



**SNAPTAIN SUPPORT**  
 US : support@snaptain.com  
 CA : support@snaptain.com  
 UK : support.uk@snaptain.com



www.snaptain.com @snaptainofficial @snaptain\_official



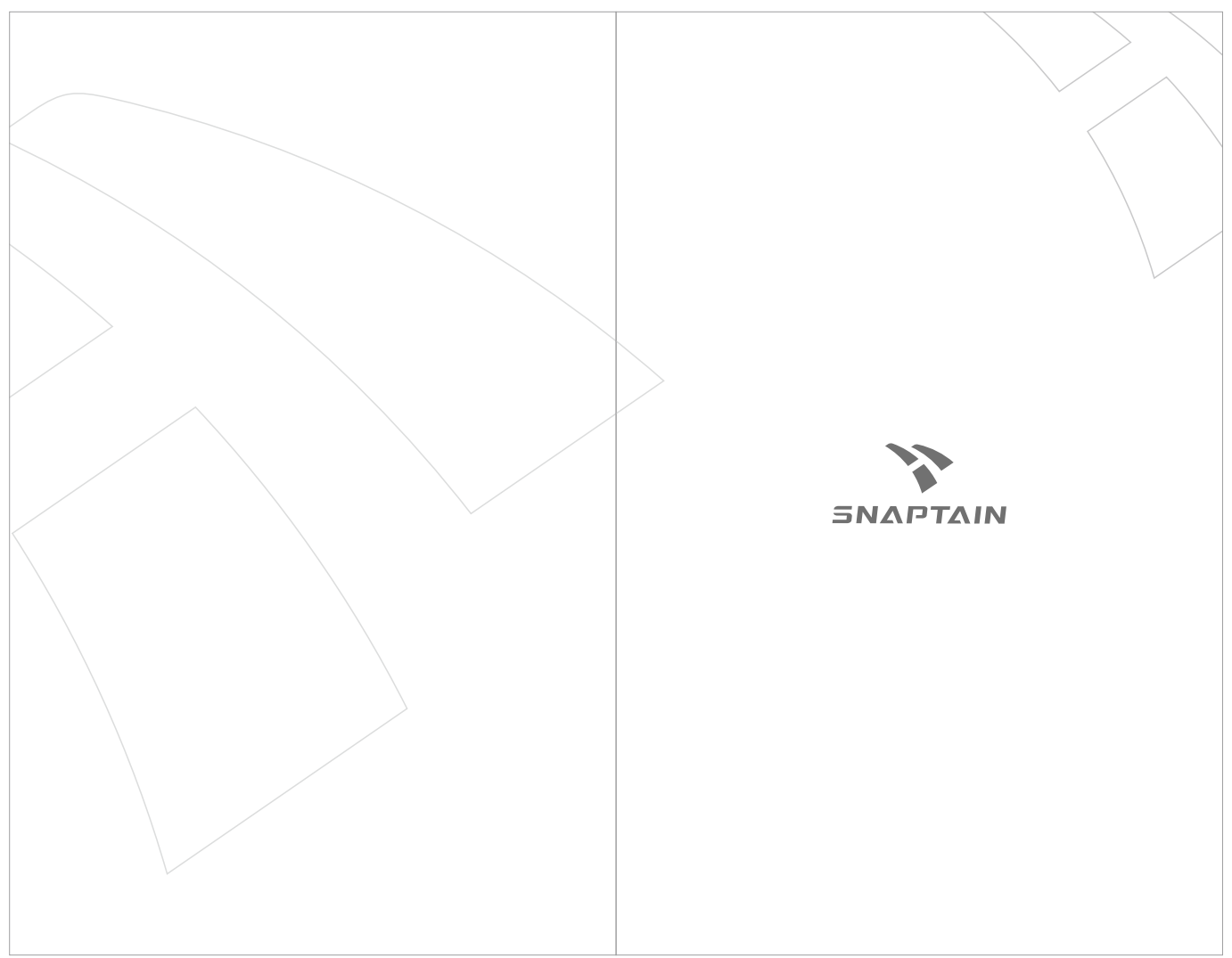
**SP510**  
 Foldable GPS Drone

**14+**

USER MANUAL

Please read this manual carefully before flying and keep it well for future reference.

V4.03



**CONTENTS**

DISCLAIMER AND SAFETY GUIDELINES.....01  
 MAINTENANCE AND CARE.....03  
 PRODUCT OVERVIEW.....04  
 FLIGHT PREPARATION.....06  
 FLIGHT OPERATION GUIDE.....09  
 Remote Operation Guide.....09  
 Pair the Remote with the Drone.....09  
 Flight Calibration.....10  
 Compass Calibration.....10  
 Gyro Calibration.....12  
 GPS Satellites Searching.....12  
 Flight Instructions.....13  
 Take-off.....13  
 Flight Directions.....14  
 Photo / Video.....15  
 Speed Switch.....16  
 Headless Mode.....16  
 Point of Interest (POI).....17  
 Attitude(ATT) Mode.....18  
 Flight Trimming.....19

Return-to-Home (RTH).....20  
 Smart RTH .....20  
 Failsafe RTH.....22  
 Low Battery RTH .....22  
 Landing.....23  
 Emergency Stop.....24  
 App Operation Guide.....24  
 Download and Install the App.....24  
 Launch the App.....25  
 Function Overview of the App.....26  
 Settings.....27  
 Take-off.....28  
 Follow Me.....29  
 Mark and Track.....30  
 Waypoints.....31  
 Photo / Video.....31  
 Gestures for Photo / Video.....32  
 Smart RTH.....32  
 Landing.....32  
 TROUBLESHOOTING.....33  
 SPECIFICATIONS.....34

**DISCLAIMER AND SAFETY GUIDELINES**

Please read the disclaimer carefully before using this product. By using it, you hereby agree to this disclaimer and signify that you have read them thoroughly.

- Before flying, please make some practice with a simulator or seek for the instruction from a professional.
- DO NOT fly above or near obstacles, crowds, open water, public road, high-voltage power lines or trees.
- DO NOT use the drone in severe weather conditions, such as a rainy day or windy day(wind speed is more than 5.5m/s), snow, hail, lightning, tornadoes, hurricanes, etc.
- DO NOT fly the drone in the magnetic interference area, radio interference area, and government regulated no-fly zones.
- The fast rotating motors and propellers are a potential hazard to cause serious damage and injury. A safe distance of 5m must be maintained from the drone at all times while it is operational. Fly with responsibility.

06 Please maintain line-of-sight of your drone at all times after it is powered up. Do not rely on the camera image to control your drone.

07 This product is not a toy and not recommended for users under age 14.

08 This product is not intended for professional aerial drone photography.

09 All parts must be kept out of the reach of children to avoid CHOKE HAZARD.

10 CAUTION: Dispose of drone and batteries in accordance with local regulations. DO NOT treat it as household waste.

11 Be sure to observe all local regulations, obtain appropriate authorizations and understand risks. Please note it is solely your responsibility to comply with all flight regulations.

SNAPTAIN accepts no liability for damage, injury or any legal responsibility incurred directly or indirectly from the use of this product. The user shall observe safe and lawful practices including, but not limited to, those set forth in these Disclaimer and Safety Guidelines. SNAPTAIN reserves the right to update this user manual.

**MAINTENANCE AND CARE**

- Thoroughly check the drone after crash or violent impact.
- Do not use or store the battery near fire.
- Do not charge the battery if it is hot. Let it cool down first.
- Do not charge the battery next to inflammable materials, such as bed, carpet, wood floors etc., or on surfaces that are electrically conductive. Do not leave the battery unattended while charging.
- ONLY use the original USB cable provided. Unplug the charger once the battery is fully charged.
- Remove the battery from the drone if it will not be used for a long time.
- Store the drone and remote in a cool, dry place away from direct sunlight.
- Be sure to clean off your drone with a dry cloth to prevent any moisture from getting onto the electronics.
- Some parts of the drone and the remote are coated with lubricant, which may overflow during use, please use a cloth to clean it.
- Do not try to disassemble or repair the product by yourself. Please contact SNAPTAIN for more help.
- Please use the original battery provided. Use an incorrect type of battery may lead to fire hazards.
- Do not dispose of the battery in fire or a hot oven, cut or mechanically crush the battery, as this may cause explosions.
- Do not leave the battery in an extremely high-temperature environment that can result in an explosion or the leakage of flammable liquid or gas.
- Do not expose the battery to the extremely low air pressure, as this may result in an explosion or the leakage of flammable liquid or gas.

**PRODUCT OVERVIEW**  
 SP510 Drone

Note: Please don't manually adjust the camera angle to avoid damage to it.

**Remote**

Legend:  
 ● Fully Charged Indicator  
 ● Charging Indicator  
 ● Power Indicator  
 ● Smart RTH Indicator  
 ● Speed Indicator  
 ● Photo/Video Indicator  
 ● Headless Mode Indicator/ Flight Trimming Indicator

**FLIGHT PREPARATION**

01 Charge the battery, then install it into the drone after it's fully charged.

Notes:  
 01 Please use the original battery and USB cable provided.  
 02 Keep the battery away from any sharp objects that could puncture into the battery to avoid risks of explosion and fire.  
 03 It's not recommended to charge the battery from the USB port of PC.  
 04 Flight time may be reduced when flying in low-temperature environments.  
 05 To extend the battery's lifespan, recharge it at least once every three months if not using it for long periods of time.

02 Unfold the rear arms, then the front arms.

01 Insert a memory card (not included) into the drone. (Optional)

\* FAT 32 format of the memory card is required.  
 \* Support up to 128G.

02 Charge the remote.

Fully Charged Indicator: Green  
 Charging Indicator: Red

03 Unfold the Remote Handle and Antenna.

04 Unfold the Phone Clamp to see more indicators. Mount your mobile device when using it to fly the drone.

05 Replace the propeller when it's needed. (Optional)

- Loosen the screw to remove the propeller.
- Fit the spare propeller into the drone. Make sure the mark (A/B) on the propeller is the same as the mark on the arm of the drone.
- Tighten the screw.

**FLIGHT OPERATION GUIDE**

**IMPORTANT:**

- Make sure you power on the drone first, then the remote in each flight.
- Do repeat the pairing and calibration procedure each time the drone or remote is restarted.
- For all flight functions and modes, the operator and tail of the drone must be aligned.
- We recommend flying in the open air and within the control range for beginners.
- Use the remote and App simultaneously to fly the drone for better flying experience.
- The maximum flight distance (the maximum distance between the drone and the last recorded Home Point) is set to 30m by default and you can reset it in Settings of App.

**Remote Operation Guide**

**Pair the Remote with the Drone**

Step 1: Turn on the drone by pressing and holding the On/Off button for 3s until the four indicators on the battery light up, then place it on a flat surface with the head forward. LEDs on the arms of the drone flash red slowly.

Flash red slowly

Step 2: Short press the On/Off button on the remote to turn on it and there is one beep from the remote. Push the Left Control Stick forward to the top, then pull it backward to the bottom. Pairing is completed when the front LEDs of the drone flash white slowly and the rear LEDs of the drone flash blue slowly.

Flash white slowly  
 Flash blue slowly

Tips:  
 1 Short press the On/Off button on the remote, then press and hold it for 2s until you hear a beep sound to turn it off.  
 2 The drone and remote will turn off automatically after 10 minutes of inactivity.

**Flight Calibration**

After pairing, the LEDs on the arms of the drone will turn to flash red quickly, indicating that the drone needs to be calibrated.

Note:  
 If the drone often flies in the same place, its LEDs won't turn to flash red quickly after pairing, however, it's still necessary to do the calibration.

**Compass Calibration**

Push the Left Control Stick to the upper right at 45° and the Right Control Stick to the upper left at 45°. The front LEDs of the drone flash white and red quickly and the rear LEDs flash blue and red quickly.

Step 1: Hold the drone horizontally, then make a 360 degrees rotation at least once until the rear LEDs of the drone turn solid blue and red, which indicates a successful horizontal calibration.

Flash white and red quickly

Flash blue and red quickly

Step 2: Hold the drone vertically with its head facing up, then make a 360 degrees rotation at least once until the front LEDs of the drone turn solid white and red, which indicates a successful vertical calibration.

Solid blue and red

Solid white and red

Notes:  
 1 Make sure to keep away from ferromagnetic substance and other electronic equipment when calibrating.  
 2 If the LEDs on the arms of the drone keep flashing red when calibrating, please move to another place to fly the drone.

**Gyro Calibration**

Place the drone on a flat surface after finishing compass calibration. Push the Left Control Stick to the upper left at 45° and the Right Control Stick to the upper right at 45° to start calibrating the gyro. Gyro calibration completes when the front LEDs (white) and the rear LEDs (blue) of the drone turn to flash slowly from which quickly.

Flash white slowly  
 Flash blue slowly

Note:  
 If the drone finds enough satellites, its LEDs will turn solid on after gyro calibration.

**GPS Satellites Searching**

Wait for the drone to search GPS satellites. You could go to Snaptain Nova app to check the GPS Signal (refer to page 24-26). When the drone finds enough satellites, the GPS signal icon on App will turn blue, and the front LEDs (white) and rear LEDs (blue) of the drone will turn solid on, indicating that the drone is ready to take off in GPS Mode.

Ready to take off in GPS Mode

The drone is set in GPS Mode by default. In this mode, the drone can utilize the GPS module to locate itself and make a precise hovering flight. GPS Mode works only when the GPS signal is strong. Please fly the drone outdoors.

Notes:  
 1 We strongly recommend GPS Mode for beginners.  
 2 If you still want the drone to take off when GPS Mode is unavailable, you can switch it to ATT (Attitude) Mode (refer to Page 18).

**Flight Instructions**

**Take-off**

Option 1: Move the Left Control Stick to lower right at 45° and the Right Control Stick to lower left at 45° at the same time until the four rotor blades start rotating, then short press the On button to take off at a height around 1.5m.

Option 2: Move the Left Control Stick to lower right at 45° and the Right Control Stick to lower left at 45° at the same time until the four rotor blades start rotating, then slowly push the Left Control Stick forward to take off.

Notes:  
 1 If you don't want the drone to take off after unlocking it, push the Left Control Stick to lower right in 45° and the Right Control Stick to lower left in 45° again ( ) to make the four rotor blades stop rotating.  
 2 The motors will stop working if there is no operation within 20s.

**Flight Directions**

**Left Control Stick**

Push the Left Control Stick forward and the drone will ascend; pull it backward and the drone will descend.

**Right Control Stick**

Push the Right Control Stick forward and the drone will fly forward; pull it backward and the drone will fly backward.

Pull the Right Control Stick leftward and the drone will fly leftward; pull it rightward and the drone will fly rightward.

**Speed Switch**

The speed of the drone is set as Medium speed by default. Slide the SPEED switch rightward to turn to High speed, and slide it leftward to turn to Low speed.

Speed Indicator  
 Low speed: Off  
 Medium speed: Solid Blue  
 High speed: Flashing Blue

Low speed High speed

**Headless Mode**

Short press the On button to activate Headless Mode. The Headless Mode indicator on the remote will be solid blue. In this mode, the drone will fly following the direction of the Right Control Stick regardless of the position of your drone's head or the tail. Press the same button again to cancel this mode.

Solid blue

**Photo/Video**

Short press On to take a photo.  
 Short press On to start recording a video, press it again to end and save the video to your mobile device and memory card if you are using Snaptain Nova App.

**Point of Interest (POI)**

POI function enables the drone to fly around a desired subject.

Step 1: Fly the drone above the desired subject. The current point of the drone is POI.

Step 2: Simultaneously press the On and On buttons on the remote to activate POI.

Step 3: Move the Right Control Stick to set the POI Radius from 2m to 100m.

Step 4: Simultaneously press the On and On buttons again, then the drone starts orbiting around POI clockwise.

\* Push the Left Control Stick forward or backward to adjust the flight altitude as needed.

Step 5: Cancel POI.

Option 1: Simultaneously press the On and On buttons again.

Option 2: Move the Right Control Stick when the drone is orbiting around POI.

Notes:  
 1 The minimum POI radius is 2m. If the POI radius you set is less than 2m, the drone will automatically fly to the point where POI radius is 2m.  
 2 This function can't be activated when battery of the drone is low.

**Attitude (ATT) Mode**

In ATT Mode, the drone will maintain a specific flight altitude, but it will drift around in the wind.