

# protoZ™

**BEGINNER DRONE**



Estes-Cox Corp.  
1295 H Street, PO Box 227  
Penrose, CO 81240-0227  
Made In Shunde, Guangdong, China



- Do not turn on the Proto-Z unless controller has been turned on first.
- Keep hands, hair and loose clothing away from spinning blades.
- Turn off controller and Proto-Z when not in use.
- Parental guidance is recommended.
- Do not submerge into water. This could damage electronic assemblies.
- Follow operating instructions exactly.
- Not intended for children under 8 years old.
- Replace any damaged or broken parts before attempting to fly.
- Do not drop the Proto-Z by suddenly reducing the throttle. This could lead to severe damage.
- The Proto-Z's range will also be affected if the battery is not fully charged.
- Do not touch the motors after flying. They can become hot.
- The battery in the Proto-Z is not replaceable.

**CAUTION:** Changes or modifications to this product not expressly approved by the party responsible for compliance may void the user's authority to operate the equipment.

Do not touch the spinning blades or fly over another person's head. Adult supervision is required.

**FCC STATEMENT AND INDUSTRY CANADA NOTICE:**

1. This device complies with Part 15 of the FCC Rules and RSS-210 of Industry Canada. 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.

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

**Remark:** This device is in accordance with the digital device grade B limitation and the 15th regulation of FCC. This limitation requires reasonable anti-interference protection around the residence. The device can transmit radio waves during use and can interrupt the mobile communication without proper installment. Interruption will occur for special device. If the device does interrupt the radio or television, please turn the device off then turn it on to adjust. Below are some resolutions for your reference:

- Move the receiving antenna
- Enlarge the distance between the device and receiver
- Try to not connect the device and the receiver on the same circuit
- Ask for professional help from experts

3. This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of Industry Canada.

**Battery Requirements for Controller:**

Requires: 2 x 1.5V AAA size batteries (not included)

**Requirements for USB Charge Cord:**

USB Output Jack (not included)

**Battery Cautions:**

- Parental guidance is recommended when installing batteries.
- Do not power controller by mixing different types of batteries, or old and new batteries.
- Use only batteries of the same or equivalent type as those recommended.

**The Proto-Z is equipped with a rechargeable 3.7V LiPo battery.**

**Please pay attention to the following cautions for safe use:**

- Do not dispose of battery into fire or heat.
- Do not use or leave battery near a heat source, such as fire or a heater.
- Do not strike battery or throw it against a hard surface.
- Do not pierce battery.
- Do not disassemble or alter battery.
- Turn off power switch after use.
- Recycle used batteries.



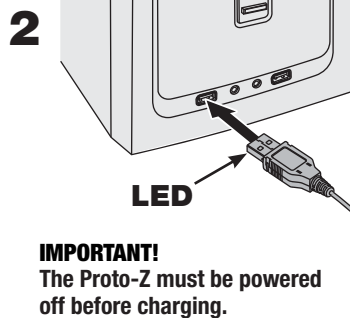
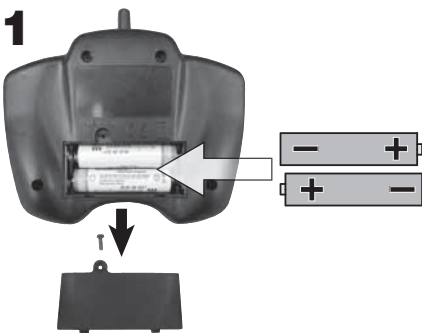
**90 DAY LIMITED WARRANTY**

**PLEASE DO NOT RETURN YOUR PRODUCT TO THE STORE** – Estes will repair or replace factory defects for 90 days from the date of purchase. This warranty specifically does not cover crash damage, misuse or abuse. To make a warranty claim, please contact our product support team at 1-217-398-8970 or e-mail us at [productsupport@hobbico.com](mailto:productsupport@hobbico.com)

If requested by Product Support, please send defective product to: Hobby Services, 3002 N Apollo Dr., Suite #1, Champaign, IL 61822

This warranty applies only if the product is operated in compliance with the instructions and warnings provided with each model. Estes assumes no liability except for the exclusive remedy or repair of parts as specified above. Estes shall not be liable for consequential or incidental damages. Some states do not allow the exclusion of consequential or incidental damages so the above exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

**GET READY TO FLY**



Plug the charger into a USB port and Proto-Z as shown. (The battery connector will only fit in one way. Do not force the connectors together.)  
The red LED will be on when charging.  
The red LED will go off once charged.

**NEVER** leave the Proto-Z unattended when charging.  
**DO NOT** allow the USB port to power down when connected to the Proto-Z.  
**ALWAYS** unplug the Proto-Z when charging is complete.

**IMPORTANT!**  
The Proto-Z must be powered off before charging.

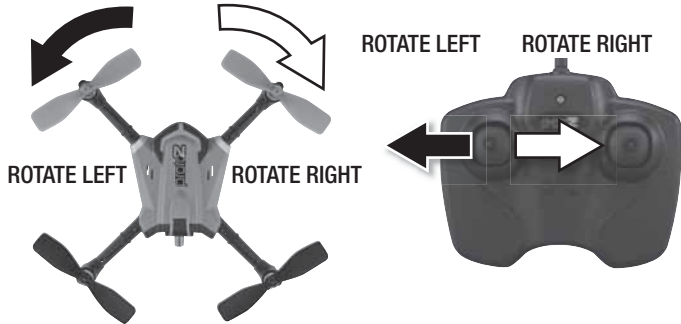
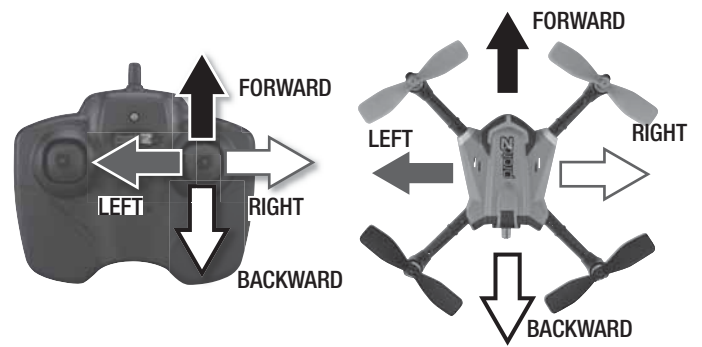


**5** Set the Proto-Z on a level surface. Turn on the controller and then the Proto-Z. The LED on the Proto-Z and the controller will flash.

**6** Move the left stick to full throttle ("BEEP"), then back to the bottom ("BEEP"). The Proto-Z is armed and LEDs are solid.



## HOW TO FLY



### FLYING BASICS

1. Take off by **slowly** advancing the left stick until the Proto-Z takes off.
2. Control altitude using the left stick.
3. Use the right stick to move left, right, forward, or backward.
4. Use the left stick (left/right) to rotate or spin left or right.
5. Always use small movements until you learn how the model behaves.

## FLIP MODE

The Proto-Z has a built-in flip function. To flip, simply push one of the flip buttons on the controller. To flip left, push the ◀ left button and to flip right, push the ▶ right button.



## TRUE DIRECTION MODE

True Direction mode is when the Proto-Z moves the direction of the input given to the controller no matter what direction/orientation the Proto-Z is in. True Direction mode is an easy mode for beginners to fly in.

**IMPORTANT:** When entering True Direction mode, the Proto-Z must be pointing away from you and the controller located directly behind the Proto-Z with the antenna pointing at the Proto-Z.

To toggle between normal and True Direction mode, push both of the flip buttons at the same time until the controller beep stops. The LED on the back of the Proto-Z will flash four times repeatedly to indicate when it is in True Direction mode. Push the flip buttons again until the controller beep stops and the LED will stay on constantly to indicate you are in normal mode. The default when you turn the Proto-Z on is to be in normal mode. If you have the Proto-Z in True Direction mode and turn it off, it will default back to normal mode.



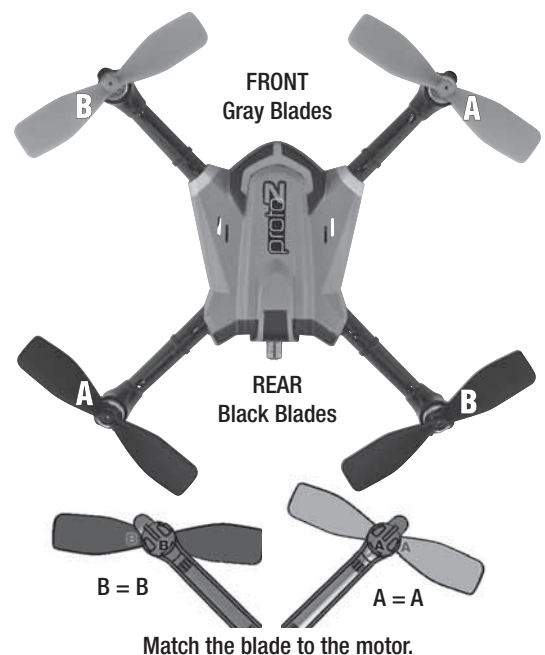
## CALIBRATING THE SENSORS

If the Proto-Z drifts, recalibrate the sensors.



1. Turn on the controller and the Proto-Z. Place the Proto-Z on a flat surface.
2. Hold the left stick to the lower right. At the same time, quickly move the right stick left and right several times until the blue LEDs flash.

## REPLACEMENT BLADES



## LANDING SAFELY

When the battery voltage begins to run low, the Proto-Z will start to lose power. To avoid the Proto-Z crashing to the ground, you need to land the Proto-Z immediately. Once the voltage reaches its cutoff, it will lose all power and fall to the ground if you have not landed.

## TROUBLESHOOTING

**PROBLEM:** Controller LED flashing after binding.

**SOLUTION:** Replace batteries.

**PROBLEM:** Proto-Z shaking.

**SOLUTION:** Check if the canopy, chassis and rotors are damaged.

**PROBLEM:** Will not take off.

**SOLUTION:** Check that the rotor blades are properly installed.