

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.

QUARK™ MICRO DRONE
2.4Ghz Indoor/Outdoor Quad Rotor Helicopter



INSTRUCTION BOOKLET

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

PACKAGE CONTAINS:



Quark™



2.4G Wireless Controller



Spare Parts



Instruction Booklet

Colors and styles may slightly vary.



Conforms to safety requirements of ASTM, CPSIA and FCC.

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Made in China

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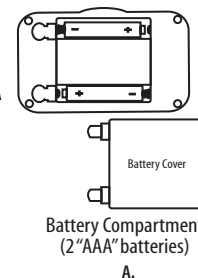
Thank you for purchasing the Quark™ 2.4Ghz Indoor/Outdoor Quadcopter. Please read this instruction booklet as it contains valuable information on how to properly fly and care for your Quark™.

FEATURES

- Built in 6 axis gyrosopic chip keeps the Quark™ extremely stable in all conditions.
- 4 channel flight controls allow for incredible maneuverability including 360° aerial stunts!
- LED directional lights makes the Quark™ easy to follow.
- On board 6 axis gyro keeps the Quark™ extremely stable in all conditions
- Patented switch-blade™ technology allows you to operate in either 3ch or 4ch modes for beginner to advanced pilots

REMOTE CONTROL BATTERY INSTALLATION

1. Unscrew and slide off the battery cover from the back of the controller.
2. Install 2“AAA” alkaline batteries into the controller as shown in diagram A
3. Replace the battery cover and secure it.
4. Turn over the controller and turn the on/off switch to the on position to check for an LED light indicator. If the indicator light turns on you have installed your batteries properly.

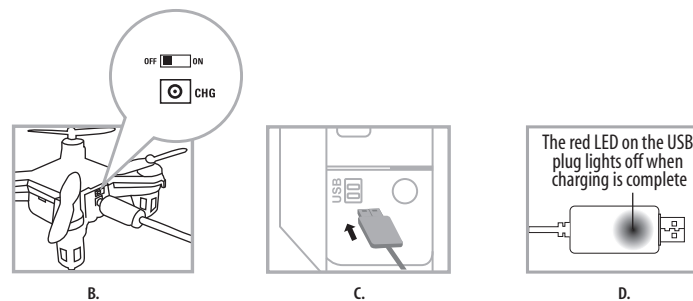


CHARGING THE HELICOPTER

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 B).
2. Next, connect the USB charging cord to your computer’s USB port (see diagram C)
Note: The USB plug will show a RED charging indicator light. This lets you know that Charging is in progress.

Note: You may also purchase a Propel USB wall charger from our online store at www.propelrc.com.

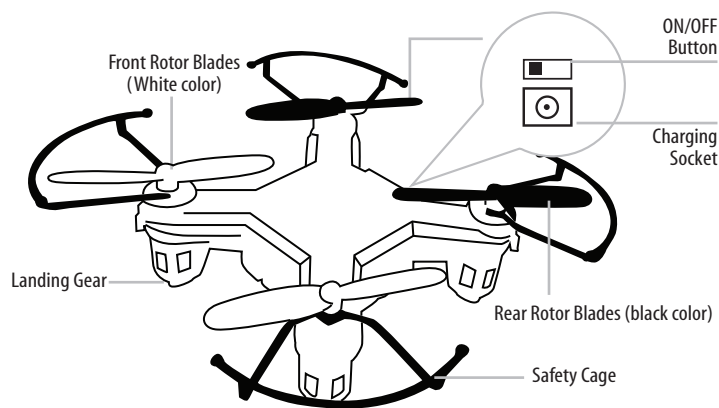
3. The red LED on the USB plug lights OFF when charging is complete (See diagram D).
4. The charging time will vary depending on the percentage of battery already charged. The average charging time is approximately 30-40 minutes.



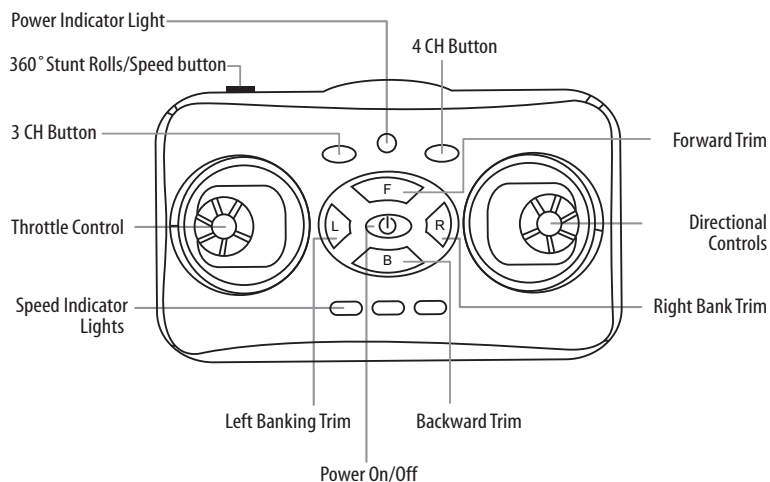
Charging socket is located on the backside of the helicopter next to the power switch.

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

QUARK™ DIAGRAM



REMOTE DIAGRAM



WARNING DO NOT FLY YOUR QUARK™ IN FOUL WEATHER!



SYNCING YOUR QUARK™

Important! When syncing your Quark™ 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 Quark™ utilizes an automatic 2.4G channel selection system that allows up to 8 people to fly side by side in the same wireless range with no interference.

For One Person Play:

1. Before starting, make sure that the power on both your controller and Quark™ are in the OFF position. Make sure that there are no other 2.4G devices in the area as well.
2. Turn ON the Quark™ and set it down on a flat surface. The white and red LED indicators of the Quark™ should begin to flash.
3. Turn ON the remote, you will hear long beep, the Quark's white and red LED lights should change to solid, pull the throttle all the way down. Right now your controller and the helicopter successfully synced, should this not happen, repeat above steps again.

For Multi Person Play:

4. Before starting, make sure that the power on all Quarks 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 Quark™ 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 player's Quark™, it should be left ON until all players have synced their Quark™ copters.
7. Should there be a mistake/interference, all players must turn off their controllers and Quark™ Quadcopters for 60 seconds and then begin the process again.

PREPARING FOR FLIGHT

- Verify that there are 2 "AAA" batteries inside the remote control unit and the Quark™ has been fully charged.
 - Make sure your Quark™ 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 Quark™ on a clean flat surface before take-off.
- DO NOT ATTEMPT TO FLY YOUR QUARK™ IF THERE IS RAIN, SNOW, HEAVY WINDS, THUNDER OR LIGHTNING OUTDOORS. IT COULD DAMAGE YOUR PRODUCT AND POSSIBLY EVEN CAUSE BODILY HARM.**

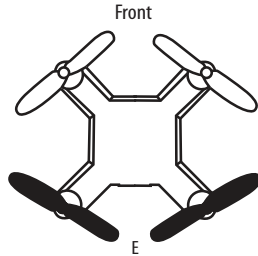
FLYING TIPS

- It is recommended that you operate the Quark™ 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 Quark™ with others, make sure all spectators are behind you.
- For best performance, it is recommended that you operate the Quark™ in zero wind conditions. Wind can greatly affect the performance of the Quark™.

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 Quadcopter is the side with two white blades (see diagram E). The rear and back of the Quadcopter is where the charging socket and the two black propellers (see diagram E).

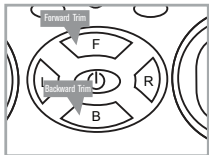
NOTE: The front of the Quadcopter displays WHITE LED lights and the back of the copter displays RED LED lights.



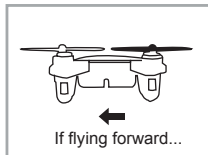
UNDERSTANDING TRIM ADJUSTMENTS

Forward/Backward Trim

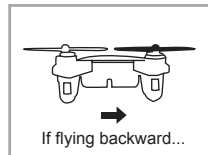
- If your Quark™ is moving forwards or backwards automatically, you may need to adjust the FORWARD/BACKWARD TRIM buttons.
- If your Quark™ flies forward, push and release the BACKWARD TRIM (B) button repeatedly until the moving stops and proper flight is maintained.
- If your Quark™ flies backwards,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



Forward/Backward Trim Controls



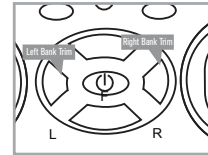
B Push and release to go backward



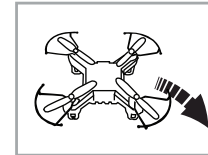
F Push and release to go forward

Banking Left/Right Trim

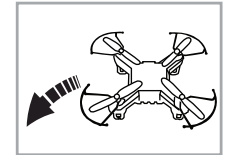
- If your Quark™ is not steadily hovering and is banking to the left or right automatically, you may need to adjust the LEFT BANK or RIGHT BANK Trim buttons.
- If your Quark™ banks to the left, push and release the RIGHT BANK TRIM (R) button repeatedly until the banking stops and proper flight is maintained.
- If your Quark™ banks to the right, push and release the LEFT BANK TRIM (L) button in the same manner until the problem is resolved.
- From time to time you may have to adjust the LEFT and RIGHT BANK TRIM to ensure the Quark™ will steadily hover in mid-air and respond accurately to your commands.



Left/Right Banking Controls



L Push the left button to increase left banking sensitivity



R Push to right button to increase right 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.

3/4 CHANNEL SELECT

Quark™ allows you to control your Quadcopter in 3 channel mode (beginner) or 4 channel mode (advanced flying). The Quark™ default setting is 4 Channel mode.

To change to 3 Channel mode:

PRESS and hold the 3CH button (see remote diagram on pg 3), you will hear 3 short beeps and the green LED lights will off indicating the Quark™ now is set to 3CH mode.

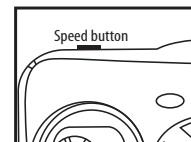
To change back to 4 Channel mode:

PRESS and hold the 4CH button (see remote diagram on pg 3), you will hear 4 short beeps and the green LED lights will lights up indicating the Quark™ is now set to 4CH mode.

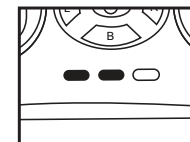
SPEED SELECT BUTTON

The Quark™ has 3 speed settings; SLOW, MEDIUM and HIGH. The Default setting when you first turn on your Quark™ is the SLOW speed mode. To increase the speed simply depress the speed setting button (see diagram F) you will here a beep and the speed setting indicator light bar will show you what speed setting you are on by the number of lights that are lit-up (see diagram G). One light indicates slow, 2 lights indicates medium speed and all 3 lights lit up indicate full or fastest speed.

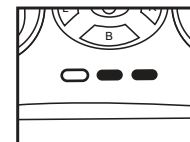
NOTE: When in 3CH mode, the speed setting indicator bar will light its LEDs from Left to Right (see diagram G). When in 4CH mode the speed setting indicator bar will light it's LED's from Right to Left (see diagram H) This is a helpful reminder as to what control channel mode you are flying in.



F



G



H

4 CHANNEL FLIGHT CONTROL

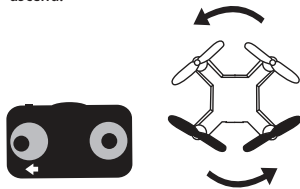
Below is a list of basic flight functions for your long-range remote control Quark™. While learning to fly your Quark™ it is best to start with a large space until you get used to the basic controls. As you master flying your Quark™ you can move to more advanced maneuvering techniques. Practice makes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



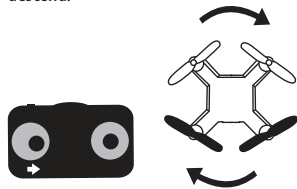
Move the left Throttle stick up to increase the speed and the Quark™ will accelerate and ascend.



Move the left Throttle stick down to decrease the speed and the Quark™ will decelerate and descend.



Move the left Throttle stick left and the Quark™ will turn/spin left.



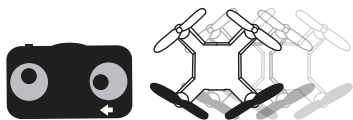
Move the left Throttle stick right and the Quark™ will turn/spin right.



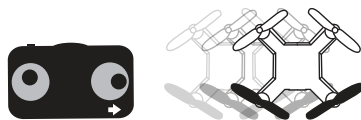
Move the right Direction Stick up and the Quark™ will move forward.



Move the right Direction Control down and the Quark™ will move backward.



Move the right Direction Control left and the Quark™ will bank to the left.



Move the right Direction Control right and the Quark™ will bank to the right.

3 CHANNEL FLIGHT CONTROL

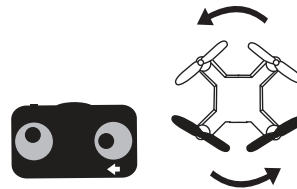
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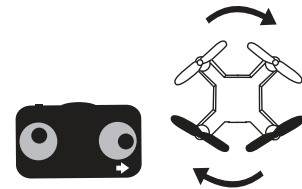
Move the Left Throttle Stick up to increase the speed and the Quark™ will accelerate.



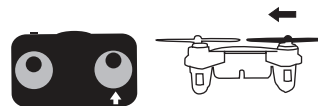
Move the Left Throttle Stick down to decrease the speed and the Quark™ will descend.



Move the Right Directional Stick Right to spin/turn left



Move the Right Directional Stick Left to spin/turn left



Move the Right Direction Stick forwards and the Quark™ will move forward.



Move the Right Direction Stick backwards down and the Quark™ will move backwards.

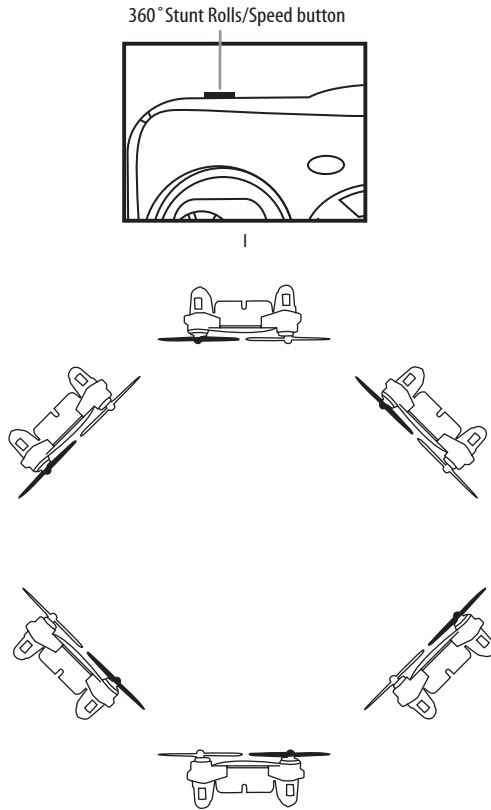
HOW TO DO 360° STUNT ROLLS

Doing 360° stunt rolls with the Quark™ Quadrocopter is as easy as 1-2-3:

1. Hover the quadcopter in still position making sure that you have at least 3 feet of clearance above and below quadcopter.
2. Press down and hold the 360 stunt button and you will enter the stunt roll mode which is indicated by a rapid beeping (see diagram I).
3. Decide which direction you want it to flip and quickly push the right control stick in the direction you want to flip your Quadrocopter. You have 4 choices a) Forward Roll, b) Backwards roll, c) right side roll, d) left side roll.

IMPORTANT NOTICE: You must hold down the stunt button as you flip your helicopter.

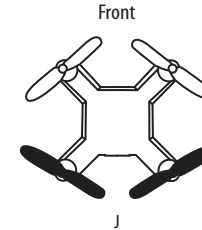
- 4). To exit the Stunt Rolls mode, simply release the button and push the directional control stick in any direction.



REPLACING THE PROPELLER BLADE

Your Quark™ 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 Quark™ propellers.

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



QUARK™ WARNING:

The Quark™ is designed for INDOOR or OUTDOOR. The Quark™ blades revolve at high speeds and can cause damage to the user, spectators and animals. Stand away from the Quark™ to reduce the risk of getting into the flight path. Warn spectators that you will be flying your Quark™ 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 Quark™.

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 Quark™ power switches when not in use.
- The included charger is built specifically for the Quark™ 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 Quark™.

BATTERY WARNINGS

RECHARGEABLE BATTERY:

This Quark™ 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 2 "AAA" 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 Quark™ 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.