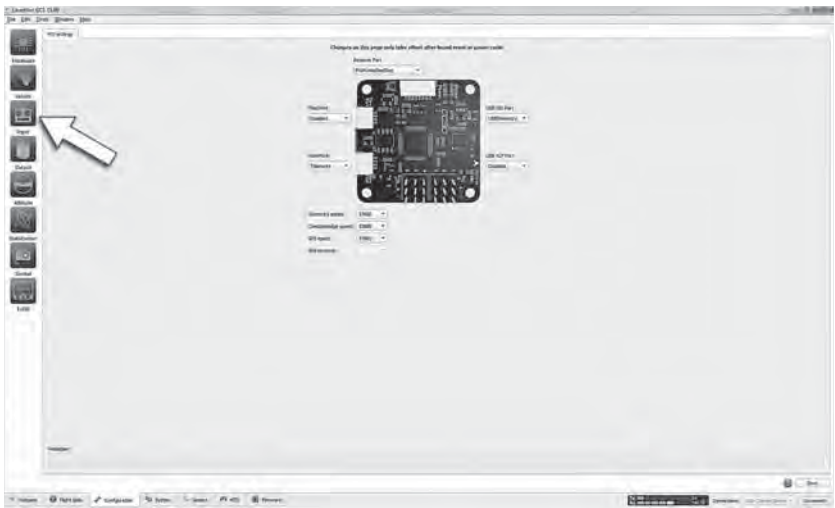


To set up your transmitter using the GCS app, you will need:

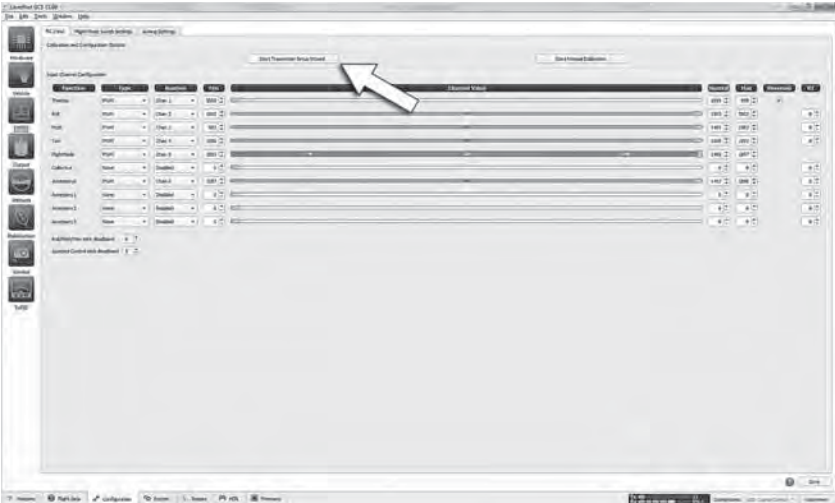
- A.** A mini-USB cable to connect the cc3d controller to the GCS app.
- B.** A charged flight battery.
- C.** The transmitter set up with the new model and linked to the receiver.



Open the GCS app and connect the RXD250 with your mini-USB cable. When the communication window shows that the flight controller is connected to the GCS app, click on the configuration button.



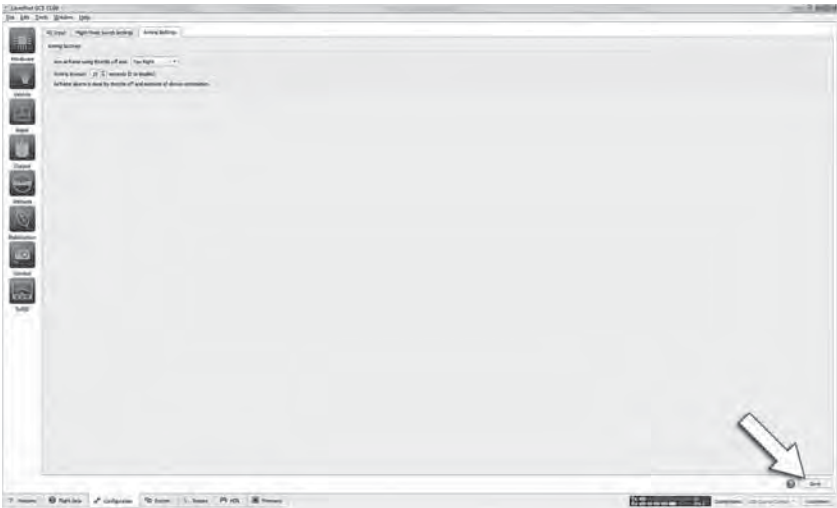
Click on the input button.



Click on the Transmitter setup wizard button and follow the steps to set up the transmitter.

ARMING SETTING

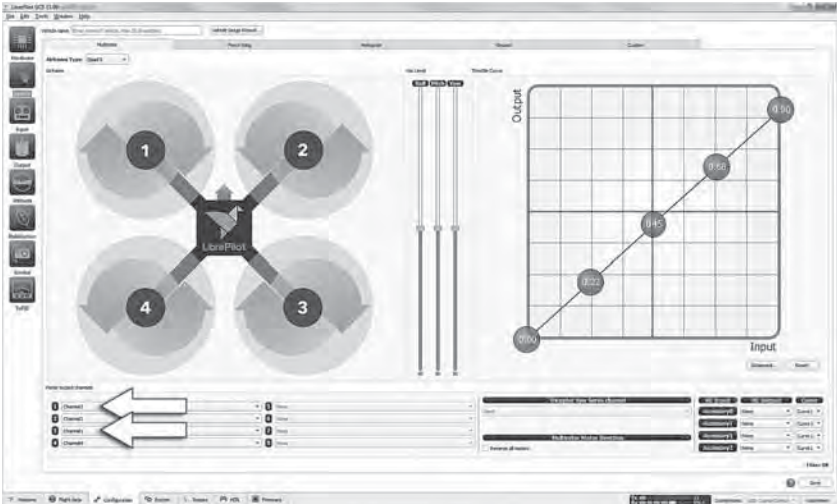
At the end of the wizard is the screen to set the motor arming procedure. The recommended setting is Yaw Right which requires the yaw control to be held to the right while the throttle is at 0 for 3 seconds to arm the motors. Holding the Yaw control to the left will disarm the motors. There are several other options available for arming/stopping the motors including using a switch assigned to Channel 6.



After the Arming Setting is completed, the settings need to be saved to the flight controller.

GENERAL SETTINGS

Any time the controller is connected to the app, the following settings should be checked.



- A. Vehicle Configuration Screen –
 - Motor Output Channel 1 – Channel3
 - Motor Output Channel 3 – Channel1



B. Attitude Configuration Screen – Yaw is set to -90

FAILSAFE

If your transmitter can set values for all the channels for failsafe, set the roll & pitch channels to midstick and the throttle to its lowest setting to stop the motors.

For transmitters that only set failsafe on the throttle channel, set the throttle to its lowest setting

Be sure to remove the props before testing the failsafe operation.

BATTERIES

The RXD250 has been tested with 3 cell lipos between 1300(30C or larger) and 2200mAh (20C or larger). Typical flight time is between 4 and 6 minutes.

IMPORTANT! The flight controller does not have a low voltage cutoff to protect the lipo from damage. The LEDs on the bottom of the RXD250 will start flashing when the battery is at 10.2V for a 3S battery. You **MUST** land the quadcopter as soon as the LEDs start to flash.

For your first flight, set a timer for 4 minutes. If the LEDs are not flashing at the end of the flight, the timer setting could be increased to find the optimal flight time. If the LEDs are flashing at the end of the flight, the timer setting should be reduced to protect the battery from damage.

We recommend using a voltage monitor/alarm that plugs into the battery's balance connector and will sound an alarm when the battery voltage gets low.

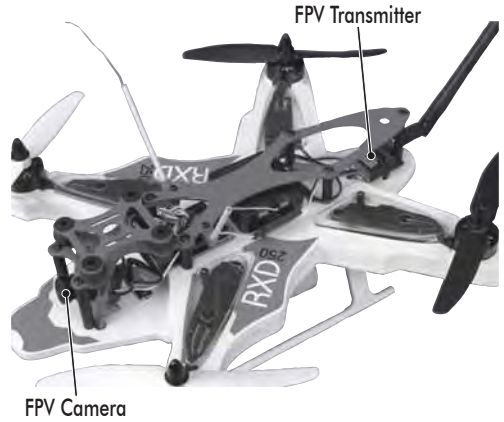


WARNING: Your battery life will be reduced and the battery can be damaged any time the battery voltage is low enough for the LEDs to flash. Charging a Lipo battery that is damaged in any way can pose a fire hazard.

VIDEO SYSTEM SETUP

The optional camera (RISE2508) is designed to fit the camera mounting plate without any modifications.

The camera is designed to operate on just 5 volts. The red and black wires should be connected to a receiver port to power the camera. Warning- check the polarity of the camera connection before connecting the flight battery to the RXD250. The camera will be damaged if the polarity is backwards.



The Tactic 200mW FPV transmitter (TACZ5005) is recommended. It can be easily connected to the 12 volt connector at the back of the RXD250 and has additional cables that make connecting the optional camera a simple task.

MOTOR ARMING & TAKEOFF

Turn on the transmitter and connect the flight battery to the RXD250. Place the quadcopter on a level surface and let it sit for 10 seconds to let the flight controller set up the gyros.

Arm the motors by holding the yaw control to the right for at least 3 seconds, and center the left stick. Advance the throttle to start the motors and take off.

To disarm the motors, bring the throttle down to 0% and hold the yaw control to the left.

FLYING

The RXD250 is a racing quad. As such it is capable of flying at high rates of speed and can get out of sight very quickly. We recommend flying the quad in stability mode without FPV for several flights until you are fully familiar with how this quad handles.

As your skills grow, try Rattitude mode. When flying in this mode, let go of the right stick if you find yourself in trouble. The quad will level itself and become stable.

FPV RACING WEBSITES

More information about FPV racing can be found at sites like multi.com and fpvracing.tv

SPARE PARTS

- 1 RISE2501 CC3D Flight Controller
- 2 RISE2502 Brushless Motor (2)
- 3 RISE2503 10 AMP ESC
- 4 RISE2504 5x3 Propeller Set
- 5 RISE2505 Landing Gear
- 6 RISE2506 Prop Nut Set
- 7 RISE2507 Frame Set
- 8 RISE2508 Camera (Optional)

EXPLODED VIEW

