

FCC Part 15 B Notice

CAUTION: 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:

- 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 experienced radio/TV technician for help.

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.



Conforms to safety requirements of ASTM, CPSIA and FCC.

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Tel: + (1) 949-566-9573 • www.propelrc.com

Made in China

PROTON-Z™ MICRO DRONE

2.4Ghz Indoor/Outdoor Quad Rotor Helicopter



INSTRUCTION BOOKLET

WARNING: Never leave product charging unattended for extended periods of time. Always disconnect Proton Z from charger immediately after the Proton Z is fully charged. Please refer to enclosed safety instructions.

PACKAGE CONTAINS:



Proton Z



2.4G Wireless Controller



Spare Parts



Instruction Booklet

Colors and styles may slightly vary.

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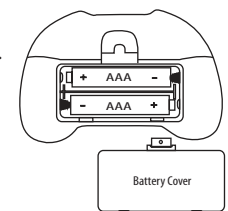
Thank you for purchasing the Proton Z™ 2.4Ghz Indoor/Outdoor Quad Rotor Helicopter. Please read this instruction booklet as it contains valuable information on how to properly fly and care for your Proton Z.

FEATURES

- Built in 6 axis gyroscopic chip keeps the Proton Z extremely stable in all conditions.
- 4 channel flight controls allow for incredible manoeuvrability including 360° aerial stunts!
- LED directional lights makes the Proton Z easy to follow.
- Invesense™ 6 axis gyro keeps the proton-z extremely stable in all conditions
- Patented switch-blade™ technology allows you to operate in 3ch or 4ch modes for beginner to advanced pilots
- Snap on wheel cage protects your quadcopter and adds an element of fun!

REMOTE CONTROL BATTERY INSTALLATION

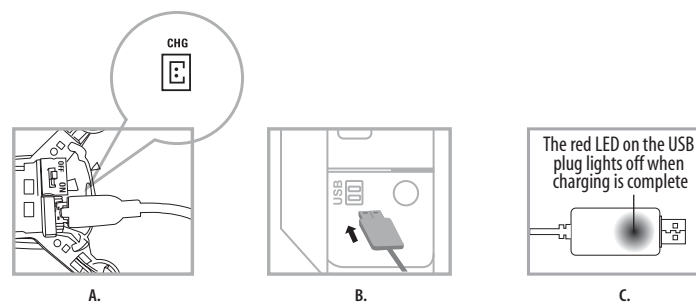
1. Unscrew the screw and slide off the battery cover from the controller.
2. Install 2 "AAA" alkaline batteries into the controller as shown in the diagram.
3. Replace the battery cover and secure it.



Battery Compartment
(2 "AAA" batteries)

CHARGING THE HELICOPTER

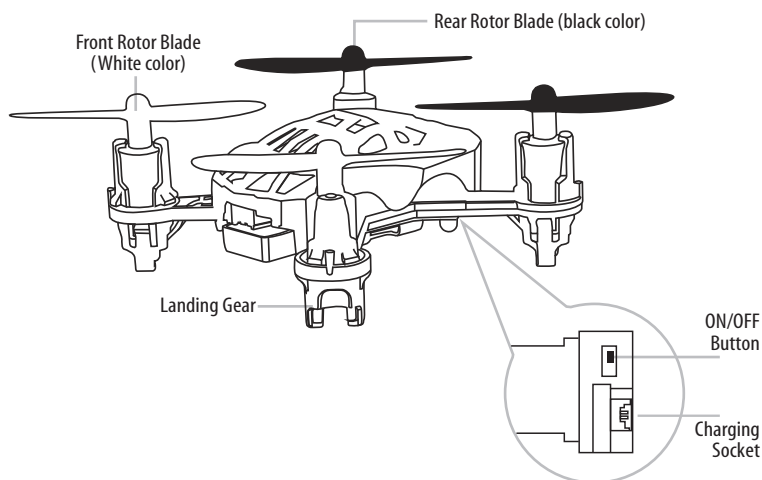
1. Make sure the helicopter's power switch is in the "OFF" position and plug the USB charging cord into the charging socket of the helicopter (see diagram A).
Caution: The USB plug fits the charging socket only in one way. Do not force it.
2. Connect the helicopter charging cord to your computer's USB port (see diagram B).
- Note: You may also purchase a Propel USB wall charger from our online store at www.propelrc.com.**
3. The red LED on the USB plug lights OFF when charging is complete (See diagram C).
4. The charging time will vary depending on the percentage of battery already charged. The average charging time is approximately 30-40 minutes.



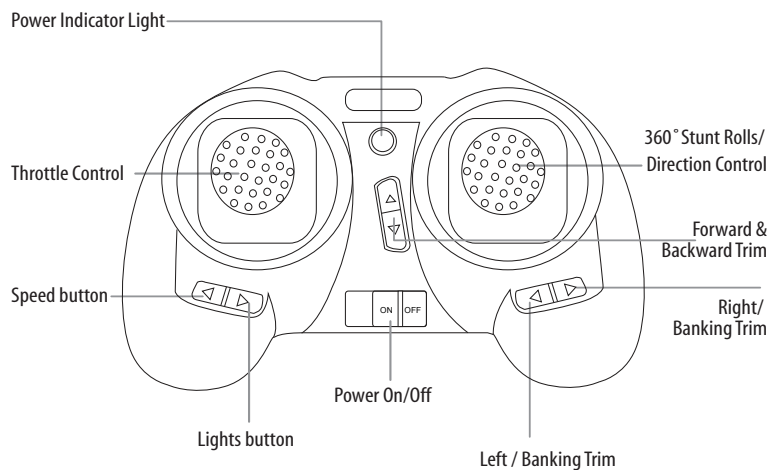
Charging socket is located on the underside of the helicopter next to the power switch.

IMPORTANT: ALWAYS DISCONNECT CHARGER CORD AFTER CHARGING. NEVER LEAVE CHARGER CONNECTED TO HELICOPTER OVERNIGHT OR FOR EXTENDED PERIODS OF TIME.

Proton Z DIAGRAM



REMOTE DIAGRAM



WARNING

DO NOT FLY YOUR PROTON Z IN FOUL WEATHER!



PREPARING FOR FLIGHT

- Verify that there are 2 "AAA" batteries inside the remote control unit and the Proton Z has been fully charged.
- Make sure your Proton Z and controller are turned on.
- Make sure to be in a large space with an open radius of at least 50 feet.
- Make sure the empty space has no obstacles and river. Set your Proton Z on a clean flat surface before take-off.

DO NOT ATTEMPT TO FLY YOUR PROTON Z IF THERE IS RAIN, SNOW, HEAVY WINDS, THUNDER OR LIGHTNING OUTDOORS. IT COULD DAMAGE YOUR PRODUCT AND POSSIBLY EVEN CAUSE BODILY HARM.

SYNCING YOUR Proton Z

Important! When syncing your Proton Z copter with the controller always make sure that the copter is on a flat level surface and that your digital trim settings are in the center position. This insures that the 6 Axis gyro is properly programmed to mimic your trim settings.

Your Proton Z™ utilizes an automatic 2.4G channel selection system that allows up to 8 people to fly side by side in the same wireless range.

For One Person Play:

1. Before starting, make sure that the power on both your controller and Proton Z are in the OFF position. Make sure that there are no other 2.4G devices in the area as well.
2. Turn ON the Proton Z and set it down on a flat surface. The white and red LED indicators at the bottom of the Proton Z body should flash.
3. Turn ON the remote, the power indicator should flash in green color and you will hear rapidly beep, pull the throttle all the way down, the white and red LED indicators on the protonZ will change to still, and the remote power indicator change to solid red. This indicates that your Proton Z and remote have successfully synced. Should this not happen, repeat all steps again.

For Multi Person Play:

4. Before starting, make sure that the power on all Proton Zs and Controllers are in the OFF position. Make sure that there are no other 2.4G devices in the area as well.
5. Each person will have to sync their Proton Z individually at a different time to avoid interference. Follow steps 1 to 3 above making sure to keep away from other people while also making sure that no one else is syncing at the same time.
6. After syncing a players Proton Z, it should be left ON until all players have synced their Proton Z copters.
7. Should there be a mistake/interference, all players must turn off their controllers and Proton Z copters and start the process all over again.

FLYING TIPS

- It is recommended that you operate the Proton Z in a wide space. The ideal space should have a 200 foot radius.
- Parental guidance or adult supervision is suggested at all times.
- If you are flying the Proton Z with others, make sure all spectators are behind you.
- For best performance, it is recommended that you operate the Proton Z in zero wind conditions. Wind can greatly affect the performance of the Proton Z.

RECOGNIZING THE FRONT AND BACK OF THE COPTER

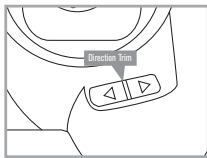
Even though the copter has four rotors there is still a front or "forward" facing direction and "back" or backwards facing direction. The forward Front and forward facing direction of the helicopter is the side with two white blades (see diagram E on page 10). The rear and back of the helicopter is where the charging socket and the two black propellers (see diagram E on page 10).

NOTE: The front of the copter displays WHITE LED lights and the back of the copter displays RED LED lights.

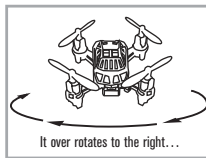
UNDERSTANDING TRIM ADJUSTMENTS

Turn Left/Right Trim

- If your Proton Z nose rotates to the left or right uncontrollably, you may need to utilize the DIRECTION TRIM buttons.
- If your Proton Z over rotates CLOCKWISE (to the right), push and release the DIRECTION TRIM button repeatedly to left side until the turning stops and proper flight is maintained.
- If your Proton Z over rotates COUNTER-CLOCKWISE (to the left), push and release the DIRECTION TRIM button to right side in the same manner until the problem is resolved.
- From time to time you may have to adjust the DIRECTION TRIM to left and right to ensure the Proton Z will fly straight and respond accurately to control commands.



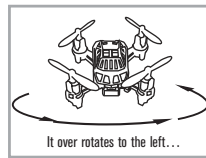
Direction Trim Controls



It over rotates to the right...



Push to left



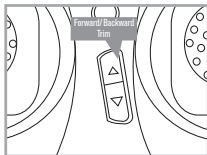
It over rotates to the left...



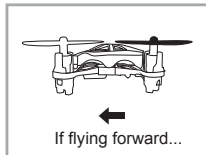
Push to right

Forward/Backward Trim

- If your Proton Z is moving forwards or backwards automatically, you may need to adjust the FORWARD/BACKWARD TRIM buttons.
- If your Proton Z flies forward, push and release the FORWARD/BACKWARD TRIM button back/down repeatedly until the moving stops and proper flight is maintained.
- If your Proton Z flies backwards, push and release the FORWARD/BACKWARD TRIM button forward/up in the same manner until the problem is resolved.
- From time to time you may have to adjust the FORWARD/BACKWARD TRIM to ensure the Proton Z will hover in mid-air and respond accurately to your commands.



Forward/Backward Trim Controls

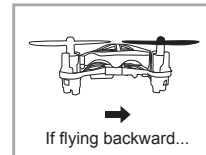


←

If flying forward...



Push down to go backward



→

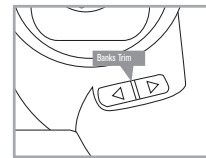
If flying backward...



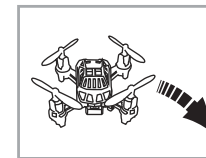
Push up to go forward

Banking Left/Right Trim

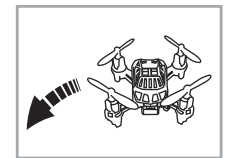
- If your Proton Z is not steadily hovering and is banking to the left or right automatically, you may need to adjust the BANKING TRIM buttons.
- If your Proton Z banks to the left, push and release the BANKING TRIM button repeatedly to the right until the banking stops and proper flight is maintained.
- If your Proton Z banks to the right, push and release the BANKING TRIM button to the left in the same manner until the problem is resolved.
- From time to time you may have to adjust the BANKING TRIM to left/right to ensure the Proton Z will steadily hover in mid-air and respond accurately to your commands.



4 CH Left/Right Banking Controls



Push to right to increase right banking sensitivity



Push to left to increase left banking sensitivity

NOTE: The use of the Trim buttons are accompanied with a Beep tone. A single long Beep indicates the product is center trimmed. Continuous long Beeps indicate the product is trimmed to the maximum on a particular side.

SPEED SELECT BUTTON

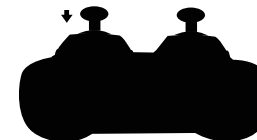
The Proton Z has 2 speed settings, the initial setting is Slow speed mode, the power indicator become still red, Press the SPEED button and your Proton Z will change to high speed mode, the power indicator become flashing in green.

LIGHT BUTTON

The Proton Z allows you turn on or off remotely, Simply press the Light button to switch On or Off the lights on Proton Z.

3/4 CHANNEL SELECT

Proton Z allows you flight in 3 channel mode or 4 channel mode. the initial setting is 4 channel mode, the power indicator light change to still red, PRESS down the throttle stick (see diagram D), the Proton Z will change to 3 channel mode and the power indicator light will change to slowly flashing red.



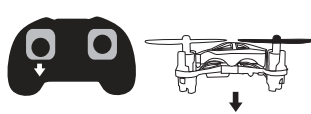
D

4 CHANNEL FLIGHT CONTROL

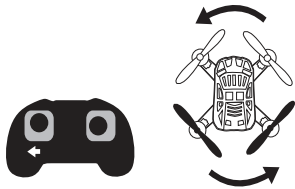
Below is a list of basic flight functions for your long-range remote control Proton Z. While learning to fly your Proton Z it is best to start with a large space until you get used to the basic controls. As you master flying your Proton Z you can move to more advanced maneuvering techniques. Practice makes perfect! When you have these basic steps down you can move to the next level.



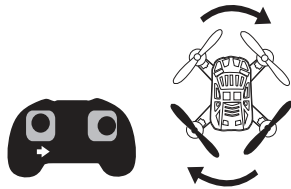
Move the Throttle up to increase the speed and the Proton Z will rise up.



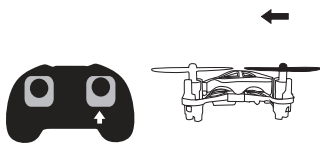
Move the Throttle down to decrease the speed and the Proton Z will descend.



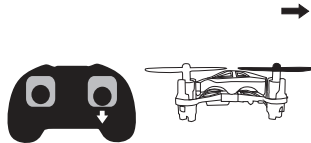
Move the Throttle left and the Proton Z will turn left.



Move the Throttle right and the Proton Z will turn right.



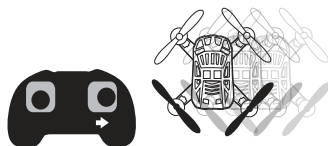
Move the Direction Control up and the Proton Z will move forward.



Move the Direction Control down and the Proton Z will move backward.



Move the Direction Control left and the Proton Z will bank to the left.



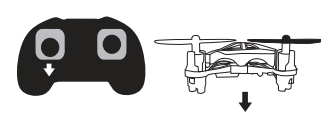
Move the Direction Control right and the Proton Z will bank to the right.

3 CHANNEL FLIGHT CONTROL

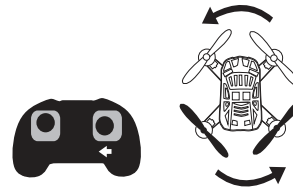
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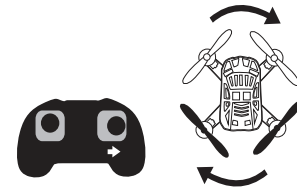
Move the Throttle up to increase the speed and the Proton Z will rise up.



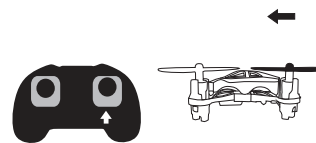
Move the Throttle down to decrease the speed and the Proton Z will descend.



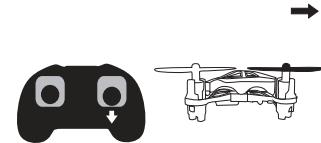
Move the Throttle left and the Proton Z will turn left.



Move the Throttle right and the Proton Z will turn right.



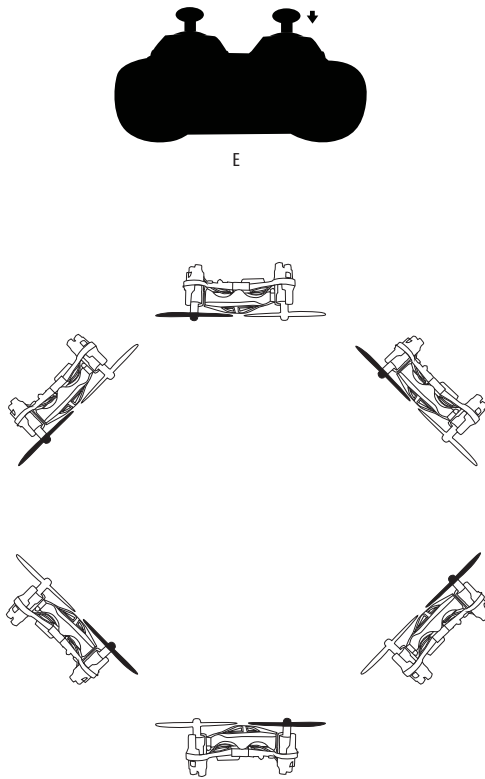
Move the Direction Control up and the Proton Z will move forward.



Move the Direction Control down and the Proton Z will move backward.

HOW TO DO 360° STUNT ROLLS

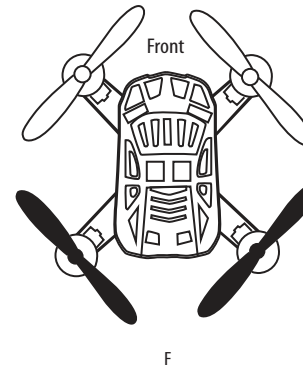
1. In order to make your Proton Z copter do 360° rolls you must first flight your Proton Z in a eye level.
2. Once you have your Proton Z in a good flight condition, Press down the 360° Stunt Rolls (Direction Control) stick (see diagram E), your Proton Z will enter Stunt Rolls mode. Push the Direction Control stick forward the Proton Z will rolling forward, Push the Direction Control stick backward the Proton Z will rolling backward, Push the Direction Control stick left the Proton Z will rolling left, Push the Direction Control stick right the Proton Z will rolling right.
3. To exist the Stunt Rolls mode, simply push the direction control stick forward.



REPLACING THE PROPELLER BLADE

Your Proton Z propeller system is a precision instrument that may need repair or replacement from time to time for optimal flight function. Crash landing from high-speed aerial flights may cause damage to your Proton Z propellers.

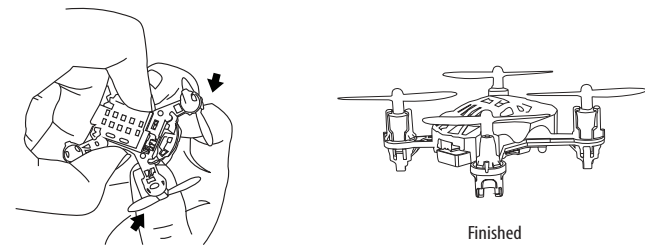
1. The Proton Z have four blades, two gray colors on front, and two black colors on back (see the diagram F).
2. Pick up a blade from the included spare parts and match the color to the diagram F.
3. Replacing the correct blade to the broken blade.



REPLACING THE INTERCHANGEABLE SHELL

Your Proton Z come with a lot of colors interchangeable shell, you can choose the color you like and change it.

1. Turn Off your Proton Z, Simply snap off the shell from the rear side of the Proton Z (see diagram G).
2. Replacing the new shell and keep all the inside part not move.

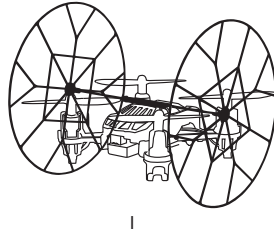
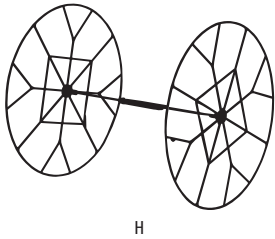


G

PLAY WITH ATTACHED WHEELS

Your Proton Z come with a protect wheel system, it will protect your proton Z from crush also bring more fun from the ground to the ceiling.

1. Assemble the wheel according to the diagram H.
2. Snap the wheel system on the shell of the Proton Z (see diagram I).
3. ready to play!



PROTON Z WARNING:

The Proton Z is designed for INDOOR or OUTDOOR. The Proton Z blades revolve at high speeds and can cause damage to the user, spectators and animals. Stand away from the Proton Z to reduce the risk of getting into the flight path. Warn spectators that you will be flying your Proton Z so that they are aware of its position. Before flight, inspect the rotor blades to make certain that the blades are securely fastened to the Proton Z.

WARNING!

- Choking/Cutting Hazard. Small Parts/Sharp Rotor Blades.
- Keep hands, hair and loose clothing away from the propeller when the power switch is turned to the ON position.
- Turn off the transmitter and Proton Z power switches when not in use.
- The included charger is built specifically for the Proton Z Li-Poly battery. Do not use it to charge any other battery.
- New alkaline batteries are recommended for maximum performance.
- Parental supervision recommended when flying Proton Z.

BATTERY WARNINGS

RECHARGEABLE BATTERY:

This Proton Z uses a Li-Poly rechargeable battery. If battery no longer stays charged, dispose of battery properly according to local disposal requirements.

CONTROLLER BATTERIES:

Remote control requires 6 "AA" batteries (not included). Please read the important battery safety warning below.

- Do not mix alkaline, standard (carbon-zinc) and rechargeable batteries (Nickel Metal Hydride).
- Do not mix old and new batteries.
- Non-rechargeable batteries are not to be recharged.
- Rechargeable batteries are to be removed from the item before being charged (if removable).
- Rechargeable batteries are only to be charged under adult supervision.
- Exhausted batteries should be removed immediately and must be recycled or disposed of properly according to state or local government ordinances and regulations.
- The supply terminals are not to be short-circuited.
- Only batteries of the same or equivalent type as recommended are to be used.
- Batteries are to be inserted with the correct polarity (see inside booklet for diagram).
- Do not dispose batteries in a fire - batteries may leak or explode.

CARE AND MAINTENANCE

- Always remove the batteries from the wireless infrared remote control when it is not being used for an extended period of time.
- To clean, gently wipe the remote control and Proton Z with a clean damp cloth.
- Keep the toy away from direct heat or sunlight.
- Do not submerge the toy into water. This can damage the unit beyond repair.
- Parental guidance recommended when installing or replacing the batteries.