FCC Part 15 C 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.

INDUSTRY CANADA NOTICE: CANADA ONLY.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter dout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Important! Register You Drone

The U.S. Department of Transportation's Federal Aviation Administration (FAA) announced a streamlined and user-friendly web-based aircraft registration process for owners of small unmanned aircraft (UAS) weighing more than 0.55 pounds (250 grams) and less than 55 pounds (approx. 25 kilograms) including payloads such as on-board cameras.
Owners can get more info and may register through a web-based system at www.faa.gov/uas/registration

⚠ **WARNING!**
CHOKING HAZARD - Small parts.
Not suitable for children under 3 years.

Conforms to safety requirements of ASTM, CPSIA and FCC.
8619 Wall street, Suite 400, Austin, TX 78754
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Tel: 949.566.9573 • www.propelrc.com

CE

Made in China

DART™ 1.0
2.4Ghz Indoor/Outdoor High-performance Drone

INSTRUCTION BOOKLET

WARNING: Never leave product charging unattended for extended periods of time. Always disconnect DART ™ 1.0 from charger immediately after the DART ™ 1.0 is fully charged. Please refer to enclosed safety instructions.

PACKAGE CONTAINS:

DART ™ 1.0	2.4G Wireless Controller	USB Charging Cord	Spare Parts	Instruction Booklet

Colours and styles may slightly vary.
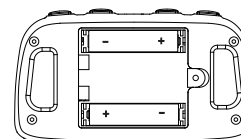
BC

TABLE OF CONTENTS

Thank you for purchasing the 2.4 G Indoor /Outdoor DART ™ 1.0. Please read this instruction booklet as it contains valuable information on how to properly fly and care for your DART ™ 1.0.

FEATURES

• Built-in 6-axis gyroscopic chip keeps the DART ™ 1.0 extremely stable in all conditions.
• Automatically start and lands with the push of a button
• New T (training) mode helps beginner pilots learn how to fly.
• Unique switchblade technology allows for 3ch and 4ch flight modes.
• 3 different speed settings for slow- to high-speed flying.
• Air pressure sensor locks flight altitude.
• LED directional lights makes the DART ™ 1.0 easy to follow.
• 2.4G radio allows for a 61 m/200 ft operational range.
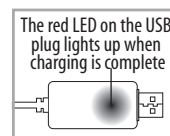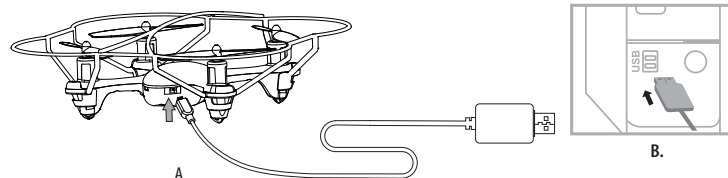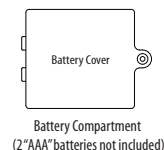• The DART ™ 1.0 is engineered for incredible maneuverability including 360˚ aerial stunts!

REMOTE CONTROL BATTERY INSTALLATION

1. Unscrew the battery cover from the back of the remote control.
2. Install 2 "AAA" alkaline batteries into the battery pack as shown in the diagram.
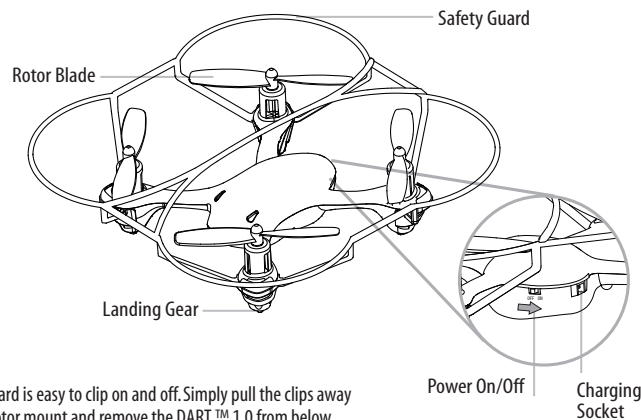3. Replace the battery cover and secure it.

CHARGING THE DART ™ 1.0

1. Make sure the DART ™ 1.0's power switch is in the "OFF" position and plug the USB charging cord into the charging socket of the DART ™ 1.0(see diagram A).
   Caution: The USB plug fits the charging socket only in one way. Do not force it.

2. Connect the DART ™ 1.0 charging cord to your computer's USB port (see diagram B).
   Caution: Only use this charging cord with a computer USB port! Do not attempt to use other USB charging devices.

3. The red LED on the USB plug lights up when charging is complete (See diagram C).
   Note: If the red LED lights up, either the charging is complete or the USB plug is not properly connected.

4. The charging time will vary depending on the percentage of battery already charged. The average charging time is approximately 30-45 minutes. The DART ™ 1.0 operates for approximately 5-7 minutes per charge.
   Low battery indication: the DART ™ 1.0's LED lights will begin to flash to notify you that the battery is running low. The lights will continue to flash for 45 seconds before the DART ™ 1.0 automatically lands.
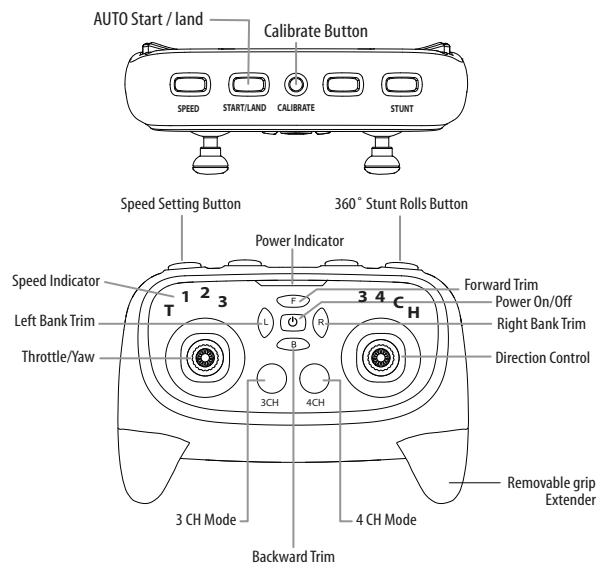
Battery Cover

Battery Compartment
(2 "AAA" batteries not included)

A

B.

The red LED on the USB plug lights up when charging is complete

C.

DART ™ 1.0 DIAGRAM

Safety Guard

Rotor Blade

Landing Gear

Power On/Off

Charging Socket

The safety guard is easy to clip on and off. Simply pull the clips away from each motor mount and remove the DART ™ 1.0 from below.
Note: Always have the safety guard attached when flying in T-Mode and Mode 1.

REMOTE DIAGRAM

AUTO Start / land
Calibrate Button

SPEED   START/LAND   CALIBRATE   STUNT

Speed Setting Button

360˚ Stunt Rolls Button

Power Indicator

Speed Indicator

1 2 3

T

Left Bank Trim

Throttle/Yaw

3 4 C

H

Forward Trim

Power On/Off

Right Bank Trim

Direction Control

3CH   4CH

3 CH Mode

4 CH Mode

Backward Trim

Removable grip Extender

REMOVABLE CONTROLLER GRIPS
Easily slide off and on. (see grip extenders card)

WARNING
DO NOT FLY YOUR DART ™ 1.0 IN FOUL WEATHER!

PREPARING FOR FLIGHT
• Verify that there are 2 "AAA" batteries inside the remote control unit and the DART ™ 1.0 has been fully charged.
• 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 or rivers.. Set your DART ™ 1.0 on a clean flat surface before take-off.
DO NOT ATTEMPT TO FLY YOUR DART ™ 1.0 IF THERE IS RAIN, SNOW, HEAVY WINDS, THUNDER OR LIGHTNING OUTDOORS. IT COULD DAMAGE YOUR PRODUCT AND POSSIBLY EVEN CAUSE BODILY HARM.

SYNCING YOUR DART ™ 1.0
Important! When syncing your DART ™ 1.0 copter with the controller always make sure that the copter is on a flat level surface. This insures that the 6-axis gyro is properly programmed to mimic your trim settings.
Your DART ™ 1.0 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 DART ™ 1.0 are in the OFF position. Make sure that there are no other 2.4G devices in the area as well.
2. Turn ON the DART ™ 1.0 and set it down on a flat surface. The white and red LED indicators of the DART ™ 1.0 should flash.
3. Turn ON your remote and you will hear 2 short beeps, the white and red LED lights will start flashing slower. Push the throttle all the way up and pull it down; You will hear 2 beeps and the LED lights will turn solid, your DART ™ 1.0 and remote should 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 DART ™ 1.0s 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 DART ™ 1.0 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 DART ™ 1.0, it should be left ON until all players have synced their DART ™ 1.0s.
7. Should there be a mistake/interference, all players must turn off their controllers and DART ™ 1.0s and start the process all over again.

FLYING TIPS
• It is recommended that you operate the DART ™ 1.0 in a wide space. The ideal space should have a 61 m/200 ft radius.
• Parental guidance or adult supervision is suggested at all times.
• If you are flying the DART ™ 1.0 with others, make sure all spectators are behind you.
• For best performance, it is recommended that you operate the DART ™ 1.0 in zero wind conditions. Wind can greatly affect the performance of the DART ™ 1.0.
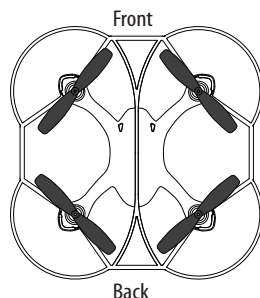
NOW YOU ARE READY TO FLY!

If you have successfully synced your DART ™ 1.0 to your controller as explained on page 4 you are now ready to fly. Before beginning to fly your drone you should familiarize yourself with how to start and stop the rotors, how to use your take off and auto land feature and how the controls work. please carefully read and familiarize yourself with various control features explained in the next few pages. Once again as a beginner pilot you should learn how to control your drone in a large open field or park on a day with zero or very light wind. Do not try to fly your DART ™ 1.0 too high until you become a more experienced pilot.

RECOGNIZING THE FRONT AND BACK OF THE DART ™ 1.0

Even though the DART ™ 1.0 has four rotors there is still a front or forward-facing direction and back or backwards-facing direction. TheFront and forward-facing direction of the DART ™ 1.0 is the side with two holes. The rear and back of the DART ™ 1.0 is where the battery charging socket and the power ON/OFF is. The DART ™ 1.0 when in flight will also help you keep aware of the orientation with lighted LED lights in the arms of the DART ™ 1.0

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

Front

Back

AUTOMATICALLY TAKE OFF / LAND

Make sure you have properly synced The DART ™ 1.0.
• simply press the "start/land" button on the top of controller, your DART ™ 1.0 will automatically take off.
• To stop or land the DART ™ 1.0 just press the "START/LAND" button again and the DART ™ 1.0 will descend and land automatically.
Tips: You also can move the two control sticks simultaneously down to the inside corners, hold them till you hear a "beep" and the blades start spinning. Release the control sticks and push the throttle stick slowly to take off manually.
In case of emergency : to stop the rotors instantly, simply press the calibrate button on the top of the cotroller, located in the center.

SPEED SETTING BUTTON

The DART ™ 1.0 has 4 speed settings; **T(Training), 1(SLOW), 2(MEDIUM)** and **3(HIGH)**. The Default setting when you first turn on your DART ™ 1.0 is **T(Traning)**. To exit T Mode and to increase the speed simply press the speed button(see remote diagram on page 3). You will hear a beep and the speed indicator will display the current speed setting with the Number. Number **1** indicates slow speed, **2** indicates medium speed and **3** indicates high speed.

T (Training)MODE

Simply press and hold the Speed Setting Button; you will hear a long beep and the speed indicator will change to "T." Now you are in T mode. T mode allows you to learn how to operate your DART ™ 1.0 at a very slow speed. To exit T mode just press the speed setting button again.

AUTO-SHUT-OFF

In T-Mode and Mode 1 (with safety cage fitted), The DART ™ 1.0's motors will automatically shut off when it comes into contact with the ground, walls or any other objects. This is a safety feature for beginner pilots and is disabled in modes 2 and 3.

3/4 CHANNEL SELECTION

DART ™ 1.0 allows you to control your Quadrocopter in 3 channel mode (beginner) or 4 channel mode (advanced flying). The DART ™ 1.0 default setting is 4 Channel mode.
To change to 3 Channel mode:
PRESS the 3CH button (see remote diagram on pg 3); you will hear 3 short beeps indicating the DART ™ 1.0 now is set to 3CH mode.
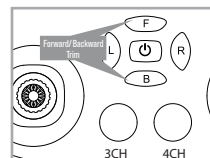To change back to 4 Channel mode:
PRESS the 4CH button (see remote diagram on pg 3); you will hear 4 short beeps indicating the Zipp Nano™ is now set to 4CH mode.
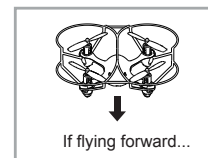
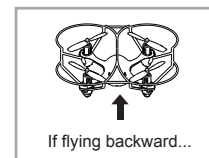## UNDERSTANDING TRIM ADJUSTMENTS

Forward/Backward Trim
• If your DART ™ 1.0 is moving forwards or backwards automatically, you may need to adjust the FORWARD/BACKWARD TRIM buttons.
• If your DART ™ 1.0 flies forward, push and release the B TRIM button repeatedly until the moving stops and proper flight is maintained.
• If your DART ™ 1.0 flies backwards, push and release the F TRIM button 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 DART ™ 1.0 will hover in mid-air and respond accurately to your commands.
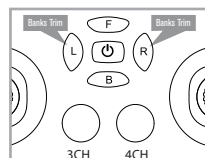
Forward/Backward Trim Controls

If flying forward…

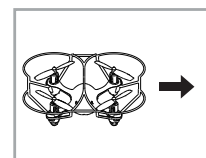Push backward trim button

If flying backward…

Push forward trim button
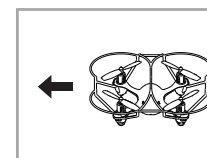
Banking Left/Right Trim
• If your DART ™ 1.0 is not steadily hovering and is banking to the left or right automatically, you may need to adjust the BANKING TRIM buttons.
• If your DART ™ 1.0 banks to the left, push and release the R TRIM button repeatedly until the banking stops and proper flight is maintained.
• If your DART ™ 1.0 banks to the right, push and release the L TRIM button in the same manner until the problem is resolved.
• From time to time you may have to adjust the BANKING TRIM to ensure the DART ™ 1.0 will steadily hover in mid-air and respond accurately to your commands.

4 CH Left/Right Banking Controls

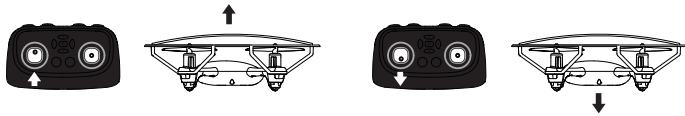Push the "L" trim button to increase left banking sensitivity

Push "R" trim 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 centre-trimmed. No beeping after press the trim button indicates the product is trimmed to the maximum on a particular side.
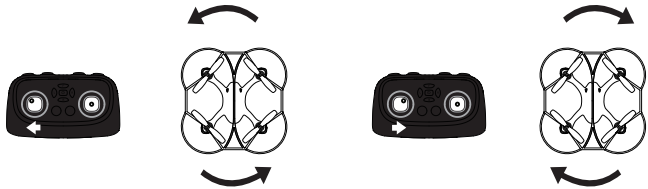
4 CHANNEL FLIGHT CONTROL

Below is a list of basic flight functions for your long-range remote control DART ™ 1.0. While learning to fly your DART ™ 1.0 it is best to start with a large space until you get used to the basic controls. As you master flying your DART ™ 1.0 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.
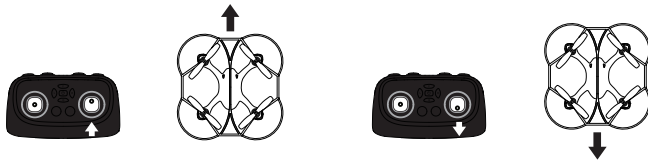
Move the Throttle up to increase the speed of the motors and the DART ™ 1.0 will rise up.

Move the Throttle down to decrease the speed of the motors and the DART ™ 1.0 will descend.

Move the Throttle stick left and the DART ™ 1.0 will rotate left.

Move the Throttle stick right and the DART ™ 1.0 will rotate right.

Move the Direction Control up and the DART ™ 1.0 will move forward.

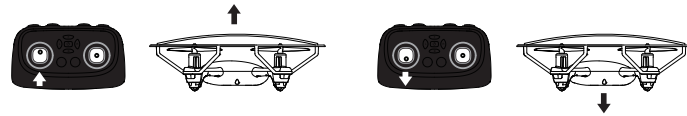Move the Direction Control down and the DART ™ 1.0 will move backward.

Move the Direction Control left and the DART ™ 1.0 will bank to the left.

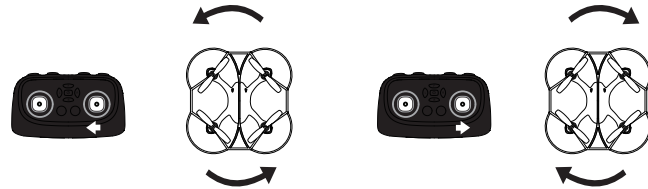Move the Direction Control right and the DART ™ 1.0 will bank to the right.

3 CHANNEL FLIGHT CONTROL

Below is a list of basic flight functions for your long-range remote control DART ™ 1.0. While learning to fly your DART ™ 1.0 it is best to start with a large space until you get used to the basic controls. As you master flying your DART ™ 1.0 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.
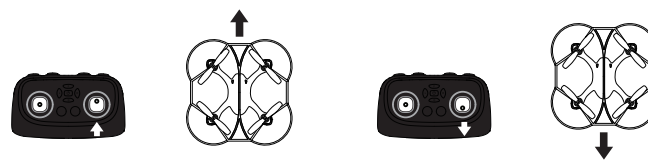
Move the Throttle up to increase the speed of the motors and the DART ™ 1.0 will rise up.

Move the Throttle down to decrease the speed of the motors and the DART ™ 1.0 will descend.

Move the Throttle stick left and the DART ™ 1.0 will rotate left.

Move the Throttle stick right and the DART ™ 1.0 will rotate right.

Move the Direction Control up and the DART ™ 1.0 will move forward.

Move the Direction Control down and the DART ™ 1.0 will move backward.

CALIBRATING THE ZIPP DART ™ 1.0

If the DART ™ 1.0 becomes unstable during the course of flying, you may need to calibrate the internal gyros. To do this place the DART ™ 1.0 on a flat level surface, press and hold the CALIBRATE button till you hear a long beep. The LEDs on the DART ™ 1.0 will flash quickly and then remain solid, this indicates your drone has been recalibrated (see diagram D).

SPEED   START/LAND   CALIBRATE   STUNT

D

HOW TO DO 360º STUNT ROLLS

1. In order to make your DART ™ 1.0 do 360º rolls you must fully charge your battery.
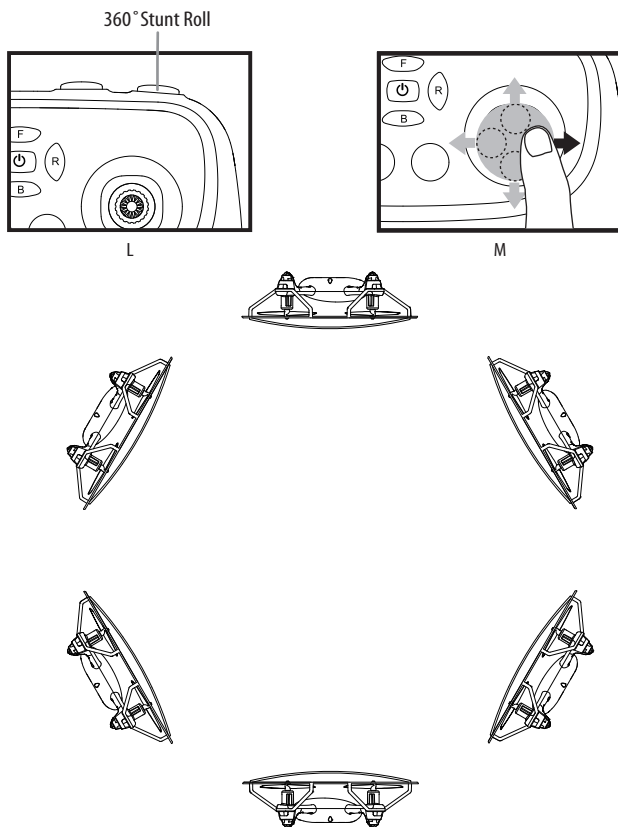   Note: The DART ™ 1.0 will not do 360º stunt rolls in T-Mode, Mode 1 or under low battery indication (The LED lights on the drone will be flashing).

2. Once you are ready to attempt a 360º roll, simply depress and let go of the "STUNT" button on the top right hand side of your controller (see Remote Diagram on page 3); you will hear a sound. This means you are now in "STUNT MODE."

3. Now quickly move your right control stick in any of 4 directions; up, down, left or right. Your DART ™ 1.0 copter will instantly roll in the associated direction. See diagram below.

360˚ Stunt Roll

L

M

DART ™ 1.0 WARNING:

The DART ™ 1.0 is designed for INDOOR and OUTDOOR use. The DART ™ 1.0 blades revolve at high speeds and can cause damage to the user, spectators and animals. Stand away from the DART ™ 1.0 to reduce the risk of getting into the flight path. Warn spectators that you will be flying your DART ™ 1.0 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 DART ™ 1.0.

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 DART ™ 1.0 power switches when not in use.
• The included charger is built specifically for the DART ™ 1.0 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 DART ™ 1.0.

BATTERY WARNINGS

RECHARGEABLE BATTERY:
This DART ™ 1.0 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 (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).
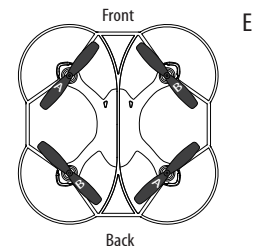• Do not dispose of batteries in a fire - batteries may leak or explode.

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 DART ™ 1.0 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.

REPLACING THE PROPELLER BLADE

Your DART ™ 1.0 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 DART ™ 1.0 propellers.

1. The DART ™ 1.0 has four blades: one A and one B blades on front, and one B and one A blades on back (see diagram E).
2. Pick up a blade from the included spare parts and match the marking to diagram E.
3. Replace the broken blade with the correct spare blade.

Front

E

Back

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.

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.

The device must not be co-located or operating in conjunction with any other antenna or transmitter.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.