## 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 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 quarantee 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 contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- 1. This device may not cause interference.
- 2. This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation. Sciences et Développement économique 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;
- 2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement

#### CAN ICES-3 (B)/NMB-3(B)

This product meets the applicable Innovation, Science and Economic Development Canada technical specifications.

Ce produit répond aux spécifications techniques pertinentes d'Innovation, Science et Développement économique applicables.



11

Conforms to safety requirements of FCC and RSS210.

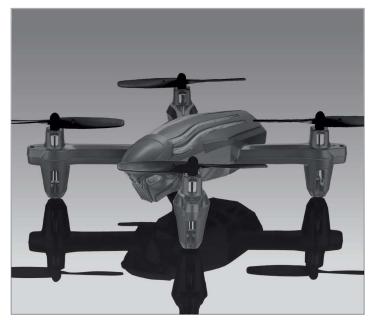
©2018 Rooftop Brands<sup>TM</sup> All rights reserved. www.propelrc.com

Made in China

V 6.0

## SPYDER X™

### Palm Sized High Performance Drone



#### INSTRUCTION BOOKLET

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

#### PACKAGE CONTAINS:











Instruction Booklet

Colors and styles may vary slightly

			,	
C17-Spyder X EN IM	114.3×174.6mm	Winnie	Jerry	2018/9/06
ARTWORK NO.	DESCRIPTION	MDSER	DESIGNER	DATE

#### TABLE OF CONTENTS

Features	
Remote Battery Installation.	!
Charging Your SPYDER X™ Battery2	!
SPYDER X™ Quadrocopter Diagram	;
Remote Diagram	i
Removable Controller Grips	
Preparing For Flight4	ļ
Syncing Your SPYDER XTM	ļ
Flying Tips4	ļ
Recognizing the Front and REAR of the SPYDER X™	i
Automatically Take OFF / LAND5	i
Speed Setting Button	i
T (Training)MODE5	i
3/4 Channel Select5	,
Forward / Backward Trim6	į
Banking Left / Right Trim6	į
4 Channel Flight Control	,
3 Channel Flight Control.	ì
Calibrating The SPYDER X™8	;
How To Do 360° Stunt Rolls.	)
SPYDER X <sup>TM</sup> Warnings	)
Battery Warnings	١
Care and Maintenance	١
Replacing The Propeller Blade	١
FCC Part 15 C Notice	

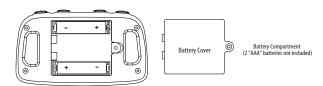
Thank you for purchasing the SPYDER X™ 2.4 G Palm Sized High Performance Drone. Please read this instruction booklet as it contains valuable information on how to properly fly and care for your SPYDER X™.

#### **FEATURES**

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

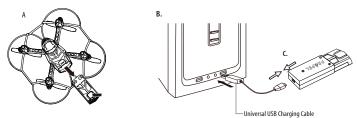
#### REMOTE CONTROL BATTERY INSTALLATION

- 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 YOUR SPYDER X™ BATTERY

- 1. Turn the SPYDER X<sup>™</sup> over and carefully remove the battery (see diagram A).
- 2. Slide the battery into the USB charger and then connect the USB charging cable to the charger (see diagram C). Connect the universal end of the USB cable to your computer's USB port (see diagram B). CAUTION: improper connection may damage the battery.
- 3. Average charging time is about 60-70 minutes. The flashing red LED indicator turns green when battery is fully charged. A full charge will allow for about 5-6 minutes of flight time depending on environment and user input.

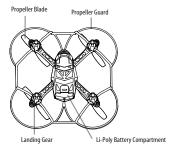


#### IMPORTANT: ALWAYS REMEMBER TO UNPLUG YOUR CHARGING CORD WHEN NOT IN USE!

**Note:** Once connected to computer charger LED will flash if the battery is not inserted.

The LED will stay solid red when charging and turn off when charging is completed.

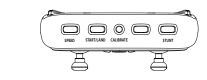
#### SPYDER X™ QUADROCOPTER DIAGRAM

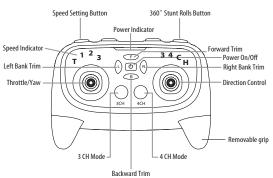


The safety guard is easy to clip on and off. Simply pull the clips away from each motor mount and remove the SPYDER X™ from below.

Note: Always have the safety guard attached when flying in T-Mode and Mode 1.

#### REMOTE DIAGRAM





#### REMOVABLE CONTROLLER GRIPS

Easily slides off and on. (see remote diagram)

## **WARNING**DO NOT FLY YOUR SPYDER X™ IN FOUL WEATHER!









#### PREPARING FOR FLIGHT

- Verify that there are 2 "AAA" batteries inside the remote control unit and the SPYDER X™ 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 bodies of water. Set your SPYDER X™ on a clean flat surface before

DO NOT ATTEMPT TO FLY YOUR SPYDER XT IF THERE IS RAIN, SNOW, HEAVY WINDS, THUNDER OR LIGHTNING OUTDOORS. IT COULD DAMAGE YOUR PRODUCT AND POSSIBLY EVEN CAUSE BODILY HARM.

#### SYNCING YOUR SPYDER X™

Important! When syncing your SPYDER X<sup>TM</sup> drone with the controller always make sure that the drone is on a flat level surface. This insures that the 6 Axis gyro is properly programmed to mimic your trim settings.

Your SPYDER X™ utilizes an automatic 2.4G channel selection system that allows up to 8 people to fly side by side.

#### For One Person Play:

- 1. Before starting, make sure that the power to your controller is turn OFF and the SPYDER X™ battery is disconnected. Make sure that there are no other active 2.4G devices in the area as well.
- 2. Insert the battery into the SPYDER X™ and set it down on a flat level surface. The white and red LED indicators of the SPYDER X™ should flash rapidly.
- 3. Turn ON your remote and you will hear short beeps. The controller power indicator will start flashing. The white and red LED lights on the quadcopter start flashing slower. Now push the throttle all the way up then down, you will hear 2 short beeps and the indicating LED lights will become solid. Your SPYDER X™ 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 SPYDER X™ and Controllers are turned OFF. Make sure that there are no other active 2.4G devices in the area as well.
- 5. Each person will have to sync their SPYDER X™ 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. The player should leave his SPYDER X™ on once synced and wait for all other players to successfully sync.
- 7. Should there be a mistake/interference, all players must turn off their controllers and SPYDER X™ and start the process all over again.

#### FLYING TIPS

- It is recommended that you operate the SPYDER X™ in a wide space. The ideal space should have a 200 foot radius.
- Parental guidance or adult supervision is suggested at all times.
- If you are flying the SPYDER X<sup>TM</sup> with others, make sure all spectators are behind you.
- For best performance, it is recommended that you operate the SPYDER X™ in zero wind conditions. Wind can greatly affect the performance of the SPYDER X™.

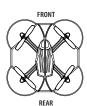
# NOW YOU ARE READY TO FLY! If you have successfully synced your SPYDER X™ to your controller as explained on page 4 you are now

If you have successfully synced your SPYDER X<sup>™</sup> 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 Auto Start and Auto Land feature and how the controls work so please carefully read and familiarize yourself with various control features explained 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 SPYDER X<sup>™</sup> too high until you become a more experience pilot.

#### RECOGNIZING THE FRONT AND REAR OF THE SPYDER XTM

Even though the SPYDER X<sup>™</sup> has four rotors there is still a "front" or "forward" facing direction and "rear" or "backward" facing direction. The "front" or "forward" facing direction of the SPYDER X<sup>™</sup> is the side with two eyes. The "rear" or "backward" facing directing of the SPYDER X<sup>™</sup> is where the battery compartment is. The SPYDER X<sup>™</sup> when in flight will also help you keep aware of the orientation with lighted LED lights in the arms of the SPYDER X<sup>™</sup>.

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



#### **AUTOMATICALLY TAKE OFF / LAND**

Make sure you have properly synced The SPYDER XTM.

- simply press the "start/land" button on the top of controller, your SPYDER X<sup>TM</sup> will automatically take off.
- To stop or land the SPYDER X™ just press the "START/LAND" button again and the SPYDER X™ will descend and land automatically.

Tips: You also can move the two control sticks simultaneously down to the inside corners, hold them until the blades start spinning. Release the control sticks and push up 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 SPYDER X<sup>TM</sup> has 4 speed settings; **T (TRAINING)**, **1 (SLOW)**, **2 (MEDIUM)** and **3 (HIGH)**. The Default setting when you first turn on your SPYDER X<sup>TM</sup> is **mode 1 (SLOW)**. To increase the speed simply press the speed setting button (see remote diagram on page 3) You will hear beeping sound and the speed indicator will display the current speed setting with letter and Numbers. Letter T indicates speed level is very slow, Number 1 indicates slow speed, **2** indicates medium speed and **3** indicate 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". T mode allows you to learn how to operate your SPYDER X™ in a very slow speed. Also in T mode a minumum and maximum height limit is set to avoid crashing into the ground or ceiling while learning. To exit T mode just press the speed setting button again.

#### 3/4 CHANNEL SELECT

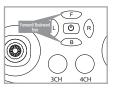
SPYDER X™ allows you to control your Quadrocopter in 3 channel mode (beginner) or 4 channel mode (advanced pilot). The SPYDER X™ default setting is 4 Channel mode.

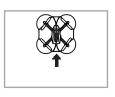
To change to 3 Channel mode: PRESS the 3CH button (see remote diagram on pg 3), you will hear 3 short beeps and the "3 CH" will light up on the controller indicating the SPYDER X™ now is set to 3CH mode. To change back to 4 Channel mode: PRESS the 4CH button (see remote diagram on pg 3), you will hear 4 short beeps and the "4 CH" will light up on the controller indicating the SPYDER X™ is now set to 4CH mode.

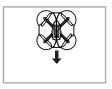
#### UNDERSTANDING TRIM ADJUSTMENTS

#### Forward/Backward Trim

- If your SPYDER X<sup>™</sup> is moving forwards or backwards automatically, you may need to adjust the FORWARD/BACKWARD TRIM buttons.
- If your SPYDER X™ flies forward, push and release the B TRIM button repeatedly until the moving stops and proper flight is maintained.
- If your SPYDER X<sup>TM</sup> 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 SPYDER X™ will hover in mid-air and respond accurately to your commands.





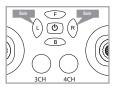


F

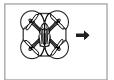


#### Banking Left/Right Trim

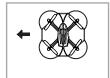
- If your SPYDER X<sup>TM</sup> is not steadily hovering and is banking to the left or right automatically, you may need to adjust the BANKING TRIM buttons.
- If your SPYDER X<sup>IM</sup> banks to the left, push and release the R TRIM button repeatedly until the banking stops and proper flight is maintained.
- If your SPYDER X<sup>TM</sup> 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 need to adjust the BANKING TRIM to ensure the SPYDER X™ will steadily hover in mid-air and respond accurately to your commands.











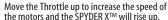
Push "R" trim button to increase right banking sensitivity

NOTE: The use of the Trim buttons are accompanied with a Beep sound. A single long Beep indicates the product is center trimmed. If there is no beeping sound after press the trim buttom, it indicates the maximum rang of the trim on a particular side.

#### 4 CHANNEL FLIGHT CONTROL

Below is a list of basic flight functions for your long-range remote control SPYDER X<sup>TM</sup>. While learning to fly your SPYDER X™ it is best to start with a large space until you get used to the basic controls. As you master flying your SPYDER X<sup>TM</sup> 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.





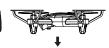


Move the Throttle stick left and the SPYDER X™ will rotate left.



Move the Direction Control up and the SPYDER X<sup>TM</sup> will move forward.





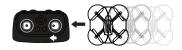
Move the Throttle down to decrease the speed of the motors and the SPYDER X™ will descend.



Move the Throttle stick right and the SPYDER X™ will rotate right.



Move the Direction Control down and the SPYDER X™ will move backward.



Move the Direction Control left and the SPYDER X™ will bank to the left.





Move the Direction Control right and the SPYDER X™ will bank to the right.

#### 3 CHANNEL FLIGHT CONTROL

Below is a list of basic flight functions for your long-range remote control SPYDER X<sup>TM</sup>. While learning to fly your SPYDER X<sup>TM</sup> it is best to start with a large space until you get used to the basic controls. As you master flying your SPYDER X<sup>TM</sup> 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.

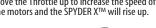


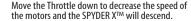






Move the Throttle up to increase the speed of the motors and the SPYDER X<sup>TM</sup> will rise up.













Move the Throttle stick left and the SPYDER X™ will rotate left.

Move the Throttle stick right and the SPYDER X™ will rotate right.







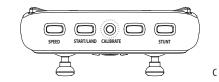


Move the Direction Control up and the SPYDER X™ will move forward.

Move the Direction Control down and the SPYDER X™ will move backward.

#### CALIBRATING THE SPYDER X™

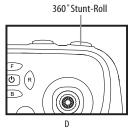
If the SPYDER X<sup>™</sup> becomes unstable during the course of flying, you may need to calibrate the internal gyros. Place the SPYDER X<sup>TM</sup> on a flat level surface then long press the CALIBRATE button on the top of remote controller. The LEDs on the SPYDER X™ will flash quickly and then remain solid, this indicates your drone has been recalibrated (see diagram C).

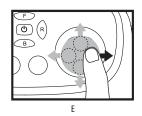


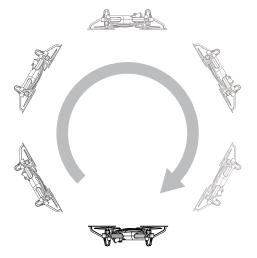
#### **HOW TO DO 360° STUNT ROLLS**

- In order to make your SPYDER X™ do 360° rolls you must fully charge your battery.
   Note: The SPYDER X™ will not do 360° stunt rolls in T-Mode, Mode1 and under low battery indication (When the LED lights on the drone is flashing slowly).
- Once you are ready to attempt a 360° roll, simply press and let go of the "STUNT" button on the top
  right hand side of your controller (see Remote Diagram D), you will hear continous beeping sunds.
  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 and your SPYDER X™ copter will instantly roll in the associated direction. (See diagram E). And the beeping sounds will stop.

NOTE: To exit the stunt mode manually if you wish not to do the stunt roll, you can press the stunt button again and the beeping sounds will stop too.







#### SPYDER X™ WARNING:

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

- WARNING!
- Choking/Cutting Hazard. Small Parts/Sharp Rotor Blades.
- Keep hands, hair and loose clothing away from the propeller when the battery is plugged in.
- Turn off the controller and take out the battery from the SPYDER X™ battery compartment when not in use.
- The included charger is built specifically for the SPYDER X<sup>TM</sup> Li-Poly battery. Do not use it to charge any other battery.
- New alkaline batteries for controller are recommended for maximum performance.
- Parental supervision is recommended when flying the SPYDER XTM.

#### BATTERY WARNINGS

#### RECHARGEARI E RATTERY:

This SPYDER  $X^m$  uses a Li-Poly rechargeable battery which has limited life cycles. If battery can no longer be charged, dispose the battery properly according to local disposal requirements.

#### CONTROLLER BATTERIES:

Remote control requires 2 "AAA" batteries (not included). Please read the important battery safety warning below.

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

#### CARE AND MAINTENANCE

- Always remove the batteries from the controller when it is not being used for an extended period of time.
- $\bullet$  To clean, gently wipe the remote control and SPYDER  $X^{TM}$  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 SPYDER X<sup>™</sup> 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 SPYDER X<sup>™</sup> propellers.

- 1. The SPYDER X<sup>™</sup> has four blades, one A & B blades on front, and one B & A blades on rear (see the diagram below).
- 2. Pick up a blade from the included spare parts and match the marking to the diagram below.
- 3. Replace the broken blade with the correct one.

