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SNAPTAIN

14"

SP600ON

GPS Drone with Gesture

USER MANUAL

Please read this manual carefully before using the product.

V1.0

ENGLISH

EN

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DISCLAIMER AND SAFETY GUIDELINES

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

Before flying, please make some practice with a simulator or seek for the instructions from a experienced.

1. DO NOT fly above or near obstacles, crowds, open water, public roads, high voltage power lines or trees.

2. DO NOT use the drone in severe weather conditions, such as a rainy, foggy, snowy, windy day, or in a place where more than 5 rainy, snow, fog, strong winds, tornadoes, and storms.

3. DO NOT fly the drone in the magnetic interference area, radio interference area, and government regulated no fly zones.

4. The low-training motors and propellers are a potential hazard to users and bystanders. Make sure the motors are in the low-speed mode before the drone is ready for flight or is operational. Fly with extreme caution.

5. 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.

6. The product is not a toy and is recommended for users under age 14.

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

8. CAUTION: Dispose of drone and batteries in accordance with local regulations. DO NOT mail or incinerate battery.

10. Be sure to observe all local regulations, obtain appropriate authorizations and licenses before flying. Please note it is solely your responsibility to comply with the flight regulations.

SNAPTAIN accepts no liability for damage, injury or any legal responsibility incurred by or related to 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

1. Thoroughly check the drone after a crash or a violent impact.
2. Do not use or disassemble damaged parts.
3. The product is not a toy and is not suitable for children.
4. Do not charge the battery next to inflammable materials, such as carpet, wood floors etc., or on surfaces that are electrically conductive. Do not leave the battery unattended while charging.
5. ONLY use the original USB cable provided, charging the charger once every 3 months.
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. Keep the class off your drone with a dry cloth to prevent any moisture from getting into the electronics.
9. Do not try to disassemble or repair the product yourself. Please contact SNAPTAIN for repairs help.
10. Please use the original battery provided. Use an incorrect type of battery may have the risk of explosion.
11. Do not dispose of the battery in fire or a hot oven, cut or mechanically crush the battery, as this may cause explosion.
12. Do not leave the battery in an extremely high temperature environment, such as in a car in the summer or near heaters or furnaces.
13. Do not expose the battery to the extremely low air pressure, as this may result in explosion or the leakage of flammable liquid or gas.

PRODUCT OVERVIEW

SP600N Drone

Remote

FLIGHT PREPARATION

1. Install the landing skids and propeller guards into the drone, then tighten the screws.

2. Charge the battery of the drone.

Notes:
- Please use the original battery and USB cable provided.
- Please charge the battery in a cool, dry and well-ventilated place.
- Do not leave the battery unattended while charging.
- It is not recommended that you charge the battery from the USB port of a PC.
- Right times may be reduced when flying in low temperature environments.

Remote Operation

1. Install the handle and antenna.

2. Install the Phone Clamp and mount your mobile device.

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

FLIGHT OPERATION GUIDE

IMPORTANT

Find one power on the drone first, then the remote in each flight. Do repeat the pairing procedure each time when the drone or remote is powered on.

For all flights beyond visual range, the operator and the drone must be aligned.

The recommended flying on the open air and within the control range.

Remote Operation Guide

Pair the Remote with the Drone

Step 1

Long press the **ON/OFF** button for 3s until the four **Battery Level Indicators** light up to turn on the drone. The front LEDs flash red and the Card Slot light up green after the drone is powered on. The drone is in the hover mode and the heads forward.

Tip:
Press the **ON/OFF** button to turn off the drone.

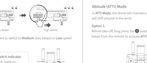
Step 2

Press the **ON/OFF** button down to turn on the remote, and you'll hear a beep from it.

Tip:
Press the **ON/OFF** button again to turn off the remote.

Step 3

Push the **Left Control Stick** forward to the top, then pull it backward to the bottom. Pairing is completed when you hear a long beep from the remote, the front LED of the drone turn solid red and the top LEDs come green.



Flight Calibration

1. Compass Calibration

Step 1

Long press the **Left Button** until you hear a beep from the remote to start compass calibration. The front LEDs of the drone flash red and yellow alternately.

Step 2

Hold the drone horizontally and make a full rotation at least twice around the center point. Then place the drone vertically and rotate it horizontal calibration. The front LEDs of the drone turn solid red.

Step 3

Hold the drone horizontally and make a full rotation at least twice around the center point. Then place the drone vertically and rotate it horizontal calibration. The front LEDs of the drone turn solid red.

2. Gyro Calibration

Place the drone on a flat surface after finishing compass calibration. Pull both control sticks to the left at 45° and leave a beep from the remote. Gyro calibration complete when the front LEDs turn solid red and the rear LEDs solid green.

GPS Satellites Searching

Due to the drone's search satellites, When you have a long beep from the remote and the drone's rear LEDs are flashing, the drone is in hard-enough satellites and is ready to take off in **GPS Mode**.

The drone is set in **GPS Mode** by default. In this mode, the drone utilizes GPS modules to scan for satellites and make a precise hovering flight.

Notes:
- **GPS Mode** works only when there is a strong GPS signal. Please fly in the open area.
- We strongly recommend this mode for beginners.

The rear LEDs remain solid green if the drone can't find enough satellites. Please go to a place to fly the drone if you want it to take off in **GPS Mode**.

GPS Mode unavailable

If you still want the drone to take off when **GPS Mode** is unavailable, you can switch it to **Altitude (ATTI) Mode** (refer to **Page 20**).

Connecting to Your Mobile Device

App Downloading and Installation

Download and install **Snaptain Mate** app on your mobile device from **Google Play** or **App Store**, or scan the following QR code to download.

Notes:
- Google Play™ is a trademark of Google Inc., and App Store™ is a trademark of Apple Inc.

App Launch

Step 1

Go to the WiFi settings of your mobile device and connect to the drone's WiFi: **SNAPTAIN-SP600N-xxxxxx**.

Step 2

Open **Snaptain Mate** and tap **Go** to enter the operation interface.

Notes:
- If you can't see the live map, please disconnect to the drone's WiFi, then turn on cellular data and location service on your mobile device to proceed the map. Next, turn off cellular data and connect to the drone's WiFi network. Now the live map will be displayed.
- The drone's WiFi network is a local network, it means that you can still the cellular data when connecting to the drone's WiFi. Otherwise, your mobile device may automatically switch to cellular data network when connecting to the drone's WiFi.
- If the WiFi **SNAPTAIN-SP600N-xxxxxx** is not listed in your WiFi or the days does not show the preview image, please restart the drone and follow the above pairing and connection procedures (refer to **Page 09-10**).
- Make sure the WiFi **SNAPTAIN-SP600N-xxxxxx** is only connected to **One** mobile device.

Flight Instructions

Take off

Option 1

Simultaneously move the **Left Control Stick** to lower left at 45° and the **Right Control Stick** to lower right at 45° until the four rotor blades start rotating, then press and hold **Left Control Stick** forward to take off.

Option 2

Simultaneously move the **Left Control Stick** to lower left at 45° and the **Right Control Stick** to lower right at 45° until the four rotor blades start rotating, then press **Left Control Stick** forward to take off.

Tip:
Simultaneously move the **Left Control Stick** to lower left at 45° and the **Right Control Stick** to lower right at 45° (**↖↗**) again to make the propellers stop rotating if you don't want the drone to take off after unlocking it.

Flight Directions

Left Control Stick

Right Control Stick

Photo/Video

Press the **⏺** button to take a photo.

Long press the **⏺** button to start recording a video. Press it again to stop record. Long press the **⏺** button to switch phone and remote camera.

Camera Tilt

Press **⏺** forward to tilt the camera upward, push it rightward to tilt the camera downward.

Speed Switch

The speed of the drone is set to **Low** speed by default.

Push **⏺** rightward to switch to **Medium** speed and there are two beeps from the remote.

Push it rightward again to switch to **High** speed and there are three beeps from the remote.

Drone **⏺** button is set to **Medium** (two beeps) or **Low** (one) speed.

Headless Mode

Press the **⏺** button to activate **Headless Mode**, and the **Headless Mode** indicator light up and there is a long beep.

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 **⏺** button to cancel the mode.

Altitude (ATTI) Mode

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

Option 1

Simultaneously, long press the **⏺** button for 3s until you hear two beeps from the remote to go into **ATTI Mode**.

Option 2

Simultaneously move the **Left Control Stick** to upper left at 45° and the **Right Control Stick** to upper right at 45° (**↖↗**) to enter the propellers stop rotating if you don't want the drone to take off after unlocking it.

Notes:
- **ATTI Mode** functions based on **GPS Mode**, including **RTH**, **Follow Me**, **Waypoints** and **POI**, use it for advanced.
- We recommend **ATTI Mode** only when the pilot has sufficient skills in operating the drone.

Return to Home (RTH)

The **Return to Home(RTH)** function brings the drone back to the last recorded **Home Point** where the drone took off last time. RTH works only when the GPS signal is strong enough and the compass functions normally.

Smart RTH

Press the **⏺** button on the remote to initiate **Smart RTH**.

• RTH Distance:

The distance between the drone and the last recorded **Home Point** where the drone took off.

1. Current Flight Altitude < Preset RTH Altitude

The drone will ascend to the preset RTH altitude, then fly back and land.

2. Current Flight Altitude ≥ Preset RTH Altitude

The drone will directly fly back at its current flight altitude and land.

Press the **⏺** button again to cancel RTH and regain control of the drone.

Notes:
- The RTH altitude is 5m by default. You can reset it in the **Settings** of **Snaptain Mate** App.
- During RTH, there are continuous beeps from the remote and the **RTH indicator** keeps flashing.

Failsafe RTH

Failsafe RTH can be activated automatically when the drone disconnects with the remote. The drone will fly back to the last recorded **Home Point** and land automatically if the GPS signal is strong.

The process of **Failsafe RTH** is the same as **Smart RTH**.

If the connection between the remote and the drone is re-established, the pilot can cancel RTH by pressing the **⏺** button and regain control of the drone. If the connection is performed, the RTH process will continue.

If the GPS signal is weak or there is no GPS signal when RTH is activated, the drone will slowly descend from the current altitude till landing.

Low Battery RTH

1. The **Low Battery RTH** will be triggered when the drone battery is low.

The drone will fly back to where RTH distance is 20m and hover, and RTH will be canceled automatically. The drone can't fly beyond 20m anymore no matter how the pilot operates.

Notes:
- The **Low Battery RTH** is set to be triggered again unless the battery is critical low.
- The **Critical Low Battery RTH** will be triggered when the drone battery is critical low. The drone will automatically fly back and land on the last recorded **Home Point**.

App Operation Guide

Function Overview of the App

- **Home**
- **Battery Level**
- **Signal**
- **Wi-Fi Signal**
- **Mode**
- **Flight Mode**
- **Return to Home (RTH)**
- **Low Battery Level**
- **Wi-Fi Signal Strength**
- **Mark and Track**
- **Follow Me**
- **Waypoints**
- **Gestures for Photo/Video**
- **Tracker**
- **Settings**
- **Take off/Landing**
- **Point of Interest**
- **Flight Attitude**
- **Left Joystick for Flight Speed**
- **Drone Battery Status**
- **Remote Battery Status**
- **Flight Mode**
- **Flight Altitude**
- **Flight Speed**
- **Flight Direction**
- **Camera Tilt**
- **Speed Switch**
- **Headless Mode**
- **Photo/Video Mode**
- **Take off/Landing**
- **Flight Direction**
- **Camera Tilt**
- **Speed Switch**
- **Headless Mode**
- **Flight Attitude**
- **Flight Speed**
- **Flight Direction**
- **Drone Battery Status**
- **Remote Battery Status**
- **Flight Mode**
- **Flight Altitude**
- **Flight Speed**
- **Flight Direction**

- **Media Gallery**
- Preview the photos and video saved.

- **GP Mode**
- Tap **⏺** to activate **GP mode** (default) or **GPS Mode**.

- **Flip Image**
- Tap **⏺** to flip the image 180°.

- **Flight Records**
- Tap **⏺** to view the flight records.

- **RTH Upload**
- Tap **⏺** to upload the RTH waypoints.

- **WI-Upload**
- Tap **⏺** to upload the WI-Upload waypoints.

- **Return to Home**
- Tap **⏺** to return to home.

- **Take off/Landing**
- Tap **⏺** to take off/land the drone.

- **Flight Attitude**
- Tap **⏺** to change the flight altitude.

- **Flight Speed**
- Tap **⏺** to change the flight speed.

- **Flight Direction**
- Tap **⏺** to change the flight direction.

- **Drone Battery Status**
- Tap **⏺** to view the drone battery status.

- **Remote Battery Status**
- Check the battery status of the remote.

Settings

Tap **⏺** to open the settings page.

- **Mark and Track**
- Tap **⏺** to enter **Mark and Track**.

Step 1

Tap on an object that is marked on the screen. The red frame will turn into green frame, then tap **⏺** to confirm.

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

Notes:
- Tracker function is safe and effective distance between the object and the drone when enabling the function.
- Please make sure the object to be tracked is moving in a two-dimensional, level or out-of-sight, and different distance from the drone.
- This function can be activated when the drone battery is low.

- **Follow Me**
- When **Follow Me** is enabled during the flight, the drone will fly follow your mobile device with a stable distance.

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

Notes:
- The function **Follow Me** may have deviation due to the GPS Signal. Please maintain a safe distance between you and the drone when enabling this function.
- Ensure the function only when there is no obstacle around you in case of unexpected accidents.
- This function can be activated when the battery of the drone is low.

- **Waypoints**
- Waypoints function allows you to define an insert flying mode on a map during the flight. Tap **⏺** to enter the interface of waypoints.

- **Option 1: Select Waypoints**
- Step 1
- Tap **⏺**, then tap some desired waypoints on the map. Tap **⏺** to finish.

Step 2

Tap **⏺** to upload waypoints.

Step 3

Tap **⏺** to start the pre-up window to start to fly following the selected waypoints.

Tap **⏺** to pause the pre-up window to start to fly following the selected waypoints.

Tap **⏺** again to cancel this mode and regain control of the drone.

Notes:
- This function can't be activated when the battery of the drone is low.

- **Option 2: Draw a Trajectory**
- Step 1
- Tap **⏺**, then tap **⏺** to draw a path on the map.

Step 2

Tap **⏺** to upload waypoints.

Step 3

Tap **⏺** to start the pre-up window to start to fly following the drawn waypoints.

Tap **⏺** to pause the pre-up window to start to fly following the drawn waypoints.

Tap **⏺** again to cancel this mode and regain control of the drone.

Notes:
- This function can't be activated when the battery of the drone is low.

- **Photo/Video**
- Tap **⏺** to take a photo.
- Tap **⏺** to switch to video mode. Tap **⏺** to start recording a video, then tap it again to stop and save the video to your memory card and mobile device.

TROUBLESHOOTING

Q1. The four LEDs of the drone keep flashing.

Ensure you've paired the drone with the remote.

Ensure the drone battery has enough power.

Q2. Fail to power on the remote.

Please charge the remote with USB cable.

Q3. The drone can't take off after I power on it outdoors.

Ensure the drone has found enough satellites (check if the rear LEDs are flashing green). If not, please wait for the drone to search satellites. Move to another place to fly the drone if the GPS signal is weak.

Q4. Why can't I connect to the drone's WiFi?

Ensure only **ONE** device is connecting to the drone's WiFi.

Q5. Why can't I see the map after launching the App?

Ensure you've enabled a map display on your mobile device.

The drone's WiFi has no internet access. Please disconnect to it and turn on cellular data to proceed the map, then turn off cellular data and connect to the drone's WiFi again.

Q6. The drone can't take off in GPS Mode.

The drone can't fly in **GPS Mode** by default. Please switch to **ATTI Mode** to take off. Or, go to a place where the satellite if you would like to fly the drone in **GPS Mode**.

Q7. The FOLLOW ME function doesn't work.

Ensure you've turned on the location service on your mobile device, and the drone is flying in **GPS Mode**.

Q8. How can I fly the drone back when I can't hold the hand or tail of the drone?

Ensure you've turned on **GPS Mode**, press the **⏺** button to trigger **RTH** function, then the drone will automatically fly back home.

Q9. How to cancel Failsafe RTH?

Press the **⏺** button to cancel **Failsafe RTH** when the remote receives the signal from the drone again.

Q10. Is it necessary to fly the drone back when the drone battery is low?

When the battery is low, please fly the drone within a distance of 20m. The drone will automatically fly back home when the battery is critical low.

SPECIFICATIONS

General		
Controllable Range		750 - 987 M/ft
USB Cable		
	For Drone Battery	For Remote
Input	5V ⎓ 2A	5V ⎓ 2A
Output	4.2V ±0.1V ⎓ 22A	5V ⎓ 2A
Rated Power	110W	10W

FCC Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. The 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.

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 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.

Caution:

The device operates in the band 5150-5250 MHz only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.

The maximum gain of antenna used for the device is as follows:

2.4GHz: 4dBi

5GHz: 4dBi

CE Warning:

(1) The device complies with EU/EC harmonised standards. Operation is subject to the following two conditions:

(2) This device is an open radio equipment, including interference that may cause undesired operation of the equipment.

(3) Hereby Snaptain declares that this equipment complies with the essential requirements and other relevant provisions of Directive 2014/53/EU.

UKCA Warning:

(1) The device complies with Radio Equipment Regulations 2017.

(2) Hereby Snaptain declares that this equipment complies with the essential requirements and other relevant provisions of Regulations 2017.

Manufacturer

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EC REP

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