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SNAPTAIN

SP500

Series Quadcopter
USER MANUAL
Note: Actual product prevails, without further notice in advance

14+

ENGLISH

ENGLISH

EU-AD

CONTENTS

DISCLAIMER AND SAFETY GUIDELINES.....01
MAINTENANCE AND CARE.....03
PRODUCT OVERVIEW.....04
FLIGHT PREPARATION.....06
FLIGHT OPERATION GUIDE.....08
REMOTE OPERATION GUIDE.....10
Pair the Remote with the Drone.....10
Flight Calibration.....10
1. Compass Calibration.....10
2. Gyro Calibration.....11
GPS Satellites Searching.....12
Flight Instructions.....13
Take off.....13
Flight Directions.....15
Return-to-Home (RTH).....16
Smart RTH.....18
Failsafe RTH.....19
Low Battery RTH.....19
Photo/Video.....20
Headless Mode.....20
Speed Switch.....21
Altitude (ATTI) Mode.....21
Landing.....22
Emergency Stop.....22
APP OPERATION GUIDE.....23
App Downloading and Installation.....23
App Launch.....23
Function Overview of the App.....25
Settings.....26
Take off.....28
Point of Interest (POI).....28
Follow Me.....30
Waypoints.....31
Photo/Video.....32
Record Videos with the Preloaded Music.....32
Landing.....32
Smart RTH.....32
LED INDICATORS DESCRIPTION.....33
TROUBLESHOOTING.....35
SPECIFICATION.....37

DISCLAIMER AND SAFETY GUIDELINES

Thank you for purchasing this vehicle. Before using the product, fly safely and responsibly, agree to this disclaimer and rightly that you have read them fully.

1. Before flying, please make some practice with a simulator or with the instruction from a professional.
2. DO NOT fly above or near obstacles, crowds, open water, public facilities, airports or military facilities.
3. DO NOT operate in poor weather conditions, such as rain, snow, fog or when wind speed is more than 5.5m/s, snow, hail, lightning, tornadoes, hurricanes, etc.
4. DO NOT fly near or around the magnetic interference area, radio interference area and government regulated no-fly zones.
5. The fast-rotating motors and propellers are a potential hazard to cause serious damage and injury. A safe distance of 3m must be maintained from the drone at all times while it is operational. Fly with responsibility.

DISCLAIMER AND SAFETY GUIDELINES

6. Keep your hands away from the rotors and propellers when it is powered up. Do not allow any part of your body to come in contact with the rotors.

7. This product is not a toy. It is not recommended for use under age 14.
8. This product is not intended for professional aerial shots photography.
9. All parts must be kept out of the reach of children to avoid CHOKE HAZARD.
10. CAUTION: Dispose of the 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 permissions and licenses, and fly responsibly. Failure to fulfill your responsibilities may result in 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 relevant Guidelines and Safety Guidelines. SNAPTAIN reserves the right to update this user manual.

MAINTENANCE AND CARE

1. Thoroughly read the instruction manual before flying.
2. Do not run or zoom the battery near a fire.
3. Do not place the battery near a heat source or direct sun.
4. Do not charge the battery near 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.
5. ONLY use the original cable provided. Unplug the charger once the battery is fully charged.
6. Remove the battery from the drone if it will not be used for a long time.
7. Store the drone and remote in a cool, dry place away from direct sunlight.
8. Be sure to clean off your drone with a dry cloth to prevent any moisture from getting into the electronics.
9. Do not disassemble or modify the drone product by yourself. Please contact SNAPTAIN for repair help.
10. Please use the original battery provided. Use an incorrect type of battery may lead to fire hazards.
11. Do not dispose of the battery in the or a hot oven, cut or mechanically crush the battery, as this may cause explosions.
12. Do not leave the battery in an extremely high temperature environment, or place it near or in a microwave or the exchange of thermostat liquid or gas.
13. Do not expose the battery to the extremely low or pressure, as this may result in an explosion or the leakage of flammable liquid or gas.

PRODUCT OVERVIEW

SP500 Drone

PRODUCT OVERVIEW

Remote

FLIGHT PREPARATION

1. Unfold the four arms from the drone.

2. Install the propeller guards into the drone.
Remove the small plastic clip from the rear shaft.
Insert the propeller guard into the rear shaft.

3. Charge the battery.

FLIGHT PREPARATION

Remove the propeller where it's needed. (Optional)

Remove the cap on the propeller.
Remove the screw on the propeller.
Take apart propeller into the drone. Make sure the mark (M) on the propeller is the same as the mark on the arm of the drone.
Tighten the screw and install the cap.

FLIGHT OPERATION GUIDE

IMPORTANT:

Make sure your power on the drone first, then the remote to each flight.

Disassemble the packing procedure each time when the drone or remote is retained.

For all flight functions and modes, the operator and tail of the drone must be aligned.

FLIGHT PREPARATION

Notes:

Please use the original battery and USB cable provided.

Please the battery away from any sharp objects that could puncture into the battery to avoid risks of explosions and fire.

Please charge the battery in a safe place, away from the USB port of PC. Flight time may be reduced when flying in low temperature environments.

Please charge the battery 1 lifespan, recharge it at least once every three months if not using it for long periods of time.

4. Install the battery into the drone after it's fully charged.

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

TF/ SD format of the memory card is recommended.

FLIGHT PREPARATION

6. Charge the remote.

7. Unfold the Remote Handle.

8. Unfold the Phone Clamp when using the mobile device to fly the drone.

FLIGHT OPERATION GUIDE

remote. Gyro Calibration is completed when the LEDs on the arms of the drone stop flashing quickly.

GPS SATELLITES SEARCHING

After finishing the compass calibration and gyro calibration, put the drone on a flat surface and go to **Snaptain Nova** App to check the **GPS Signal** (see the detailed information on page 12). Wait until the GPS signal is stable and the drone is ready to fly. Please make sure to the head of the drone faces and arrows. The drone has been enough GPS satellites and is ready for flight.

The drone is set in **GPS mode**. In GPS mode, the drone can use the GPS module to locate itself and make a precise hovering flight.

GPS Mode has been shown a strong GPS signal (4 Tines). Obtain fly the drone outdoors at your first try.

Note:
We strongly recommend **GPS Mode** for beginners.

FLIGHT OPERATION GUIDE

Step 1:
Hold the drone horizontally and rotate it until its LEDs on the front arms turn red, which indicates a successful calibration.

Step 2:
Rotate the drone vertically and rotate it until its LEDs on the rear arms turn green, which indicates a successful calibration.

Step 3:
Place the drone on a flat surface. Press and hold the **Left** button on the remote for 6 to 8 seconds until the drone's LED lights stop flashing and the drone will fly forward.

FLIGHT OPERATION GUIDE

Flight Directions

Left Control Stick

Right Control Stick

FLIGHT OPERATION GUIDE

FLIGHT INSTRUCTIONS

Take off

Option 1:
Move the **Left Control Stick** to lower left in 45° and the **Right Control Stick** to lower left in 45°, and the drone will start its motors and rotating, then slowly push the **Left Control Stick** forward to take off.

Option 2:
Move the **Left Control Stick** to lower left in 45° and the **Right Control Stick** to lower right in 45°, and the drone will start its motors and rotating, then slowly push the **Left Control Stick** forward to take off.

FLIGHT OPERATION GUIDE

Option 3:
Press the **Left** button on the remote when rotating, then press the **Left** button again to take off.

Option 4:
Press the **Left** button on the remote when rotating, then press the **Left Control Stick** forward to take off.

When the App remote pops "The compass was seriously interfered" and the drone blinks red + white to stop the operation of the remote control, or the GPS Mode, please move to another place to fly the drone.

FLIGHT OPERATION GUIDE

Flight Directions

Left Control Stick

Right Control Stick

FLIGHT OPERATION GUIDE

Return-To-Home(RTH)

The **Return-to-Home(RTH)** function brings the drone back to the last recorded Home Point. The Home Point is recorded when the drone is signal drone, Green is more, and the compass is functioning normally. Otherwise, this function can not be performed.

Smart RTH
Press **Gear** on the remote to initiate **Smart RTH**.

Failsafe Mode
The distance between the drone and the last recorded **Home Point** where the drone lost signal.

1. RTH Distance < 20M
The drone will directly fly to Home Point.

2. RTH Distance > 20M
If the drone's current altitude is lower than the preset RTH altitude, the drone will first ascend to the preset RTH altitude, then fly horizontally to above Home Point and descend to land.

FLIGHT OPERATION GUIDE

If the current flight altitude is higher than the preset RTH altitude, the drone will directly fly back to above Home Point at its current flight altitude and descend.

3. RTH Distance < 20M
The drone will directly fly to above Home Point at its current flight altitude and descending.

FLIGHT OPERATION GUIDE

Option 2:
Press the **Left** button on the remote when rotating, then press the **Left** button again to take off.

Option 3:
Press the **Left Control Stick** forward to take off.

"When the App remote pops "The compass was seriously interfered" and the drone blinks red + white to stop the operation of the remote control, or the GPS Mode, please move to another place to fly the drone.

FLIGHT OPERATION GUIDE

Notes:

Smart RTH

Smart RTH will be automatically activated when the remote disconnects with the drone for more than 3s. The drone will fly back to the last recorded **Home Point** under the control of the system itself.

If the connection between the remote and drone is re-established, the drone will stop the Smart RTH and return to the remote control.

If the activity is performed by the pilot, the RTH process will continue.

Failsafe

Failsafe RTH will be automatically activated when the remote disconnects with the drone for more than 3s. The drone will fly back to the last recorded **Home Point** under the control of the system itself.

If the connection between the remote and drone is re-established, the drone will stop the Failsafe RTH and return to the remote control.

If the activity is performed by the pilot, the RTH process will continue.

Notes:
1. The drone cannot avoid obstacles during the flight path of **Failsafe RTH**.
2. If the Failsafe RTH disconnects with the drone for more than 3s, and the GPS function is not available, the drone will slowly descend from the current altitude till landing.
3. During the flight path of Failsafe RTH, the LEDs of the drone will flash quickly.

FLIGHT OPERATION GUIDE

Low Battery RTH

1. The **Low Battery RTH** will be triggered when the drone battery is low and electrical level goes lower than 30%.

After flying back and when the RTH distance is less than 20m, RTH will be canceled automatically. The drone can not fly forward. Bring the remote to mother have the pilot operates.

Notes:
1. Continuously RTH, the Low Battery RTH will be triggered again unless the battery is critical low.
2. The **Critical Low Battery RTH** will be triggered when the drone battery is critical low.

FLIGHT OPERATION GUIDE

The drone will automatically fly back to the last recorded Home Point if it is the last recorded Home Point and the drone's RTH distance is over 20m. The drone will descend and land directly if the RTH distance is within 20m. Stop landing, the drone can't take off any more unless you change or restart the battery.

Notes:
Please land the drone, then, change or replace the battery when the battery is low.

Photo/Video
Short press **Left** to take a photo.
Press and hold **Left** for 3s to start recording a video, press and hold **Left** for 3s to stop recording. Photos and videos will be saved and memory card if you are using **Headless Mode**.

Headless Mode
Short press **Left** to activate **Headless Mode**. In this mode, the drone will fly following the direction of the **Right Control Stick** regardless of the orientation of the drone. Turn off the **Headless Mode Indicator** and flight control mode.

FLIGHT OPERATION GUIDE

Speed Switch

The speed of the drone is set as **LOW** speed by default. Press the **Gear** button twice to **HIGH** speed and there are two beeps from the remote. Press the **Gear** button again twice to low speed and there is one beep.

Altitude (ATTI) Mode

Short press **Left** button to activate **ATTI Mode**, and there is a long beep from the remote.

If the current flight altitude is higher than the preset RTH altitude, the drone will directly fly back to above Home Point at its current flight altitude and land.

3. RTH Distance < 20M
If the current flight altitude is lower than the preset RTH altitude, the drone will first ascend to the preset RTH altitude, then fly horizontally to above Home Point and descend to land.

FLIGHT OPERATION GUIDE

Landing

Option 1:
Short press the **Left** button to land the drone.

Option 2:
Slowly pull the **Left Control Stick** backward to land the drone.

Emergency Stop

Press and hold **Left** for 3s, the drone will stop in the air and fall.

FLIGHT OPERATION GUIDE

Notes:
1. The **SNAPTAIN SP500 camera** (FPV) is not fixed in your RTF kit and may be damaged during shipping and transportation. Please check and restore, then reseat the camera and wire connection connections **following the sections on page 10-12**.
2. Please connect the **SNAPTAIN SP500** camera WF-U only connected to 2.4G band.
3. Since Cam and the free time, please disconnect to the drone's Wi-Fi, then turn on cellular data and location service on your mobile device to preload the map. Note, turn off cellular data and location service after the map is loaded.
4. Only discover WF-U Wi-Fi network appears, it's recommended that you turn off the cellular data when connecting to the drone's Wi-Fi network. Otherwise, the App may automatically switch to cellular data and disconnect with the drone's Wi-Fi.

FLIGHT OPERATION GUIDE

Function Overview of the App

1. Gear
2. Speed
3. Return to Home
4. Record Video
5. Take Photo
6. Flip Mode
7. Headless Mode
8. Gyro Calibration
9. Compass Calibration
10. Landing
11. Emergency Stop
12. Flip Mode
13. Headless Mode
14. Gyro Calibration
15. Compass Calibration
16. Gear
17. Speed
18. Return to Home
19. Record Video
20. Take Photo

FLIGHT OPERATION GUIDE

1. Gear
Tap **Gear** button on the remote to switch the gear.

2. Speed
Tap **Speed** button on the remote to switch the speed.

3. Take Photo
Tap **Take Photo** button on the remote to take a photo.

4. Record Video
Tap **Record Video** button on the remote to record a video.

5. Flip
Tap **Flip** button on the remote to flip the drone.

6. Headless Mode
Tap **Headless Mode** button on the remote to switch the headless mode.

7. Gyro Calibration
Tap **Gyro Calibration** button on the remote to calibrate the gyro.

8. Compass Calibration
Tap **Compass Calibration** button on the remote to calibrate the compass.

9. Landing
Tap **Landing** button on the remote to land the drone.

10. Emergency Stop
Tap **Emergency Stop** button on the remote to stop the drone.

FLIGHT OPERATION GUIDE

Settings

Tap **Settings** button on the remote to enter the settings.

Media Gallery

Tap **Media Gallery** button on the remote to enter the Media Gallery.

Gear Mode

Tap **Gear** button on the remote to switch the gear.

Speed Mode

Tap **Speed** button on the remote to switch the speed.

Flip Mode

Tap **Flip** button on the remote to flip the drone.

Headless Mode

Tap **Headless Mode** button on the remote to switch the headless mode.

Gyro Calibration

Tap **Gyro Calibration** button on the remote to calibrate the gyro.

Compass Calibration

Tap **Compass Calibration** button on the remote to calibrate the compass.

Landing

Tap **Landing** button on the remote to land the drone.

Emergency Stop

Tap **Emergency Stop** button on the remote to stop the drone.

FLIGHT OPERATION GUIDE

Point of Interest (POI)

Tap **Settings** to enter **POI Radius** and **POI Radius** and Tap **POI** icon. The drone will circle around the current point of drone while keeping that point centered in the frame.

FLIGHT OPERATION GUIDE

Waypoints function allows you to define an exact flying route in a map during the flight.

Step 1:
Tap **Map** icon to view desired waypoints on the map. Tap **Delete** icon to delete waypoints if you want to reset.

Step 2:
Tap **Start** to begin waypoint flying.

Step 3:
Tap **Pause** if the you want to stop.

Tap again during the flight to cancel this mode and regain control of the drone.

Note:
Tap again during the flight to cancel this mode and regain control of the drone.

FLIGHT OPERATION GUIDE

Follow Me

Tap **Follow Me** function, then tap **Yes** on the pop-up window to start. When **Follow Me** is enabled during flight, the drone's camera will keep pointing at your mobile phone's location.

Step 1:
Tap **Follow Me** button on the App remote control.

Step 2:
Tap **Yes** button on the App remote control.

Tap again during the flight to cancel this mode and regain control of the drone.

Notes:
1. The function of **Follow me** may have deviation due to the **GPS** signal. Please maintain a safe distance between you and the drone while enabling this function.
2. Please make sure your mobile phone has no obstacle around you in case of unexpected accidents.
3. This function can't be activated when the battery of drone is low or the Low Battery Status shows 2 Yellow bars and the LEDs of the drone flash slowly.

FLIGHT OPERATION GUIDE

Photo/Video

Tap **Photo** button on the App remote control.

Tap **Record Video** button on the App remote control.

Notes:
1. Please make sure your mobile phone has enough storage space.
2. Please make sure the **GPS Mode** is **ON** and the GPS signal is strong when using the **Follow Me** function.
3. Please make sure your mobile phone has no obstacles around you in case of unexpected accidents.
4. This function can't be activated when the battery of drone is low or the Low Battery Status shows 2 Yellow bars and the LEDs of the drone flash slowly.

FLIGHT OPERATION GUIDE

Waypoints

Tap **Waypoints** icon to enter the waypoints.

Tap **Map** icon to view desired waypoints on the map. Tap **Delete** icon to delete waypoints if you want to reset.

Step 1:
Tap **Start** to begin waypoint flying.

Step 2:
Tap **Pause** if the you want to stop.

Tap again during the flight to cancel this mode and regain control of the drone.

Notes:
1. Please make sure your mobile phone has enough storage space.
2. Please make sure the **GPS Mode** is **ON** and the GPS signal is strong when using the **Waypoints** function.
3. Please make sure your mobile phone has no obstacles around you in case of unexpected accidents.
4. This function can't be activated when the battery of drone is low or the Low Battery Status shows 2 Yellow bars and the LEDs of the drone flash slowly.

FLIGHT OPERATION GUIDE

Record Videos with the Preloaded Music

Step 1:
Tap **Music** icon to enter the Music.

Step 2:
Tap **Click to select music**, and music provided will be displayed on the screen.

Step 3:
Tap the background music you prefer and confirm your choice, then tap **OK** on the pop-up window to start recording videos. Videos will be saved to the **Media Gallery** after you finish recording videos.

Step 3:
Save your videos with your friends from **Media Gallery** by tapping **Share** icon on the upper corner of the selected video.

Landing

Tap **Landing** button to land the drone during the flight.

Smart RTH

Tap **Smart RTH** button on the App remote control to land the drone back to the last recorded **Home Point**. Tap **RTH** on the pop-up window.

LED INDICATORS DESCRIPTION

LEDs on the Head of the Drone

LEDs Status	Drone Status
Off	GPS Mode OFF
Solid Green	Normal Flying
Solid red	Satellites Searched, GPS Mode available

LED INDICATORS DESCRIPTION

During the path of RTH, tap **Left** button to press the **Left** button on the remote control.

LED INDICATORS DESCRIPTION

Function	Front LEDs	Rear LEDs
Calibration	Red	Green
Power On	Flash slowly	
Pairing	Flash quickly	
Compass Calibration	Start Calibrating: off Calibrating Horizontal: Solid red Completed: light up Vertical Calibration: Solid red Completed: light up	Start Calibrating: off Calibrating Horizontal: Solid green Completed: light up Vertical Calibration: Solid green Completed: light up
Gyro Calibration	Start Calibrating: Flash quickly for 6 seconds Calibrated: Solid	
Failsafe RTH	Flash slowly	
Low Battery Status	Low Battery: Flash slowly Critical Low Battery: Flash quickly	

TROUBLESHOOTING

Q1. The motors are not rotating when the drone starts.
A: Make sure that gear is on and on the drone and the remote. Make sure that the drone Battery is not low and the drone battery is fully charged.
Make sure that the remote has been paired with the drone successfully.

Q2. The LEDs of the drone flash abnormally.
A: Make sure that the drone battery has enough power.
Try to calibrate the compass.
Try to calibrate the gyro.

Q3. The drone's propellers start rotating after I unlock the motor, but the drone does not take off.
A: Make sure that the drone has enough power.
Push the Left Control Stick forward to take off after unlocking the motors.
Make sure that the propellers (LED) are installed correctly.
Check if the rotating speed of each motor is the same. If not, the motor is broken, please contact us directly.

Q4. The drone tilts to one side after taking off.
A: Place the drone on a level surface.
Make sure that the propellers are installed correctly.
Check if the motor is stuck by any small object or if there is a burning smell from the motor. If yes, please remove the foreign object or contact us directly.
Check if the motor is broken. If yes, please contact us directly.

TROUBLESHOOTING

Q5. The Drone's propeller fell to crash.
A: Check if the propeller is not tightened.
Check if the motor is broken. If yes, please contact us directly.
Check if the propeller is damaged. If yes, please remove the broken propeller and install a new one.

Q6. The drone drifts after taking off.
A: Make sure that **GPS Mode** is **ON** and the GPS signal is strong.
Make sure the drone is placed on a level surface.
Make sure the drone and cellphone are connected.

Q7. The drone is unresponsive or insensitive to the control of the remotes.
A: Make sure that the drone flies within control range (0.25km).
Make sure that the remote has enough power.
Make sure that the remote battery has enough power.

Q8. Can't see the live image on App.
A: Make sure that the drone has enough power.
Make sure that your mobile device has connected to the drone's Wi-Fi.
Please go to your mobile device's App Store to check for any other data, or disable the function that allows your phone to automatically disconnect to self-with no Internet connections.
Make sure that the camera not loosened.
Make sure that the Wi-Fi signal is in range (<25m).
Make sure that you've authorized **SNAPTAIN** access to the App.
Please try to use another phone to connect to the drone's wifi.

SPECIFICATIONS

Operating Temperature	32°F to 104°F(0°C to 40°C)
USB Cable	
	For Remote	For Drone Battery
Input	5V 1-2.5A	5V 1-2A
Output	2.1V 1-400mA	1.4V 1-400mA

FCC Caution

The product is insufficiently non-especially sensitive and is therefore responsible for compliance. Issued and the user's authority to operate the equipment.

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.

The 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 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 an experienced radio/TV technician for help.

For Remote:
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

RF EXPOSURE
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

CAUTION

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

- Do not dispose of the battery in fire.
- Do not short circuit the battery.
- Do not disassemble or modify the battery.

This product bears the selection sorting symbol for Waste electrical and electronic equipment (WEEE). This symbol indicates that the waste of this product must be disposed of according to local laws and regulations