



Manuals.plus /

› Readytosky /

› Readytosky ZD550 Quadcopter Frame Instruction Manual

Readytosky ZD550

Readytosky ZD550 Quadcopter Frame Instruction Manual

Brand: Readytosky | Model: ZD550

1. INTRODUCTION

This manual provides detailed instructions for the assembly, operation, and maintenance of your Readytosky ZD550 Quadcopter Frame. Please read this manual thoroughly before beginning assembly or operation to ensure proper functionality and safety.

2. PRODUCT FEATURES

- 550mm Compact Folding Quadcopter Frame Kit.
- Positive locking folding arms provides easy transport and storage.
- Material of the main board: 3k full carbon fiber.
- Sturdy construction and easy to assemble.
- With good quality carbon fiber landing gear.

3. SETUP AND ASSEMBLY

Follow these steps carefully to assemble your ZD550 Quadcopter Frame. Refer to the accompanying installation video for visual guidance.

3.1. Motor Installation

Before starting, identify the two types of motors: Clockwise (CW) and Counter-Clockwise (CCW). CW motors have a hole at the top of the shaft and a white mark on the box. CCW motors have a flat top of the shaft and no mark on the box.

For the ZD550 frame, the two red arms (front) will each have one CW motor and one CCW motor. Similarly, the two white arms (back) will each have one CW motor and one CCW motor. Ensure correct placement as shown in the video.

Use the provided M3*8 screws for installation; do not use the screws that may come with the motor box as their length may be insufficient. Position the motor so its power cords face the inside of the arm. Align the screw holes and gently screw in the four screws. Once all four motors are in place, tighten them one by one. Confirm there are no errors in motor type or placement.

Video: ZD550 Install video. This video demonstrates the step-by-step assembly process for the ZD550 Quadcopter Frame, including motor and plate installation.

3.2. Plates Assembly

First, position the arms correctly: the two red arms are at the front, and the two white arms are at the rear. Install the top plate by using four screws to fix each arm (16 screws in total). Gently screw them in initially, then tighten them all one by one. Next, install the bottom plate using two screws per arm (8 screws in total). Again, gently screw them in before tightening them all.

3.3. Vibration Dampening Plate & Flight Controller

Insert four rubber balls into the designated holes on the vibration dampening plate to create a shock-absorbing support. Use tweezers to gently push each rubber ball into the hole, usually requiring 3 to 4 pushes to fully insert. Apply two double-sided adhesive strips to the middle of the top plate. Attach the vibration dampening plate to these adhesives. Then, fix the Pixhawk flight controller to the middle of the vibration dampening plate using two more double-sided adhesive strips. Ensure the arrow on the Pixhawk points towards the front of the drone.

3.4. ESC Installation

Begin with motor No. 1. Insert the XT60 plug for the power supply. The ESC and the motor are connected by three wires; you can connect them randomly for now, as the motor rotation direction can be adjusted during commissioning. Make sure the Dupont wire goes through the vibration dampening plates and then insert it into port number 1 of the MAIN OUT on the Pixhawk, with the black wire on top. Repeat this process for motors 2, 3, and 4, connecting their Dupont wires to the corresponding MAIN OUT ports. Secure the ESC and XT60 to the arm using zip ties, ensuring they are firmly attached. The motor connections do not need to be secured at this stage, as the wiring sequence may need adjustment later.

3.5. GPS Bracket & Module Installation

Assemble the GPS bracket by fixing the stick, assembling the base, and tightening the knob as illustrated in the video. Unscrew two screws from the top plate of the drone and then fix the assembled GPS bracket base to this location. Fix the GPS module to the plate using double-sided tape, ensuring the arrow direction on the module faces forward. The GPS has two wires; plug them into the GPS and I2C sockets on the flight controller.

3.6. Receiver, Buzzer & Safety Switch Installation

Plug the 3-pin Dupont cable into the PPM port of the receiver, with the white wire on top. Plug the other end of this cable into the RC port of the Pixhawk, with the black wire on top. Plug the buzzer wire into its corresponding port on the flight controller and fix the buzzer on an arm using double-sided tape. Insert the safety switch wire into its corresponding port and place the switch in a convenient position on the drone. Use three zip ties to firmly fix the safety switch.

4. OPERATING INSTRUCTIONS

4.1. Propeller Installation

Install the propellers according to the motor type. Motors No. 1 and No. 2 use propellers with a silver cap. Motors No. 3 and No. 4 use propellers with a black cap. Tighten all propellers firmly by hand.

Video: How to Assemble F450 Drone? DIY a Real Drone. This video provides a comprehensive guide to assembling a drone, including propeller installation and initial setup.

4.2. Pre-Flight Check and Takeoff

1. Turn on your transmitter.
2. Pull the throttle stick to its lowest position and ensure all switches are in their original positions.

3. Connect the battery to the power module and secure it with a tie.
4. Plug in the voltage tester and set it to 3.6 or 3.7 volts.
5. Turn on the safety switch by pressing and holding it for about 2 seconds.
6. Check the LED status on the flight controller: a light flashing green indicates the GPS is normal and the HOME position has been recorded. A light flashing blue indicates that the GPS cannot locate a signal.
7. Arm the aircraft: Take the left stick to the bottom-left position for about 4 seconds. The propellers will start to rotate, and the drone will be in standby mode.
8. Change the flight mode switch to 'Loiter'.
9. Slowly push the throttle stick to about 50%, and the aircraft will take off.

Video: Remote a F450 Drone by FS-I6X. This video demonstrates basic flight instructions and controls for a F450 drone using an FS-I6X remote.

4.3. Basic Flight Controls

Once airborne, use the remote control sticks to maneuver the drone:

- **Move Left/Right:** Use the right stick to move the drone horizontally left or right.
- **Forward/Backward:** Use the right stick to move the drone horizontally forward or backward.
- **Rotate Left/Right:** Use the left stick to rotate the drone clockwise or counter-clockwise.
- **Fly Up/Down:** Use the left stick to increase or decrease altitude.

In 'Loiter' mode, the drone can maintain a fixed height and position, provided there is high GPS positioning accuracy and low wind conditions.

4.4. Return to Launch (RTL)

To initiate an automatic return to the launch point, turn on the RTL switch on your transmitter. The drone will automatically return to its recorded HOME position. Please note: Use RTL only when the HOME position is accurately located in open areas and there are no obstacles between its current position and HOME.

5. MAINTENANCE

- Regularly inspect the carbon fiber frame for any cracks or damage.
- Check all screws and fasteners for tightness before each flight.
- Ensure all wiring connections are secure and free from wear.
- Keep the frame clean from dirt, dust, and debris.
- Inspect folding arm mechanisms for smooth operation and secure locking.

6. TROUBLESHOOTING

- **Difficulty in Assembly:** Refer to the detailed steps in Section 3 and the provided installation video. Ensure all components are correctly identified and oriented.
- **Missing Parts:** If any parts are missing from your kit, please contact Readytosky customer support immediately.
- **Motor Not Spinning Correctly:** The motor rotation direction is determined by the order of the three wires connected to the ESC. If a motor spins in the wrong direction, swap any two of the three wires connecting the motor to the ESC.
- **GPS Signal Issues:** If the LED is flashing blue, indicating no GPS lock, ensure the drone is in an open area with a clear view of the sky. Avoid flying near tall buildings or dense foliage.
- **Unstable Flight:** Verify that all components are securely fastened, propellers are correctly installed and tightened, and the flight controller is properly calibrated.

7. SPECIFICATIONS

Feature	Detail
Brand	Readytosky
Model Name	ZD550
Item Model Number	FR550
Material	Carbon Fiber
Item Weight	1.76 pounds
Package Dimensions	13.43 x 6.65 x 2.32 inches
Color	Black
Manufacturer	Readytosky

8. WARRANTY AND SUPPORT

For warranty information, technical support, or inquiries regarding missing parts, please contact Readytosky customer service through their official channels. Keep your purchase receipt as proof of purchase.