



Brookstone®

FLIGHTFORCE™

MICRO DRONE

For ages 14+

TABLE OF CONTENTS

Warnings and Cautions.....	2
FCC Information.....	12
Location of Parts and Controls.....	16
Controller Battery Installation.....	18
Charging the Micro Drone Battery.....	19
Syncing the Micro Drone.....	21
Preparing for Flight.....	23
Flying Tips.....	24
Recognizing the Front and Rear of the Micro Drone.....	25
3/4 Channel Select.....	26
4 Channel Flight Controls (Advanced Flying).....	27
3 Channel Flight Controls (Beginner Flying).....	31
Switching To Medium & High Speed Mode.....	34
Understanding Trim Adjustments.....	35
Level Surface Gyro Calibration.....	37

Performing a 360° Stunt Roll.....	38
Low Battery Warning.....	39
Replacing The Propeller Blades.....	40
Troubleshooting.....	41
Care and Maintenance.....	43
Micro Drone Specifications.....	43
Warranty.....	44

CAUTION

- TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER.
THERE ARE NO SERVICEABLE PARTS INSIDE.
- TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.



The lightning flash with arrow-head symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated “dangerous voltage” within the unit’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the unit.

IMPORTANT SAFETY INSTRUCTIONS

All of the safety and operating instructions should be read, adhered to and followed before the unit is operated.

SAVE THESE INSTRUCTIONS

MICRO DRONE WARNINGS:

1. The Micro Drone is designed for INDOOR or OUTDOOR flight.
2. The Micro Drone's blades revolve at high speeds and can cause damage to the user, spectators and animals. Stand away from the Micro Drone to reduce the risk of getting into the flight path and always maintain visual contact with the Micro Drone while flying.
3. Warn spectators that you will be flying your Micro Drone so that they are aware of its position.
4. Before flight, inspect the rotor blades to make certain that the blades are securely fastened to the Micro Drone.
5. Before flying check your local laws and regulations pertaining to drone usage.
6. It is recommended to operate the Micro Drone in a wide open space. The ideal space should have a 200-foot radius.
7. Parental guidance or adult supervision is suggested at all times.

8. If you are flying the Micro Drone with others, make sure all spectators are behind you.
9. For best performance, it is recommended that you operate the Micro Drone in zero wind conditions, as wind can greatly affect the performance of the aircraft.

CAUTION: DO NOT ATTEMPT TO FLY THE MICRO DRONE IF THERE IS RAIN, SNOW, HEAVY WINDS, THUNDER OR LIGHTNING OUTDOORS. IT COULD DAMAGE YOUR PRODUCT AND MAY CAUSE BODILY HARM.



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 controller and Micro Drone power switches when not in use.
- Not suitable for children under 14 years old. Parental supervision recommended when flying the Micro Drone.



BATTERY WARNINGS

RECHARGEABLE BATTERY (MICRO DRONE):

This device contains a non-removable Lithium-Polymer battery. The included charger is built specifically for the Micro Drone Li-Poly battery. Do not use it to charge any other battery. The battery must be recycled or disposed of properly. Contact your local waste management office for information on battery recycling or disposal.



CONTROLLER BATTERIES:

- New alkaline batteries are recommended for maximum performance.
- 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.
- Do not dispose batteries in a fire - batteries may leak or explode.

DANGER

To reduce the risk of electric shock, burns, fire or injury:

1. Do not use while bathing or in a shower.
2. Do not place or store unit where it can fall or be pulled into a tub or sink.
3. Do not place in, drop or submerge in water or other liquid.
4. Do not reach for a unit that has fallen into water. Unplug it immediately.
5. Care should be taken so that objects do not fall and liquids are not spilled onto the unit.

WARNING

1. Close supervision is necessary when this appliance/ product is used by or near children or mentally disabled individuals.
2. Use this unit only for its intended use as described in this manual.
3. Unplug this unit during lightning storms or when unused for long periods of time.
4. Never drop or insert an object into any opening.
5. Protect the power cord from being walked on or pinched, particularly at plug outlets, convenience receptacles and the point where it exits the unit.
6. Do not allow cord to touch hot surfaces. Wrap cord loosely around the unit when storing.
7. The unit should be situated away from direct sunlight or heat sources such as radiators, electric heaters, heat registers, stoves, or other units (including amplifiers) that produce heat. Avoid placing on top of stereo equipment that radiates heat.
8. Never block the air openings of the unit with materials such as clothing, plastic bags or papers, or place it on a soft surface such as a bed or couch, where the air openings may be blocked.
9. Do not overload the electrical outlet. Use only the power source as indicated.
10. Do not carry this unit by its cord or use the cord as a handle.
11. Never operate this unit if it has a damaged cord or plug, if it is not working properly, or if it has been dropped or damaged, or dropped into water. If the unit's power supply cord or plug is damaged, do not attempt to fix it yourself.
12. To avoid the risk of electric shock, do not disassemble or attempt to repair the unit. Incorrect repair can cause risk of electric shock or injury to persons when the unit is used.
13. Do not operate in the presence of explosive and/or flammable fumes.
14. Never remove the plug from the outlet by pulling the power cord.

FCC INFORMATION

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

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 distance between the equipment and receiver.

- Connect the equipment to 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 equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This equipment may not cause harmful interference.
2. This equipment must accept any interference received, including interference that may cause undesired operation.

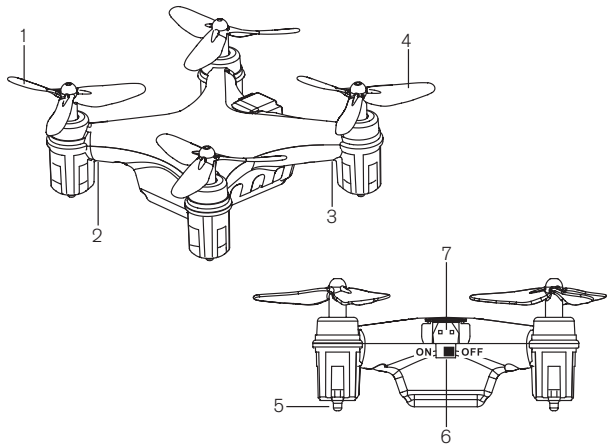
Modifications not authorized by the manufacturer may void the user's authority to operate this device.

NOTES

NOTES

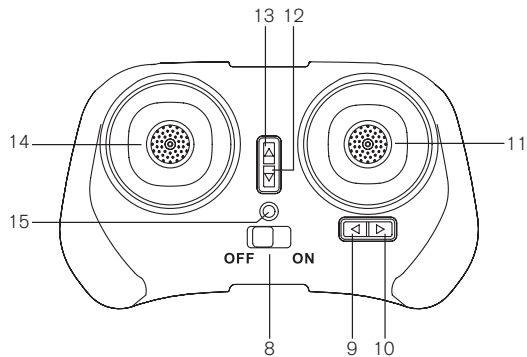
LOCATION OF PARTS AND CONTROLS

- | | |
|----------------------------|--------------------|
| 1. Front Rotor Blades (2) | 5. Landing Gear |
| 2. Front LED Indicator (2) | 6. On/Off Switch |
| 3. Rear LED Indicator (2) | 7. Charging Socket |
| 4. Rear Rotor Blades (2) | |



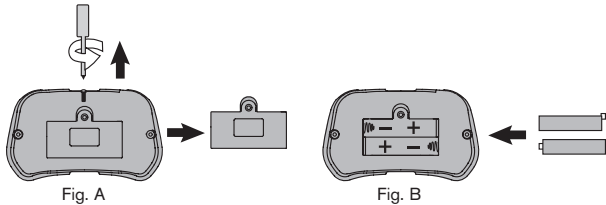
LOCATION OF PARTS AND CONTROLS

- | | |
|-----------------------------|----------------------------|
| 8. On/Off Switch | 12. Backward Trim Button |
| 9. Left Trim Button | 13. Forward Trim Button |
| 10. Right Trim Button | 14. Throttle Control Stick |
| 11. Direction Control Stick | 15. Power LED Indicator |



CONTROLLER BATTERY INSTALLATION

1. Unscrew the battery cover from the back of the controller as shown in figure A.
2. Install 2 AAA alkaline batteries (not included) into the controller as shown in figure B.
3. Replace the battery cover.
4. Turn over the controller and turn the ON/OFF SWITCH to the ON position. The POWER LED INDICATOR will flash red to indicate the batteries are installed correctly.



CHARGING THE MICRO DRONE BATTERY

1. Switch the Micro Drone OFF. Connect the included USB cable to the unit making sure the arrow side of the connector is on top side facing the top of the Micro Drone as shown in figure C.

Note: The USB plug fits into the CHARGING SOCKET in one way only. Do not force it. Improper connection will damage the Micro Drone.

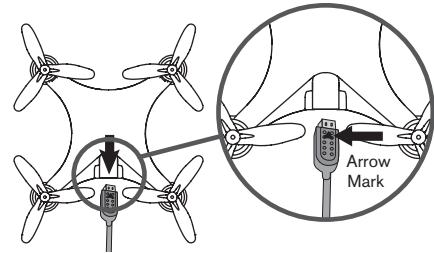


Fig. C

2. Connect the USB end of the cable to your computer's USB port as shown in figure D.

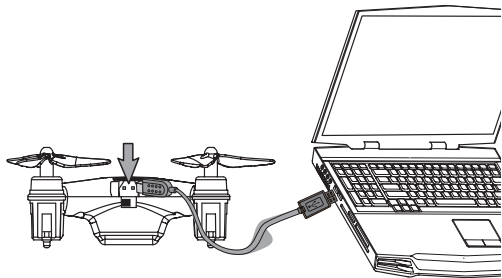


Fig. D

3. The red LED on the USB plug turns on when charging is complete. Average charging time is 40 minutes.

Note: The red LED on the USB plug turns on when connected to a power source. When the USB plug is connected to the Micro Drone, the red LED will turn off. When the Micro Drone is fully charged the red LED will turn on. A full charge will allow for about 5-6 minutes of flight time. Unplug the charging cord when not in use.

SYNCING THE MICRO DRONE

Important! When syncing the Micro Drone with the controller, always make sure that the Micro Drone is on a flat level surface and that your digital trim settings are in the center position. This ensures that the 6-Axis gyro is properly programmed to mimic your trim settings.

The Micro Drone utilizes an automatic 2.4Ghz 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 switches on both the controller and the Micro Drone are in the OFF position. Make sure that there are no other 2.4Ghz devices in the area.
2. Turn the Micro Drone ON and set it down on a flat surface. The FRONT AND REAR LED INDICATORS will begin to flash rapidly.
3. Turn the controller ON, one beep will sound. The FRONT AND REAR LED INDICATORS will flash slowly.

4. Push the THROTTLE CONTROL STICK all the way forward (one beep will sound) and then pull the THROTTLE CONTROL STICK all the way back. A second beep will sound and the FRONT AND REAR LED INDICATORS will be solid, indicating the controller and the Micro Drone are successfully synced. If not, repeat above steps.

FOR MULTI-PERSON PLAY

5. Before starting, make sure that the power switches on both the controller and the Micro Drone are in the OFF position. Make sure that there are no other 2.4G devices in the area.
6. Each person needs to sync their Micro Drone at a different time to avoid interference. Follow steps 1 to 4 above ensuring that no one else is syncing at the same time.
7. After syncing, each player's Micro Drone should be left ON until all players have synced their Micro Drones.
8. Should there be interference, all players must turn off their controllers and Micro Drone for up to 60 seconds and then begin the syncing process again.

PREPARING FOR FLIGHT

1. Verify that there are 2 AAA batteries inside the remote control unit and the Micro Drone has been fully charged.
2. Confirm your Micro Drone and controller are both turned on.
3. Make sure to be in a large space with an open radius of at least 50 feet.
4. Make sure the empty space has no obstacles or water close by.
5. Place the Micro Drone on a clean, flat surface before take-off.

CAUTION: DO NOT ATTEMPT TO FLY THE MICRO DRONE IF THERE IS RAIN, SNOW, HEAVY WINDS, THUNDER OR LIGHTNING OUTDOORS. IT COULD DAMAGE YOUR PRODUCT AND MAY CAUSE BODILY HARM.

FLYING TIPS

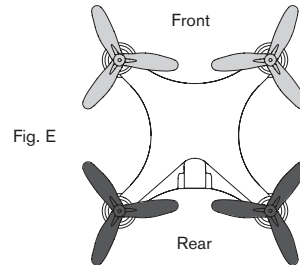
- It is recommended to operate the Micro Drone in a wide open space. The ideal space should have a 200-foot radius.
- Parental guidance or adult supervision is suggested at all times.
- If you are flying the Micro Drone with others, make sure all spectators are behind you.
- For best performance, it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

RECOGNIZING THE FRONT AND REAR OF THE MICRO DRONE

The drone has a “front” and a “rear.”

The front and forward-facing direction of the Micro Drone is the side with two gray propellers as shown in figure E. The LED indicators on the front of the Micro Drone are white.

The rear and backwards-facing direction of the Micro Drone is the side with two black propellers as shown in figure E. The LED indicators on the rear of the Micro Drone are red.



3/4 CHANNEL SELECT

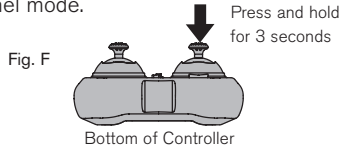
The Micro Drone can be controlled in 3 Channel mode (beginner) or 4 Channel mode (advanced flying). The Micro Drone default setting is 4 Channel mode.

TO CHANGE TO 3 CHANNEL MODE

After syncing the Micro Drone and controller, press and hold the DIRECTION CONTROL STICK on the right side of the controller straight down for 3 seconds (as shown in figure F); a long beep will sound indicating the Micro Drone is now in 3 Channel mode.

TO CHANGE TO 4 CHANNEL MODE

Press and hold the DIRECTION CONTROL STICK on the right side of the controller straight down for 3 seconds (as shown in figure F); a long beep will sound indicating the Micro Drone is now in 4 Channel mode.



4 CHANNEL FLIGHT CONTROLS (ADVANCED FLYING)

Below is a list of basic flight functions. While learning to fly the Micro Drone, it is best to start in a large space until you get used to the basic controls. As you master flying your Micro Drone, you can move to more advanced maneuvering techniques.

1. Move the THROTTLE CONTROL STICK upwards to increase the speed of the propellers and the Micro Drone will accelerate upwards and ascend. Move the THROTTLE CONTROL STICK down to decrease the speed and the Micro Drone will decelerate and descend (see figure G).

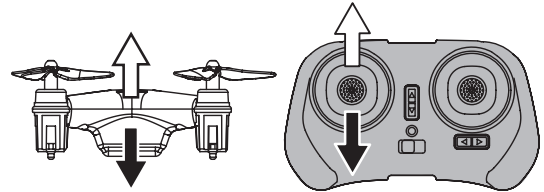


Fig. G

2. While in the air, move the THROTTLE CONTROL STICK left and the Micro Drone will rotate left. Move the THROTTLE CONTROL STICK right and the Micro Drone will rotate right (see figure H).

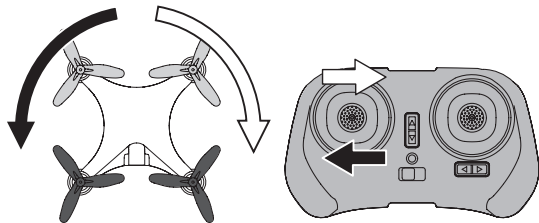


Fig. H

3. While in the air, move the DIRECTION CONTROL STICK up and the Micro drone will move forward. Move the DIRECTION CONTROL STICK down and the Micro Drone will move backward (see figure I).

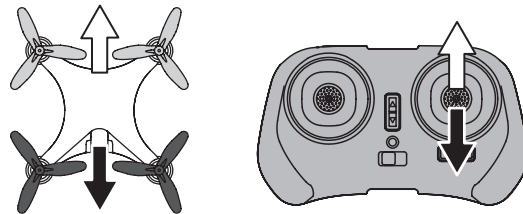


Fig. I

4. While in the air, move the DIRECTION CONTROL STICK left and the Micro Drone will bank to the left. Move the DIRECTION CONTROL STICK right and the Micro Drone will bank to the right (see figure J).

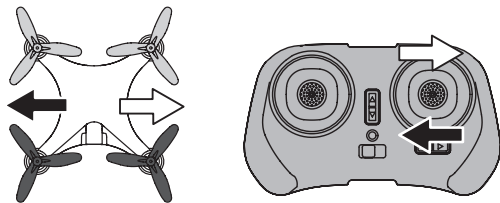


Fig. J

3 CHANNEL FLIGHT CONTROLS (BEGINNER FLYING)

Below is a list of basic flight functions. While learning to fly the Micro Drone, it is best to start in a large space until you get used to the basic controls. As you master flying your Micro Drone, you can move to more advanced maneuvering techniques.

1. Move the THROTTLE CONTROL STICK upwards to increase the speed of the propellers and the Micro Drone will accelerate upwards and ascend. Move the THROTTLE CONTROL STICK down to decrease the speed and the Micro Drone will decelerate and descend (see figure K).

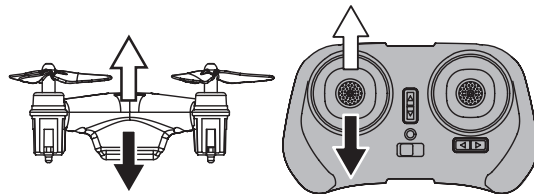


Fig. K

2. While in the air, move the DIRECTION CONTROL STICK left and the Micro Drone will rotate left. Move the DIRECTION CONTROL STICK right and the Micro Drone will rotate right (see figure L.)

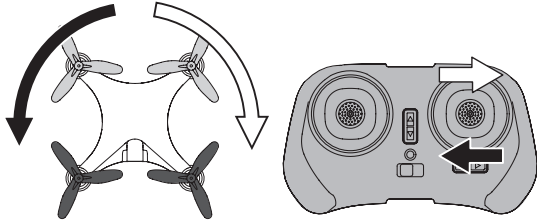


Fig. L

3. While in the air, move the DIRECTION CONTROL STICK up and the Micro Drone will move forward. Move the DIRECTION CONTROL STICK down and the Micro Drone will move backward (figure M).

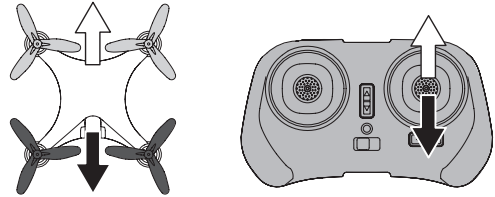
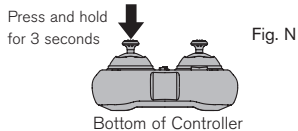


Fig. M

SWITCHING TO MEDIUM AND HIGH SPEED MODE

To change the drone's flight speed from the default (low speed) to medium and high speed:

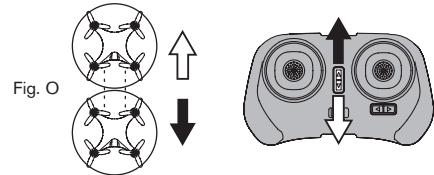
1. Turn on the controller.
2. Depress the THROTTLE CONTROL STICK straight down for 3 seconds as shown in figure N.
3. Two beeps sound indicating that the Micro Drone's speed has been changed to medium.
4. To change to high speed repeat step 2.
5. Three beeps sound indicating that the Micro Drone's speed has been changed to high.
6. To switch back to low speed, repeat step 2. One beep will sound indicating that the Micro Drone's speed has been changed to low.
7. Speed returns to low speed once the controller is turned off.



UNDERSTANDING TRIM ADJUSTMENTS

FORWARD/BACKWARD TRIM

- If the Micro Drone is drifting forward or backward, the FORWARD/BACKWARD TRIM may need to be adjusted (see figure O).
- If the Micro Drone drifts forward, push and release the BACKWARD TRIM BUTTON repeatedly until the motion stops and proper flight is maintained.
- If the Micro Drone drifts backward, push and release the FORWARD TRIM BUTTON repeatedly until the motion stops and proper flight is maintained.
- The FORWARD or BACKWARD TRIM may need to be adjusted during use to ensure the Micro Drone will hover in mid-air and respond accurately to commands.



RIGHT/LEFT TRIM

- If the Micro Drone is drifting left or right, the LEFT/RIGHT TRIM may need to be adjusted (see figure P).
- If the Micro Drone drifts left, push and release the RIGHT TRIM BUTTON repeatedly until the motion stops and proper flight is maintained.
- If the Micro Drone drifts right, push and release the LEFT TRIM BUTTON repeatedly until the motion stops and proper flight is maintained.
- The LEFT or RIGHT TRIM may need to be adjusted during use to ensure the Micro Drone will hover in mid-air and respond accurately to commands.

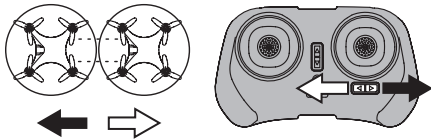


Fig. P

LEVEL SURFACE GYRO CALIBRATION

If the Micro Drone becomes unstable during the course of flying, or after a crash, the onboard gyro chip may need to be recalibrated.

1. Place the Micro Drone on a flat level surface.
2. Sync the controller and the Micro Drone (see page 21 for syncing instructions).
3. Pull the DIRECTION CONTROL STICK all the way down and to the right (approximately 45°) and hold for a couple of seconds as shown in figure Q. The FRONT AND REAR LED INDICATORS on the Micro Drone will flash quickly.
4. Release the control stick and the FRONT AND REAR LED INDICATORS on the Micro Drone will turn solid to indicate the Micro Drone has been stabilized.

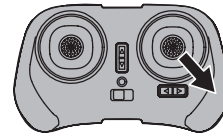


Fig. Q

PERFORMING A 360° STUNT ROLL

1. Once the Micro Drone is airborne, press the DIRECTION CONTROL STICK straight down.
2. Move the lever in the direction you wish to perform the 360° roll as shown in figure R.

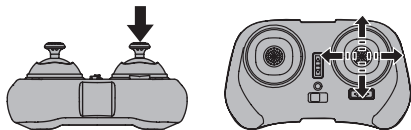
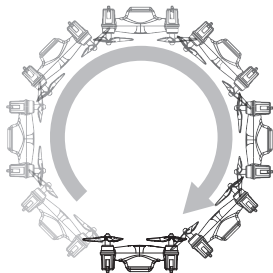


Fig. R



LOW BATTERY WARNING

CONTROLLER

When the controller batteries are low, the POWER LED INDICATOR will turn on. Land the Micro Drone slowly and replace the batteries.

DRONE

When the Micro Drone's battery is low, the FRONT AND REAR LED INDICATORS will flash. Land the Micro Drone slowly and recharge.

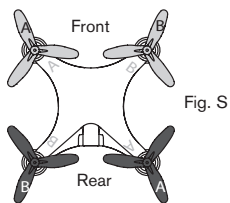
WARNING: Do not attempt a 360° flip when the Micro Drone's battery is low.

REPLACING THE PROPELLER BLADES

The Micro Drone's propeller system is a precision instrument that may need repair or replacement for optimal flight function. Crash landing from high-speed aerial flights may cause damage to your Micro Drone's propellers.

1. The Micro Drone has four blades, two gray propellers on the front, and two black propellers on the rear. Both the blades and the Micro Drone are labeled with an embossed A or B as shown in figure S.
2. When replacing the propeller blades (included), gently remove the blade from the rotor shaft. Make sure to match both the color of the blade and the indication letter on the blade with the letter on the HD Video Drone.
3. Replace the damaged blade with the new blade.

Gray Blade Front Left=A
Gray Blade Front Right=B
Black Blade Rear Left=B
Black Blade Rear Right=A



TROUBLESHOOTING

ISSUE	SOLUTION
No power (controller)	Switch the ON/OFF switch to ON. Make sure all batteries are installed correctly (see diagram B on page 18). Replace batteries.
No power (Micro Drone)	Recharge the Micro Drone.
Controller not responding	Switch the ON/OFF switch to ON on the controller. Switch the ON/OFF switch to ON on the Micro Drone. Conditions are too windy. Replace batteries.
Micro Drone not responding	Calibrate gyro (see instructions on page 37).

TROUBLESHOOTING (CONTINUED)

ISSUE	SOLUTION
Micro Drone won't lift off	Push THROTTLE CONTROL STICK forward. Recharge the Micro Drone.
Micro Drone descends too fast	Control the THROTTLE CONTROL STICK slower and smoother. Recharge the Micro Drone.
Loss of Micro Drone control	Keep the Micro Drone within 100 feet of the controller.

CARE AND MAINTENANCE

- Always remove the batteries from the controller when it will not be used for an extended period of time.
- To clean, gently wipe the Micro Drone and controller with a clean damp cloth.
- Parental guidance recommended when installing or replacing the batteries.

MICRO DRONE SPECIFICATIONS

Li-Poly Rechargeable Battery.....	3.7V, 130 mAh
Battery Life.....	Approx. 5-6 min
Charging Time	Approx. 40 min
Range	100 feet
Radio Frequency.....	2.4 Ghz
Weight	3.8 oz (107.7g)
Dimensions.....	2.3 x 2.3 in (58.4 x 58.4 mm)

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ONE (1) YEAR LIMITED WARRANTY

Brookstone® warrants this product against defects in materials and/or workmanship under normal use for a period of ONE (1) YEAR from the date of purchase by the original purchaser ("Warranty Period"). If a defect arises and a valid claim is received within the Warranty Period, at its option, Brookstone will either 1) repair the defect at no charge, using new or refurbished replacement parts, or 2) replace the product with a new product that is at least functionally equivalent to the original product, or 3) provide a store credit in the amount of the purchase price of the original product. A replacement product or part, including a user-installable part installed in accordance with instructions provided by Brookstone, assumes the remaining warranty of the original product. When a product or part is exchanged, any replacement item becomes your property and the replaced item becomes Brookstone's property. When a store credit is given, the original product must be returned to Brookstone and becomes Brookstone's property.

Obtaining Service: To obtain warranty service, call Brookstone Limited Warranty Service at 1-800-292-9819. Please be prepared to describe the product that needs service and the nature of the problem. A purchase receipt is required. All repairs and replacements must be authorized in advance. Service options, parts availability and response times will vary. You are responsible for delivery and the cost of delivery of the product or any parts to the authorized service center for replacement, per our instructions.

Limits and Exclusions: Coverage under this Limited Warranty is limited to the United States of America, including the District of Columbia and the U.S. Territories of Guam, Puerto Rico, and the U.S. Virgin Islands. This Limited Warranty applies only to products manufactured for Brookstone that can be identified by the "Brookstone" trademark, trade name, or logo affixed to them or their packaging. The Limited Warranty does not apply to any non-Brookstone products. Manufacturers or suppliers other than Brookstone may provide their own warranties to the purchaser, but Brookstone, in so far as permitted by law, provides these products "as is."

This warranty does not apply to: a) damage caused by failure to follow instructions relating to product's use or the installation of components; b) damage caused by accident, abuse, misuse, fire, floods, earthquake or other external causes; c) damage caused by service performed by anyone who is not a representative of Brookstone; d) accessories used in conjunction with a covered product; e) a product or part that has been modified to alter functionality or capability; f) items intended to be periodically replaced by the purchaser during the normal life of the product including, without limitation, batteries or light bulbs; g) any product sold "as is" including, without limitation, floor demonstration models and refurbished items; or h) a product that is used commercially or for a commercial purpose.

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