

User manual

Model: Z-55



Introduction

Thank you for choosing Quadrone! This is a four-axis aircraft that can fly outdoors, in order to make it easier to control the aircraft. Please carefully read this manual before operating your Quadrone. Please keep this manual for future reference. Before your first flight, please take the time to carefully read this manual containing important flight information which will help your first flight go more smoothly.

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Notes

All instructions, warranties and other collateral documents are subject to change at the sole discretion of our company.

Warning

Read the ENTIRE instruction manual to become familiar with the features of the product before operating. Failure to operate the product correctly can result in damage to the product, personal property or cause serious injury. This is a sophisticated hobby product. It must be operated with caution and common sense, and requires some basic mechanical ability. Failure to operate this product in a safe and responsible manner could result in injury or damage to the product or property. This product is not intended for use by children without direct adult supervision. This manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in this manual, prior to assembly, set up or use, in order to operate correctly and avoid damage or serious injury.

Additional Warnings and Precautions

1. Age Recommendation: Not for children under 8 years of age. This is not a toy.
2. Always operate in open spaces away from obstacles, people, and hazards.
3. Always follow directions and warnings for this and any optional equipment carefully.
(chargers, rechargeable battery packs, etc)
4. Always keep small parts and electrical parts out of the reach of children.

Additional Warnings and Precautions

5. Always avoid water exposure to all equipment not specifically designed and protected for this purpose.
Moisture can cause damage to electronics.
6. Never place any portion of the model in your mouth as it could cause serious injury or even death.
7. Never operate your model with low batteries.

Safety Notes

If this is your first time flying a quadcopter read the manual carefully. Seek the help of an experienced pilot to help you fly. These safety instructions are intended not only for the protection of your Quadrone but also to protect your own safety. Improper operation can cause injury or property damage.

This product is suitable for indoor and outdoor use. Please make sure you choose a flight area with no obstacles and maintain a safe distance from people and pets. Do not operate near power lines.

RC models are composed of many precise electrical components. It is important to keep the model and associated equipment away from moisture and other contaminants. The introduction of exposure to water or moisture in any form can cause the model to malfunction or crash. Do not operate or expose to rain or moisture.

To avoid a potential fire hazard from batteries, do not short, reverse polarity, or puncture batteries. Battery charging should be done under adult supervision at all times, at a location out of reach of children. Do not mix Ni-Cad and Alkaline batteries.

Safety Notes

Make sure the batteries are installed correctly to ensure correct polarity. If you do not plan to use your Quadrone for an extended period of time, remove the batteries from the controller to avoid battery leakage which may damage the controller. Please dispose depleted batteries according to local laws and ordinances.

Li-Polymer batteries have higher operational risks compared to other batteries. It is imperative to follow proper operational guidelines. The manufacturer and dealer assume no liability for accidental damages caused by improper usage. Do not use any other charger other than the supplied charger included in this packaging in order to avoid potential fire or explosion. Do not crush, disassemble, burn, or reverse polarity.

RC models are made from various forms of plastic very susceptible to damage or deformation due to extreme heat and cold temperatures. Make sure not to store the model near any heat source or adverse temperatures.

Assembly Notes and Precautions

1. This whole product is made of plastic. Be sure not to over-tighten screws into the drone. This can cause the screws to strip. Please use adult supervision when assembling your drone.
2. Make sure the directions of the blades, motors, and shell are connected correctly, i.e. A to A, B to B, or the drone will not fly properly.
3. Follow the color matching grid of Step 6 when installing the motor and LED plugs into the PCB. If the electronics are set up incorrectly, the drone will not fly.
4. Make sure to use the correct screws as listed in the manual when assembling your drone.

Parts List



Motor x4



Gear Protector x4



Crash Guard x4



Landing Gear x4



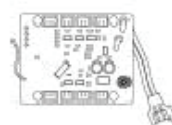
Battery Cover



Upper Shell



Lower Shell



PCB



Blade A x2



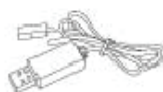
Blade B x2



LED x2
(Green)



LED x2
(Red)



USB Charging Cable



Li-Po Battery



Remote Controller



Screwdriver



P1 Short Screws
x20



P2 Big Head Screws
x4



P3 Long Screws
x8



Sticker Sheet

Assembly

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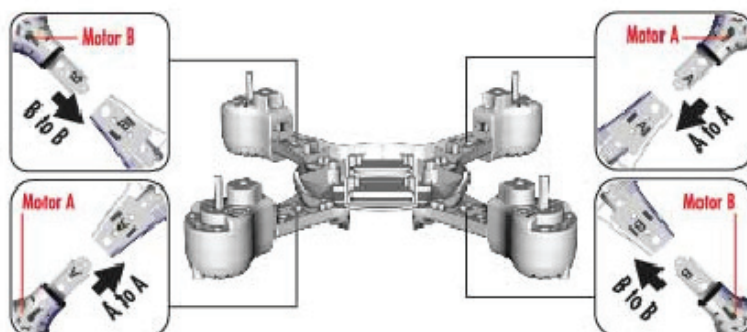
Step 1

Install gear protectors to the bottom of all 4 motors using P3 screws.



Step 2

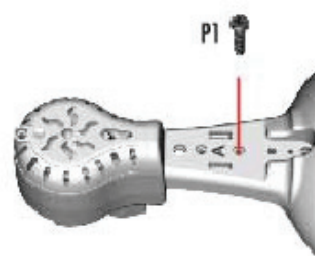
Connect motors to the base of the drone. Proper motor direction is very important!



Assembly

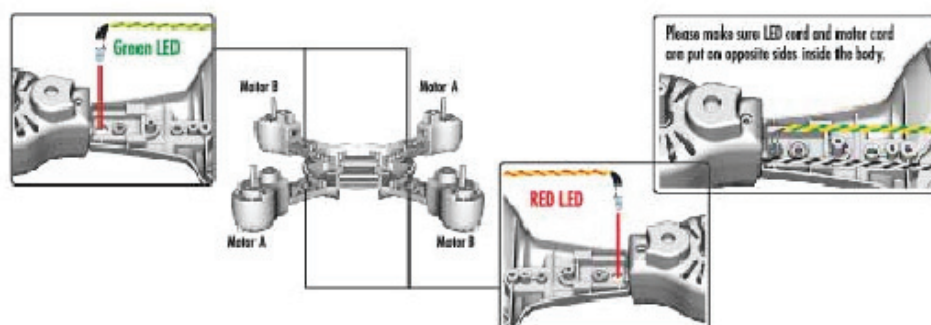
Step 3

Secure the 4 motors into the base with P1 screws.



Step 4

Install LEDs to the base of the drone. Green LEDs are in the front, and red LEDs are in the back.

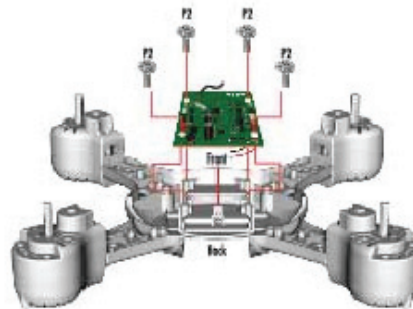


Assembly

8

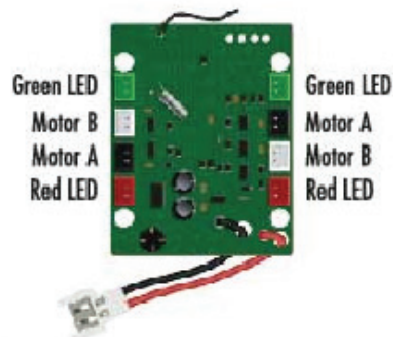
Step 5

Install PCB and secure with P2 screws.



Step 6

Plug the motors and LEDs to PCB based on the chart below:



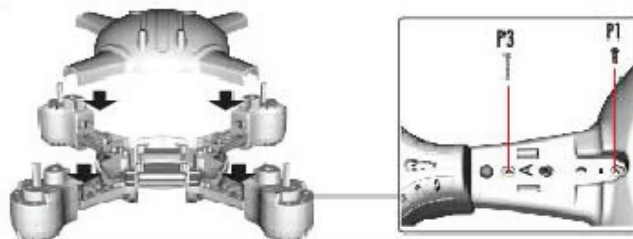
	Card Color	Plug / Port Color
Green LED (Front light)	Green	Green
Red LED (Back light)	Red	Red
Motor B (rotate clockwise)	White	White
Motor A (rotate counter-clockwise)	Black	Black



Assembly

Step 7

Connect the top cover to the base of the drone. Use a P1 screw and a P3 screw for each side to secure.



Step 8

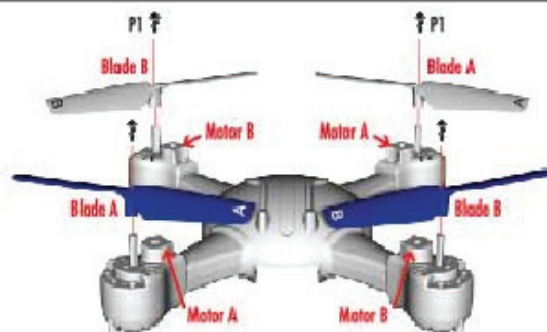
Install all the Crash Guards with P1 screws.



Assembly

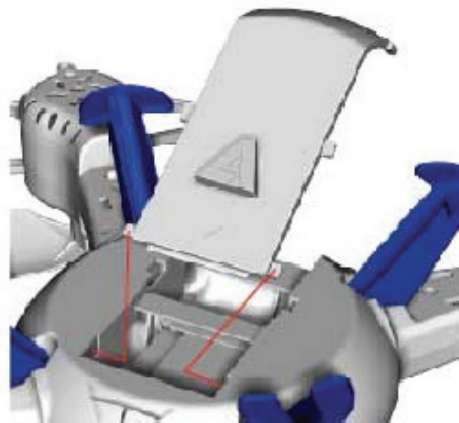
Step 9

Install the 4 Blades with P1 screws.
Proper blade placement is very important!



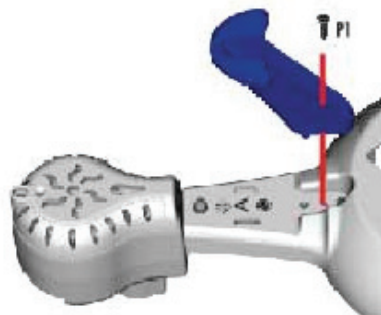
Step 10

Install Battery Cover to the base of the drone.

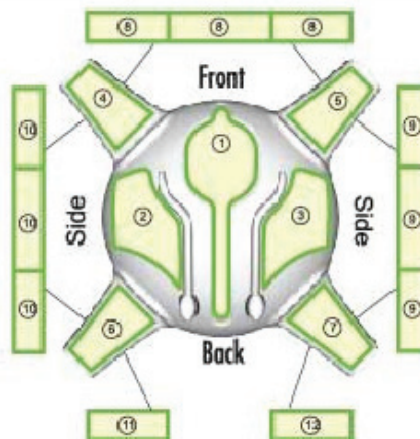


Assembly

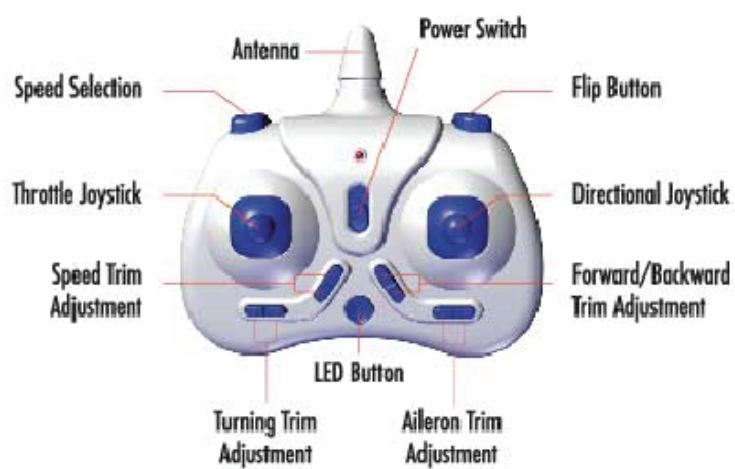
Step 11
Install Landing Gear with P1 screws.



Step 12
Decorate your drone with the included sticker sheet.



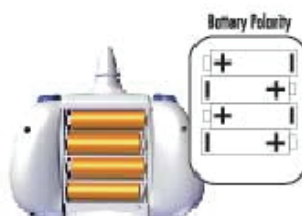
Remote Controller



Battery Installation



Unscrew battery cover
on the back of the remote.



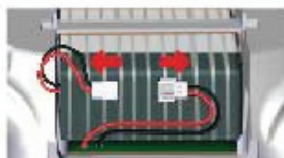
Install 4 AA batteries.



Refasten battery cover
to the back of the remote.

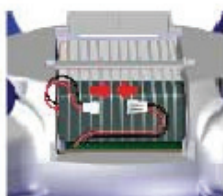
Charging Your Drone

1. Turn off the drone and disconnect the battery plug.
2. Open the battery cover and remove the drone.
3. Connect the battery plug to the USB charging port.
4. Plug the other end of the USB charging cable into an USB port.
5. The red USB light will be on, indicating charging has begun. When the light turns off, charging is complete.
6. Place the battery back into the drone and close the battery cover.



Syncing Your Drone With the Remote

1. Insert the battery and turn on the drone.
Place the drone on a flat surface.
2. Pull down the Throttle Joystick and then turn on the remote. Your drone and remote controller will automatically sync together.



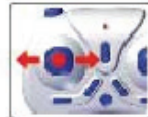
Flight Controls

Throttle Joystick

Press UP
to ascend

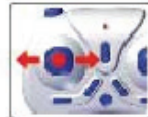


Press DOWN
to descend



Press LEFT
to turn left

Press RIGHT
to turn right

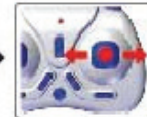


Directional Joystick

Press UP
to fly forward

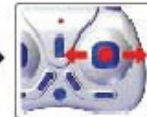


Press DOWN
to fly backward



Press LEFT
to fly left

Press RIGHT
to fly right



Trimming the Quad

If your Quadrone is leaning to or favoring a side, you may need to use the trim feature to balance it out so it flies straight.

If the drone
drifts forward,
press the Back
Trim Button.



If the drone
drifts backward,
press the Forward
Trim Button.

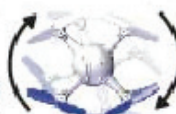


Trimming the Quad

If the drone turns right, press the Left Turning Trim Button.



If the drone turns left, press the Right Turning Trim Button.



If the drone flies to the right, press the Left Aileron Trim Button.



If the drone flies to the left, press the Right Aileron Trim Button.



Speed Selection

Your Quadrone can fly at three speeds. To select a speed, simply press the Speed Selection button on your remote. The remote will beep each time the speed changes.

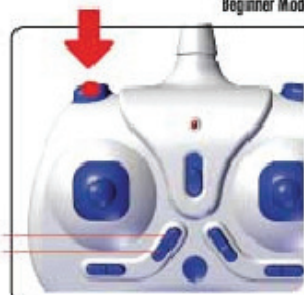
Beginner Mode - Low Speed (One Beep)

Intermediate Mode - Medium Speed (Two Beeps)

Expert Mode - High Speed (Three Beeps)

NOTE: Use the Speed Trim Buttons when the Speed Selection Button is too drastic a change in speed.

NOTE: Default speed is Beginner Mode.



Speed Trim Accelerate
Speed Trim Decelerate

Flips and Rolls

Your Quadrone can perform impressive flips and rolls in midair. In order to do this, press the flip button on your remote during flight. Move the directional joystick in any direction and the aircraft will perform a coinciding flip.

NOTE: Your drone cannot enter Flip Mode while flying at Beginner Speed



LED Control

Control your drone's LED lights with your remote. You can turn them on, have them blink, or fly without them on at all. The LED lights will turn on when you power up your drone by default. Press the button and they will begin to blink. Press the button again and the lights will turn off. To turn the lights back on, simply press the button one last time.



Practice Tips

Use these recommended practice exercises to become a better Quadrone pilot:

Elevation: Raise the Quadrone using the throttle joystick. Gradually lower the Quadrone so it lands softly to the ground.

Direction: Move the Quadrone in a cross pattern using the directional joystick. Move forward, backward, left, right, and back to its original position.

Turning: Turn the Quadrone with the throttle joystick. Turn left and right repeatedly, and back to its original position.

Flying: Once you have mastered the previous three exercises, draw a circle on the ground. Practice flying within the confines of the circle. Narrow the circle as your skills progress.

Troubleshooting

Problem	Cause	Solution
Drone's LED lights blink continuously for more than 4 seconds after quad is turned on. No response to controller.	Unable to sync to remote controller.	Repeat power sequence and re-sync.
No response after quad is turned on.	1. Remote batteries have been depleted. 2. Batteries are installed at incorrect polarity.	1. Replace batteries. 2. Reinstall batteries at correct polarity.
Motor does not respond to throttle.	Battery has been depleted.	Recharge quad battery.
Motor spins but doesn't take off.	1. Bent rotor blades. 2. Quad battery is depleted.	1. Replace damaged blade. 2. Recharge battery.
Quad is making a loud vibration noise.	Bent or damaged rotor blades.	Replace damaged blade.
Quad still wanders forward after trim adjustment.	Forward trim is too high.	1. Lower forward trim. 2. Recalibrate drone.
Cannot fly after crash.	1. Motor fell out. 2. Gear loosened.	1. Reinstall motor. 2. Tighten gear.

Safety Guidelines

- Follow community-based safety guidelines, as developed by organizations such as the Academy of Model Aeronautics (AMA).
- Fly no higher than 400 feet and remain below any surrounding obstacles when possible.
- Keep your drone in eyesight at all times, and use an observer to assist if needed.
- Remain well clear of and do not interfere with manned aircraft operations, and you must see and avoid other aircraft and obstacles at all times.
- Do not intentionally fly over unprotected persons or moving vehicles, and remain at least 25 feet away from individuals and vulnerable property.
- Contact the airport or control tower before flying within five miles of an airport.
- Do not fly in adverse weather conditions such as in high winds or reduced visibility.
- Do not fly under the influence of alcohol or drugs.
- Ensure the operating environment is safe and that the operator is competent and proficient in the operation of the drone.

Safety Guidelines

- Do not fly near or over sensitive infrastructure or property such as power stations, water treatment facilities, correctional facilities, heavily traveled roadways, government facilities, etc.
- Check and follow all local laws and ordinances before flying over private property.
- Do not conduct surveillance or photograph persons in areas where there is an expectation of privacy without the individual's permission.

Battery Guidelines

WARNING!

To reduce the risk of fire or burns:

Do not disassemble, crush, puncture, or short external connectors contacts. Use only with specified charger and player.

Do not dispose of in fire or water.

Do not expose to high temperature above 140° F (60° C).

Store between 32° F (0° C) and 140° F (60° C).

Keep away from children.

See operating instructions of this battery or product.



Li-Ion Battery
Must Be Disposed
Of Properly

Batteries should be recycled or disposed of as per State and Local guidelines.

Limited 90-Day Warranty

DGL Group, Ltd. warrants to the original consumer that this product is free from any electrical or mechanical defects for a period of 90 DAYS from the date of purchase. If any such defect is discovered within the warranty period, DGL Group, Ltd. will repair or replace the unit free of charge upon receipt of the unit, shipped postage prepaid and insured to our warranty center. The warranty covers normal consumer use and does not cover damage that occurs in shipment of failure that results from alterations, accident, misuse, abuse, neglect, wear and tear, inadequate maintenance, commercial use or unreasonable use of the unit. Removal of any parts/components voids all warranties. This warranty does not cover cost of repairs made or attempted outside by third-party individuals and fitness, are hereby limited to 90 DAYS from the date of purchase. Consequential or incidental damages resulting from a breach of any applicable express or implied warranties are hereby excluded. Some states do not allow limitations on the duration of implied warranties and do not allow exclusion of incidental or consequential damages, so the above limitations and exclusions in these instances may not apply.

Repair Replace Product

If your product begins to malfunction or stop working, immediately call or email our warranty center at the phone/email listed below. If it is determined that a return is necessary, our warranty department will issue you an RMA number/Form and an address to the nearest return center to ship the product to. **IMPORTANT NOTICE:** We will reject all returns that are not accompanied by an issued RMA form and number so make sure to contact our warranty center before attempting to return your product!

Preparation For Shipping Your Product

Please repack your product in a durable box, preferably in the original carton, and send it prepaid, and adequately insured. Include the RMA form that was issued by our warranty department along with your daytime telephone number and email address (if available) inside the shipping carton. If your warranty has expired, contact our warranty center for charged service. For further information please send all inquiries to support@dglusa.com

IMPORTANT NOTICE!

DO NOT ATTEMPT TO SHIP YOUR PRODUCT BACK WITHOUT
FIRST CONTACTING OUR WARRANTY DEPARTMENT AT:

DGL Group, Ltd.
WARRANTY REPLACEMENT DEPARTMENT
support@dglusa.com

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does

cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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Other trademarks and trade names are those of their respective owners.

DGL TOYS,
195 Raritan Center Parkway, Edison, NJ 08837.
Specifications, colors and contents may vary from illustrations.
Conforms to safety requirements of ASTM, FCC, & CPSIA.

BATTERY WARNING:

- Do not mix alkaline, standard (carbon zinc), rechargeable (nickel hydride) batteries.
- Do not mix old and new batteries.
- Non-rechargeable batteries should not be recharged.
- Rechargeable batteries should be removed from the appliance before being charged.
- Rechargeable batteries should be charged under adult supervision only.
- Exhausted batteries should be removed.
- The supply terminals should not be short-circuited.
- Only batteries of the same or equivalent type are recommended to be used.
- Batteries should be inserted with the correct polarity.



FCC ID: 2AL66

Tested to comply with FCC standards.
FOR HOME OR OFFICE USE.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference and
- (2) This device must accept any interference received, including interference that may cause undesired operation.



WARNING:
CHOKING HAZARD—Small parts.
Not for children under 3 years.

Manufactured in
Dongguan, Guangdong, China
Batch Ref: 170715DGL
Model Number: AW-DIY-DR

FCC Caution.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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