

## PRE FLIGHT- SYSTEM PREPARATION -Continued

### Charging your helicopter:

- 1) Ensure the helicopter's on/off switch is in the OFF position.
- 2) Plug the charger into the helicopter (as shown).



- 3) Ensure charger is ON- charging will start automatically.
- 4) Let the charger run its charge cycle. When charge is finished the green LED goes out.

### Color LED showing battery power and charging status

**Red LED is ON:**  
Power switch in "ON" position.

**Red LED Dim:**  
The battery voltage is low.

**Green LED is Flashing:**  
The helicopter is charging.

**Green LED is OFF:**  
The helicopter is fully charged.

### Tip GET IN THE AIR FAST!!!

THE MICRO MOSQUITO 4X4 IS PARTIALLY CHARGED SO YOU CAN FLY IMMEDIATELY OUT OF THE BOX.

Tip CHARGE TIME VARIES BASED ON HELICOPTER AND CHARGER BATTERY CONDITIONS. TYPICALLY AFTER A 5 MINUTE FLIGHT THE HELICOPTER WILL NEED A 25 MINUTE CHARGE.

Tip YOU DO NOT NEED TO WAIT FOR THE CHARGE TO BE COMPLETE TO FLY, SHORTER CHARGE TIMES = SHORTER FLIGHT TIMES.

Tip YOU CAN POWER THE CHARGER BY USING AC CURRENT IF YOU SUPPLY YOUR OWN AC ADAPTER AND PLUG IT INTO THE COAXIAL INPUT JACK ON THE SIDE OF THE CHARGER. THE ADAPTER SHOULD RATED WITH DC 9V, 450mA OUTPUT AND CENTRAL PIN POSITIVE. THE CHARGER OPERATION AND CHARGE TIME WILL REMAIN UNCHANGED.

**WARNING!:** Interrupting the charge before the charge cycle is completed will not damage the battery, however for the longest flight times please let the charger finish its charge cycle.

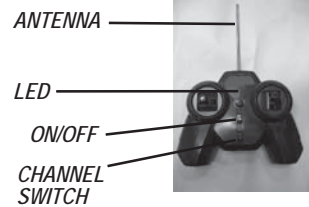
## PILOT INFORMATION NOTICE!

The Micro Mosquito 4X4 is an indoor helicopter only. The technology that makes the helicopter stable and easy to fly will prevent you from flying in winds!

### GETTING TO KNOW THE MICRO MOSQUITO HELICOPTER

#### Basic Functions:

**On / Off Switch** - turns the transmitter on and off.  
**LED** - turns on when the transmitter is on.  
**Antenna** - Fully extend to ensure the greatest control range.



The transmitter is a digital proportional radio, therefore small movements in the control stick produce precise control.

Move the Stick Towards You -the helicopter flies backwards.

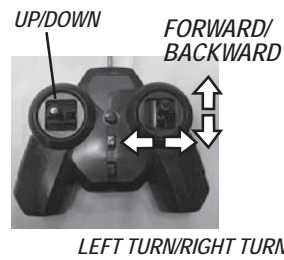
#### Pre-Flight Checklist:

- 1) Extend transmitter antenna.
- 2) Turn on transmitter.
- 3) Turn helicopter on.
- 4) Set helicopter on a horizontal flat surface for the best take off.
- 5) Push UP/DOWN completely to UP, then back to DOWN to initialize speed control.
- 6) Gently increase the UP/DOWN throttle to ensure that the rotors start spinning. Now that you know your helicopter is functioning as it should- RELAX! -DO NOT TAKE OFF!

Tip Be sure to read the next section on "FIRST FLIGHT- TRIMMING YOUR HELICOPTER" before your first flight!  
\*The radio control range is up to 10M, and depends on interference at the operation environment.

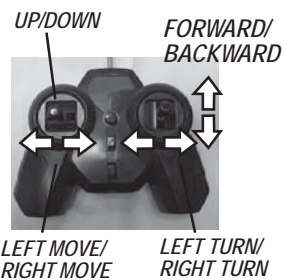
#### Transmitter Function in 3CH mode:

**UP/DOWN** - controls the rotor speed and vertical movement of the helicopter. The further you push UP, the higher the helicopter will fly.  
**FORWARD/BACKWARD** - Move the Stick Away From You -the helicopter flies forward.  
**LEFT TURN/RIGHT TURN** - controls left/right steering direction of the helicopter.  
**Move the Stick Left/Right** -helicopter turns to the left/right.



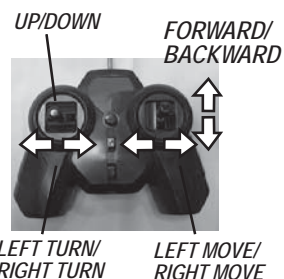
#### Transmitter Function in 4CH mode:

**UP/DOWN** - controls the rotor speed and vertical movement of the helicopter. The further you push UP, the higher the helicopter will fly.  
**LEFT MOVE/RIGHT MOVE** - Move the Stick Left/Right -the helicopter flies lateral Left/Right movement.  
**FORWARD/BACKWARD** - Move the Stick Away From You -the helicopter flies forward.  
**LEFT TURN/RIGHT TURN** - controls left/right steering direction of the helicopter.  
**Move the Stick Left/Right** -helicopter turns to the left/right.



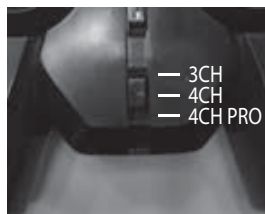
#### Transmitter Function in 4CH PRO mode:

**UP/DOWN** - controls the rotor speed and vertical movement of the helicopter. The further you push UP, the higher the helicopter will fly.  
**LEFT TURN/RIGHT TURN** - controls left/right steering direction of the helicopter.  
**Move the Stick Left/Right** -helicopter turns to the left/right.



**FORWARD/BACKWARD** - Move the Stick Away From You -the helicopter flies forward.  
**LEFT MOVE/RIGHT MOVE** - Move the Stick Left/Right -the helicopter flies lateral Left/Right movement.

There are 3 Control Mode for selection as shown:  
- 3CH Mode  
- 4CH Mode  
- 4CH PRO Mode



### FIRST FLIGHT-TRIMMING YOUR HELICOPTER

Your helicopter must be "trimmed" to stop unwanted rotation. First, using the "UP" control stick, simply raise the helicopter to eye level and turn the trim control knob (as shown) on the transmitter unit either left or right till the helicopter stops spinning. This should be done everytime you fly your helicopter after charging. Trim setting will vary as the helicopter battery drains. Re-adjust trim during flight as required.



## FLYING TIPS!

**Take off** - To take off, the rotors need to spin up to speed to produce lift. For great take offs use the following steps.

- 1) Push the UP/DOWN throttle completely to UP and watch the helicopter leap off the ground.
- 2) Once off the ground, gently reduce the throttle so that the helicopter is at the desired height above the ground.

**Altitude Control** - the throttle control is a digital proportional system, therefore fine movement of the throttle stick will produce minor changes in the helicopter altitude.

Tip Take time to practice controlling the altitude and getting accustomed to the throttle sensitivity.

**Note:** The helicopter will always fly forward based on its design.

**Trimming** - Once flying at the desired height the helicopter may be spinning under the rotors instead of holding a heading. Adjust the trim control so that the helicopter body does not spin: Turn the trim control left if the body is spinning right (Clockwise)- Turn the trim control right if the body is spinning left (Counter Clockwise).

**Note:** many factors affect the trim of the helicopter such as battery condition, throttle setting and damage to the rotors. It may be required to adjust the trim control more than once during a flight - once trimmed minor corrections can be managed using the steering control. See TROUBLESHOOTING section for more information.

**Forward Flight** - the best forward flight motion is achieved by gently moving the FORWARD control stick up, this produces the smoothest transition from hover to moving flight. Sharp or abrupt movements can cause the helicopter to "porpoise" or swing, but might be required to overcome a slight wind or draft.

**Direction control** - Direction control convention is based as if you were sitting in the pilot's seat of the helicopter. The LEFT/RIGHT stick on the transmitter controls the steering of the helicopter. Pushing the stick left results in a left turn. Pushing the stick right results in a right turn.

**Control Reversal** - When the helicopter is flying towards you the steering will appear to reverse.



## TROUBLESHOOTING

ISSUE:	CAUSE:	CORRECTIVE ACTION:
Helicopter will not start, LED on helicopter is OFF.	<ol style="list-style-type: none"> <li>1) Helicopter not turned on.</li> <li>2) Battery is not charged.</li> <li>3) Helicopter was not set to OFF during charging.</li> <li>4) Rotors locked for overload protection.</li> </ol>	<ol style="list-style-type: none"> <li>1) Turn helicopter on.</li> <li>2) Ensure helicopter is off and charge battery.</li> <li>3) Ensure batteries are fresh.</li> <li>4) Adjust helicopter's on/off switch to OFF, then switch on again.</li> </ol>
Helicopter will not start, LED on helicopter is ON.	<ol style="list-style-type: none"> <li>1) Transmitter is not turned ON.</li> <li>2) Speed control is not initialized.</li> <li>3) Battery is low.</li> </ol>	<ol style="list-style-type: none"> <li>1) Turn transmitter on.</li> <li>2) Push UP/DOWN completely to UP, then back to DOWN to initialize speed control.</li> <li>3) Ensure helicopter is OFF and charge battery.</li> </ol>
Helicopter is flying too high.	<ol style="list-style-type: none"> <li>1) You need to reduce the throttle.</li> </ol>	<ol style="list-style-type: none"> <li>1) Move the throttle stick down.</li> </ol>
Helicopter is flying too low.	<ol style="list-style-type: none"> <li>1) Needs more power/throttle.</li> <li>2) The battery in the helicopter is low.</li> <li>3) The batteries in the charger are drained.</li> </ol>	<ol style="list-style-type: none"> <li>1) Move the throttle stick up.</li> <li>2) Ensure the helicopter is OFF and charge the battery.</li> <li>3) Remove batteries from charger &amp; replace with new batteries and charge the helicopter again.</li> </ol>
Helicopter doesn't hover.	<ol style="list-style-type: none"> <li>1) The helicopter drifts forwards/backwards.</li> </ol>	<ol style="list-style-type: none"> <li>1) Push the FORWARD/BACKWARD stick back/ forward to compensate and hold the helicopter in position.</li> </ol>
Helicopter doesn't fly backwards	<ol style="list-style-type: none"> <li>1) The helicopter only flies backwards briefly then spins to fly forward.</li> </ol>	<ol style="list-style-type: none"> <li>1) Aerodynamics make flying backwards more difficult than flying forwards and this flight pattern is normal. Practice flying backward and control the left/right motion to keep the tail pointed in the direction you desire.</li> </ol>
Helicopter doesn't move fast enough.	<ol style="list-style-type: none"> <li>1) The battery charge is getting low.</li> <li>2) The tail rotor is damaged.</li> <li>3) The helicopter center of gravity is no longer correct.</li> </ol>	<ol style="list-style-type: none"> <li>1) Turn the helicopter off and charge the battery.</li> <li>2) Replace tail rotor with new unit from the replacement rotor kit (available in stores)</li> <li>3) Sellotape a clip on the base of the helicopter to add weight to adjust the center of gravity. See also "Helicopter doesn't hover" issue.</li> </ol>
Helicopter always turns.	<ol style="list-style-type: none"> <li>1) Trim control is not set correctly.</li> <li>2) The rotor blades have sustained damage / or wear from use:                     <ol style="list-style-type: none"> <li>a. Helicopter spins counter clockwise.</li> <li>b. Helicopter spins clockwise.</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1) Adjust the trim control knob. See the FLYING TIPS section.</li> <li>2) Gently bend more curvature into the blades.                     <ol style="list-style-type: none"> <li>a. Adjust the top rotor blades.</li> <li>b. Adjust the bottom rotor blades.</li> </ol> </li> </ol>
Helicopter fails to take off. (See addendum)	<ol style="list-style-type: none"> <li>1) One or both of the main drive gears (A, B) are misaligned with the upper and lower rotors.</li> <li>2) Locking pin under the body has detached from the drive shaft.</li> <li>3) The rubber stopper on the top of the drive shaft has detached.</li> </ol>	<ol style="list-style-type: none"> <li>1) Realign with equal spacing between the pair of main gears.</li> <li>2) Replace locking pin as shown.</li> <li>3) Replace the rubber stopper (part separately available inside Replacement Parts Kit).</li> </ol>

# NOTICE!

**IF YOU HAVE ANY PROBLEMS OR CONCERNS ABOUT THIS PRODUCT, CONTACT OUR CUSTOMER CARE CENTRE BEFORE RETURNING IT TO ANY RETAIL STORE!**

Please contact us at:

Email: [info@interactivetoy.com](mailto:info@interactivetoy.com)

Phone: Outside North America: +1 416 444 6873

Inside North America: 1 866 214 2220

Address: Interactive Toy Concepts, 1192 Martin Grove Road, Toronto, Ontario, Canada. M9W 5M9

Web site: [www.interactivetoy.com](http://www.interactivetoy.com)

## IMPORTANT SAFETY INFORMATION

Keep the helicopter away from face, eyes and hair at all times. Keep fingers away from moving rotors or propellers. Do not fly the plane near or at other people or animals. Use caution when flying, make sure people around you know that you are playing with the helicopter. Recommended for use indoors only in rooms without obstacles, breakable objects or fans. The charger provided in this package is for charging the helicopter ONLY. Do not use any other source to charge the helicopter. Do not attempt to overcharge your helicopter. Follow the charging instructions provided in this instruction manual. Only use the provided charger included in the package to charge the lithium polymer battery installed in the Micro Mosquito 4X4 radio controlled indoor micro helicopter.

## IMPORTANT BATTERY INFORMATION

Use only batteries recommended in this instruction manual. Do not mix old and new batteries. Battery installation should be performed by an adult. Be careful to install the batteries with the correct polarity, as indicated. Do not use rechargeable batteries. Do not mix alkaline, standard, lithium, rechargeable, or different types of batteries. The supply terminals are not to be short-circuited. Exhausted batteries are to be removed as they will hinder performance. Never leave a battery unattended while it is being charged. Never leave a battery unattended in the presence of children. Helicopter charging time will increase with usage as the condition of the C cells diminish. Helicopter's Li-Po rechargeable battery is not replaceable. The helicopter takes one 9V battery and six C size batteries (not included).

## FCC NOTE: U.S. ONLY

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.

2) This device must accept any interference received including interference that may cause undesired operation.

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, 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 and 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 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.

## Industry Canada Notice: Canada only.

This radiocommunication device complies with all the requirements of Industry Canada Standard RSS-310.

Operation is subject to the following two conditions: 1) This device may not cause harmful interference.

2) This device must accept any interference received, including interference that may cause undesired operation.

Field Strength and measurement distance: 27.195MHz - 57.7 dBµV/m at 3 meter. 49.890MHz - 62.65 dBµV/m at 3 meter.

## Limited 30-day warranty

This product is warranted by Interactive Toy Concepts, against manufacturing defects in material and workmanship under normal use for thirty (30) days from the date of purchase. Please retain proof of purchase.

Micro Mosquito Helicopter and BladeRunner Series are registered trademarks of Interactive Toy Concepts © 2007 All Rights Reserved. Manufactured by and distributed by Interactive Toy Concepts Ltd. Conforms to Safety Standards ASTM F963 Regulatory Requirements. Products and colors may vary. MADE IN CHINA.



Lithium Polymer Rechargeable Batteries must be recycled or disposed of properly.



INS-45071-71024-ENG

FCC NOTE : THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

# MICRO MOSQUITO 4X4

## INSTRUCTION MANUAL

AGE 12+

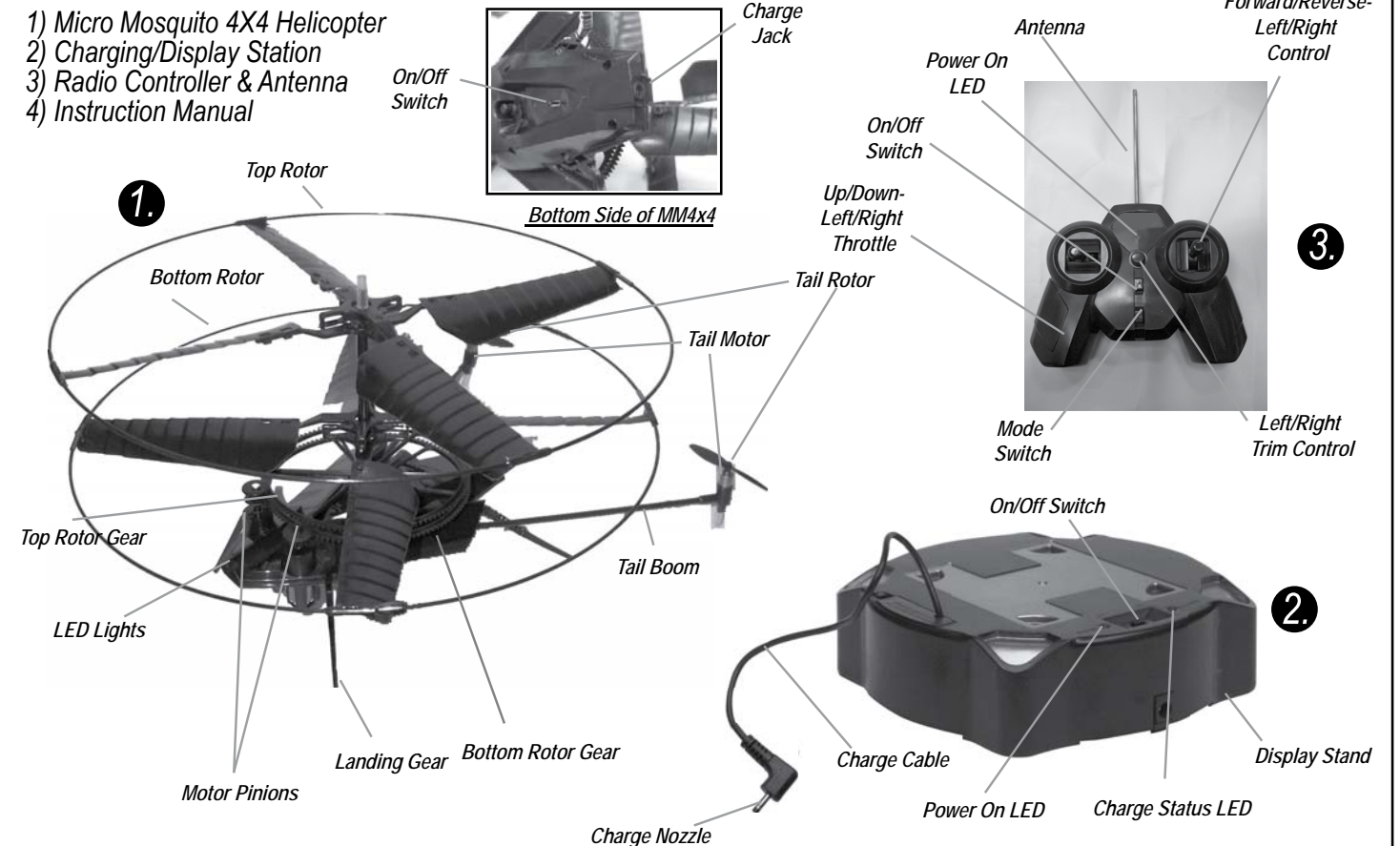
**WARNING:** The Micro Mosquito 4X4 is a delicate machine, before removing it from the packaging please read the instructions.

Congratulations on the purchase of your BladeRunner Series Micro Mosquito 4X4 helicopter, the world's smallest indoor R/C helicopter. The Micro Mosquito 4X4 is designed for fun and easy flying; however the helpful tips in this pilot's manual will improve your skill and enhance your experience. Look for these symbols for extra help.

## UNPACKING YOUR MICRO MOSQUITO HELICOPTER

To prevent damage during shipping the Micro Mosquito 4X4 is securely fastened in the package. Please ensure that all of the tie down and fastening locations are unfastened before attempting to remove the Micro Mosquito 4X4. Be very careful when removing the Micro Mosquito 4X4 to prevent damaging the helicopter.

## COMPLETE PACKAGE CONTENTS AND COMPONENT BREAKDOWN



- 1) Micro Mosquito 4X4 Helicopter
- 2) Charging/Display Station
- 3) Radio Controller & Antenna
- 4) Instruction Manual