## PR@PEL

## 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 agains 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.

This product is manufactured by AMAX Group
12645 Memorial Drive Suite F1 \#388 Houston, TX 77024
Propel ${ }^{\text {TM }}$ and Propel RC $^{\text {TM }}$ are the licensed trademarks of Rooftop Group
LTD Singapore.
2008 All rights reserved. Visit us at www.propelrc.com
Conforms to safety requirements of FCC.

## PROPEL

## AIR RACER ${ }^{\text {™ }} 2.0$

Indoor / Outdoor Laser Battling Drones


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

## PACKAGE CONTAINS:



2.4G Wireless Controller


Spare Parts


USB Charger
\& Li-Poly Rechargeable Battery

| ARTWORKNO. | DESCRIPTION | MDSER | DESIGNER | DATE |
| :---: | :---: | :---: | :---: | :---: |
| $I M$ | $114 \times 174 M M$ |  | Johnny | $2019 / 05 / 22$ |

TABLE OF CONTENTS
Features ..... 2
Remote Control Battery Installation ..... 2
Charging the Battle X's Li-Poly Battery ..... 2
AIR RACER ${ }^{T M}$ 2.0 Battery Installation ..... 2
AIR RACERTM 2.0 Diagram ..... 3
Remote Control Diagram ..... 3
Flight Preparation ..... 4
Syncing Your AIR RACERTM 2.0 ..... 4
Now You Are Ready To Fly ..... 5
Recognizing The Front \& Rear of The AIR RACER ${ }^{\text {TM }} 2.0$ ..... 5
Speed Select Button ..... 5
Reverse Button ..... 5
Headless Mode Button ..... 5
Flight Control ..... 6
Flight Practice ..... 6
Adjusting The Trim ..... 7
Calibrating The AIR RACERTM 2.0 ..... 8
Interactive Battle Modes ..... 8
How To Perform $360^{\circ}$ Stunt Flips ..... 9
Troubleshooting Your AIR RACERTM 2.0 ..... 10
Replacing The Propeller Blades ..... 10
Warnings ..... 11
Battery Warnings ..... 11
Care and Maintenance ..... 11
Limited 90-Day Warranty ..... 12
FCC Information ..... 13

Thank you for purchasing the AIR RACERTM 2.0 2.4 Ghz High-Performance Stunt Drone. Please read this instruction booklet as it contains valuable information on how to properly fly and care for your AIR RACERTM 2.0

## FEATURES

- 6 axis gyro keeps the AIR RACERTM 2.0 stable in all conditions
- Push button $360^{\circ}$ aerial stunts.
- 2 speed settings for beginner to advanced quadrocopter pilots.
- Laser battle game with other AIR RACER ${ }^{T M} 2.0$ battling drones.
- On board 2.4Ghz digital spread spectrum allows up to 8 players to battle simultaneously.


## REMOTE CONTROL BATTERY INSTALLATION

1. Unscrew the security screw and remove the battery cover from the back of the controller
2. Install 3 " $A A^{\prime \prime}$ alkaline batteries into the controller as shown in diagram A .
3. Replace the battery cover and security it.
4. Switch the controller power on you will see the indicator lights up and feel a vibration if the batteries were installed properly.


## CHARGING THE BATTLE X'S LI-POLY BATTERY

1. Pop out the battery from the drone battery compartment (see illustration $B$ )
2. Next, insert the battery into the charger then connect the USB charger to your computer's USB port (see diagram C). Caution: Only use this charger with a computer USB port! Do not attempt to use other USB charging devices.
3. The red LED on the charger will light up and stays on till the battery is fully charged, then the LED will turn off. (See diagram D).
Note: If the red LED light is off, either the charging is complete or the USB plug or battery is not properly connected
4. Average charging time is approximately 40 minutes. A fully charged drone can fly for approximately 5-6 minutes depending on environment and user input.
Note: If plug the USB cord in without connecting battery, the red LED light will keep flashing.


IMPORTANT: ALWAYS REMEMBER TO UNPLUG YOUR CHARGING CORD WHEN NOT IN USE!

## AIR RACER ${ }^{\text {¹ }} 2.0$ BATTERY INSTALLATION

1. Slide the battery into the battery compartmetn as shown in illustraition E
2. Make sure the battery is fully inserted. Caution:The battery fits only one way! Do not force it.
3. Turn on the ON/OFF switch of the AIR RACER ${ }^{\text {TM }} 2.0$, the LED lights will start flashing if you install the battary properly


AIR RACER ${ }^{\text {TM }}$ 2.0 DIAGRAM


Bottom View

## CONTROLLER DIAGRAM



## WARNING

## DO NOT FLY YOUR AIR RACER ${ }^{\text {TM }} 2.0$ IN FOUL WEATHER! <br> 

## FLIGHT PREPARATION

- Verify that there are 3"AA" batteries installed the remote control unit and the AIR RACER"M 2.0 battery has been fully charged.
- Make sure to be in a large open space preferably a field or a park with an open radius of at least 200 feet - Make sure to start your drone on a clean flat level surface before take-off
- IMPORTANT! Until you have experience in flying your AIR RACERTM 2.0 , it is not advised to use in any rate of wind. Wait until a zero wind day or extremely light wind when learning how to fly.


## SYNCING YOUR AIR RACER ${ }^{\text {¹ }} 2.0$

Important! When syncing your AIR RACER ${ }^{\text {TM }} 2.0$ with the controller always make sure that the drone 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 respond to your trim settings. Your AIR RACERTM 2.0 utilizes an automatic 2.4 G channel selection system that allows up to 8 people to fly side by side in the same wireless range with no interference.

1. Before starting, make sure that the power switch is off both on your controller and the AIR RACER ${ }^{T M}$ 2.0. Make sure that there are no other 2.4 G devices in the area.
2. Turn on your AIR RACERTM 2.0 and set it down on a flat level surface. The red and white LED lights of the drone should begin to flash repeatedly.
3. Quickly turn ON the remote and you will notice that the red LED light on the face of the controller should light up and stay solid.The"Battle Indicator" will flash once then off. The lights on the drone will flash slower.
4. Push the left control stick all the way up until it stops and then pull it back all the way down to the bottom(see illustration below). You will hear 2 high-pitched beeps when pulling the throttle up and down. The lights on the drone should stop flashing and become solid. If the lights on both the drone and the controller have stopped flashing and become solid you have successfully synced your AIR RACERTM 20 and are ready to fly. If the lights on the controller or the drone are still flashing repeat steps 1-4 again.

## - TIP 1: try not to leave too much time between turning on the drone and the controller or your syncing window will time-out. <br> - TIP 2: Syncing your drone indoors or in the shade will make it easier to see the LED light indicators on both the controller and the drone.


move the control stick all the way up and alr way wown you

the flashing red LED light will become solid when you are

## NOW YOU ARE READY TO FLY!

If you have successfully synced your AIR RACER ${ }^{\text {TM }} 2.0$ 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 the controls work so please carefully read and familiarize yourself with various control features explain in the next two 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 AIR RACER ${ }^{\text {TM }} 2.0$ too high until you become a more experience pilot.

## RECOGNIZING THE FRONT \& REAR OF THE AIR RACER ${ }^{\text {TM }} 2.0$

Even though the AIR RACERTM 2.0 has four rotors there is still a front or "forward" facing direction and "REAR" or backwards facing direction. The forward Front and forward facing direction of the AIR RACER" 2.0 is the side with two gray blades (see diagram G ). The rear and back of the Quadrocopter is the side with two black propellers (see diagram G).
NOTE:The front of the Quadrocopter also displays WHITE LED light and the back of the Quadrocopter displays RED LED lights.


REAR

## SPEED SELECT BUTTON

The AIR RACER ${ }^{\text {TM }} 2.0$ has 2 speed settings;SLOW, and HIGH. The Default setting when you first turn on your AIR RACER ${ }^{\text {TM }} 2.0$ is the SLOW speed mode. To increase the speed simply press the Speed setting button (see remote diagram on pg 3 ) you will hear 2 beeps and the speed changed to HIGH speed. Speed settings can be set before flight or during the flight.

## HEADLESS MODE BUTTON

You can maintain orientation of your AIR RACERTM 2.0 during flight.

1. Once the AIR RACER ${ }^{T M} 2.0$ is activated press the headless mode button (see controller on pg.3) to activate the internal compass.
2. The flying orientation is now locked to match the direction control lever.

Note: Before switch to "headless Mode",you need place the drone straight ahead right in front of you, Calibrate it first then press the headless mode button.

## FLIGHT CONTROL

Below is a list of basic flight functions for your long-range remote to control the AIR RACER ${ }^{\text {TM }}$ 2.0. While earning to fly your AIR RACER ${ }^{\text {TM }} 2.0$ it is best to start in a large space until you get used to the basic controls. As you master flying your AIR RACER 2.0 you can move to more advanced maneuvering techniques. Practice makes perfect!

Move the left Throttle stick up to increase the propeller speed and the AIR RACER ${ }^{\text {TM }} 2.0$ will accelerate and ascend.
Move the left Throttle stick down to decrease the propeller speed and the AIR RACER ${ }^{T M} 2.0$ will decelerate and descend (see diagram H).

While in the air, move the left Throttle stick left and the AIR RACER ${ }^{\text {TM }} 2.0$ will rotate left.
Move the left Throttle stick right and the
AIR RACER ${ }^{\text {TM }} 2.0$ will rotate right (see diagram I).

While in the air, move the right Direction Stick up and the AIR RACER ${ }^{\text {TM }} 2.0$ will move forward. Move the right Direction Control down and the AIR RACER ${ }^{\text {TM }} 2.0$ will move backward (see diagram J).


## FLIGHT PRACTICE

To master flying your aircraft try practicing the excersizes shown below. Start with simple vertical takeoffs, landings, and left/right turning and rotating. Once those are mastered move on to square and cross maneuvers. Good luck and have fun!


Fixed-point landing


Square Pattern Maneuver


Cross Pattern Maneuver

## ADJUSTING THE TRIM

NOTE:The AIR RACER ${ }^{\text {TM }} 2.0$ is already properly trimmed and calibrated right out of the box and should not require any trim adjustments before flying. Some more experienced pilots may want to adjust trim setting for their style of flying. After several crashes you may need to adjust trim settings for the AIR RACERTM 2.0 to be more balanced.

## Forward/Backward Trim

- If your AIR RACER ${ }^{\text {TM }} 2.0$ drifts forward while in the air, push and release the BACKWARD TRIM button repeatedly until the motion stops and proper flight is maintained (see diagram L)
- If your AIR RACERTM 2.0 drifts backwards, push and release the FORWARD TRIM button forward in the same manner until the problem is resolved.

Bank Right/Left Trim

- If your AIR RACERTM 2.0 drifts left while in the air, push and release the RIGHT TRIM button repeatedly until the motion stops and proper flight is maintained (see diagram M).
- If your AIR RACER ${ }^{\text {TM }} 2.0$ drifts right, push and release the LEFT TRIM button in the same manne until the problem is resolved.



## CALIBRATING THE AIR RACERTM 2.0

NOTE:Your AIR RACER ${ }^{\text {TM }} 2.0$ comes pre-calibrated out of the box so you are ready to fly,
After several crashes and shock to your gyro sensors, you may notice that your drone is drifting and no holding its center position as well as it used to.
This most likely means that you need to recalibrate the 6 axis gyro. Please follow the simple instructions below.

1. Place the AIR RACER ${ }^{\text {TM }} 2.0$ on a flat level surface
2. Make sure the AIR RACERTM 2.0 is on and that the controller is synced (refer to syncing pg 4.). Do not start the blades. Press the "calibrate button." You will see the lights on the drone rapidly flash and stop. Once the lights stop flashing you have completed your calibration and are ready to fly!

TROUBLE SHOOTING: If you do not see the lights flash, turn off your controller take out the battery in the Drone and Start again. Always make sure to put your battery in the copter first, then turn on your controller. Push the left throttle stick up all the way and then pull back down all the way. When you hear the beep the AIR RACERTM 2.0 is synced to the controller and you are ready to calibrate.


## INTERACTIVE BATTLE MODE

Get ready for aerial combat missions with your friends (Note Requires additional AIR RACERTM 2.0).

## PREPARATION FOR MISSION

1.Make sure all battling quadrocopters are fully charged, properly synced and ready to fly (refer to SYNCING YOUR AIR RACER ${ }^{\text {TM }} 2.0$ ).

## READY, AIM, FIRE!

1. While your AIR RACER ${ }^{\text {TM }} 2.0$ 's in flight, aim the front side of your AIR RACER ${ }^{T M} 2.0$ to your opponent's AIR RACERTM 2.0 and press the SHOOT button on the top of your remote control (see diagram on pg 3 ).
2. If you score first hit, your opponent's remote control will vibrate one short time, the AIR RACERTM 2.0 will swing one time, in the mean time the indicator lights will flash one time.
3. If you score second hit, your opponent's remote control will vibrate two short times, the AIR RACERTM 2.0 will swing one time, in the mean time the indicator lights will flash two times.

## THREE STRIKES YOU'RE OUT!

4.On the third direct hit, your opponent's remote control will vibrate one long time, your opponent's AIR RACERTM 2.0 indicator lights will flash three times and your opponent will not be able to control the quadrocopter. The quadrocopter will gradually descend to the ground. Mission accomplished!
5. Once the quadcopter fully stops, your opponent can pull the throttle all the way down to recover (reset) and will be ready for the next dogfight.

## HOW TO PERFORM $360^{\circ}$ STUNT FLIPS

Performing $360^{\circ}$ stunt flips with the AIR RACERTM 2.0 is as easy as $1-2-3$ :

1. Hover the AIR RACERTM 2.0 in still position making sure that you have at least 5 feet of clearance above and below the quadrocopter,
2. Press and release the $360^{\circ}$ stunt button and you will enter the stunt flip mode the controller will start beeping. (see diagram Q1).
3. Determine which direction you want it to flip and quickly push the right control stick in the direction you want to flip your AIR RACERTM 2.0 (see diagram Q2). You have 4 choices a) Forward flip, b) Backwards flip, c) Right side flip, d) Left side flip. After stunt flip, it will automatically exit the stunt mode.
4. To exit the Stunt flip mode manually, simply Press and release the button again. The controller will stop beeping.


TROUBLESHOOTING YOUR AIR RACER ${ }^{\text {TM }} 2.0$

| PROBLEM | POSSIBLE CAUSE | POSSIBLE SOLUTION |
| :---: | :---: | :---: |
| No Power | 1. Power switched off <br> 2. Polarity is reversed <br> 3. Batteries may be low or in need of charging | 1. Switch the $0 \mathrm{~N} / \mathrm{OFF}$ switch to ON 2. Make sure all batteries are installed correctly (see diagram A on pg.2) 3. Replace batteries |
| Drone Not Responding | 1. Remote is switched off <br> 2. battery power in remote is too weak <br> 3.The remote is not properly synced <br> 4. Out of control range | 1. Switch the $\mathrm{ON} / \mathrm{OFF}$ switch to ON <br> 2. Connect the battery to AIR RACERTM 2.0 <br> 3. Re-sync the remote <br> 4. Do not fly beyond 200 feet |
| Drone Won't lift off | 1. Rotor speed too slow <br> 2.Drone not fully charged <br> 3.Obstruction of rotors | 1. Push throttle lever forward <br> 2. Recharge your AIR RACERTM 2.0 <br> 3. Check rotors for hair or other obstructions |
| Drone <br> Decsends <br> Too Fast | Moving the throttle down too quickly flying in high wind or bad weather | Control the throttle slower, use auto land feature, Do not fly in bad weather |

## REPLACING THE PROPELLER BLADES

Your Battle X's propeller system is a precision instrument that may need repair or replacement from time to time for optimal flight function. Crash landing at high-speed may cause damage to your Battle X's propellers.

1. The AIR RACERTM 2.0 has four blades, two gray blades in the front, and two black blades in the back (see the diagram $S$ ).
2. When replacing the propeller blades, make sure to match both the color of the blade and the indication letter on the blade.
3. Replace the damaged blade with the correct blade.

Gray Blade Front Left = L
Gray Blade Front Right $=$ R
Black Blade Back Left $=$ R Black Blade Back Right $=\mathrm{L}$


## AIR RACER ${ }^{\text {TM }}$ 2.0 WARNING:

The AIR RACER ${ }^{\text {TM }} 2.0$ is designed for indoor \& outdoor use. The Battle X's blades revolve at high speeds and can cause damage to the user, spectators and animals. Stand away from the AIR RACER ${ }^{\text {M }} 2.0$ to reduce the risk of getting into the flight path. Warn spectators that you will be flying your AlR RACER ${ }^{\text {¹ }} 2.0$ so that they are aware of its position. Before flight, inspect the rotor blades to make sure that the blades are securely fastened to the AIR RACER ${ }^{\text {TM }} 2.0$.

## 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 AIR RACERTM 2.0 power switches when not in use
- The included charger is built specifically for the AIR RACER ${ }^{\text {TM }} 2.0$ 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 AIR RACER ${ }^{\text {TM }} 2.0$


## BATTERY WARNINGS

RECHARGEABELB BARERY: battery properly according to local disposal requirements.

## CONTROLLER BATTERIES:

Remote control requires 3"AA" batteries (not included).
Please read the important battery safety warning below.

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


## CARE AND MAINTENANCE

- Always remove the batteries from the wireless remote control when it is not being used for an extended period of time.
- To clean, gently wipe the remote control and AIR RACER ${ }^{\text {TM }} 2.0$ 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.


Limited 90-Day Warranty
NORTH AMERICA

AMAX Group USA warrants to the original consumer that this product is free from any electrical or mechanical defects for a period of 90 DAYS from the date of purchase. If any such defect is discovered within the warranty period, AMAX Group USA will repair or replace the unit free of charge upon receipt of the unit, shipped postage prepaid and insured to our warranty center. The warranty covers normal consumer use and does not cover damage that occurs in shipment or failure that results from alterations, accident, misuse, abuse, neglect, wear and tear, inadequate maintenance, commercial use or unreasonable use of the unit Removal of any parts/components voids all warranties. This warranty does not cover cost of repairs made or attempted outside by third-party individuals or companies. Any applicable implied warranties, including warranties of merchantability and fitness, are hereby limited to 90 DAYS from the date of purchase. Consequential or incidental damages resulting from a breach of any applicable express or implied warranties are hereby excluded. Some states do not allow limitations on the duration of implied warranties and do not allow exclusion of incidental or consequential damages, so the above limitations and exclusions in these instances may not apply.

## REPAIR/REPLACE PRODUCT

If your product begins to malfunction or stop working, immediately email our warranty center at the email listed below. If it is determined that a return is necessary, our warranty department will issue you an RMA number/form and an address to the nearest return center for shipping the product to. IMPORTANT NOTICE:We will reject all returns that are not accompanied by an issued RMA form and number so make sure to contact our warranty center before attempting to return your product

## PREPARATION FOR SHIPPING YOUR PRODUCT

Please repack your product in a durable box, preferably in the original carton, and send it prepaid, and adequately insured. Include the RMA form that was issued by our warranty department along with your daytime telephone number and email address inside the shipping carton. If your warranty has expired, contact our warranty center for charged service. For further information please send all inquiries to: customercare@amaxbrands.com

IMPORTANT NOTICE! DO NOT ATTEMPT TO SHIP YOUR PRODUCT BACK WITHOUT FIRST CONTACTING OUR WARRANTY DEPARTMENT BY EMAIL AT:
customercare@amaxbrands.com

