Visit our YouTube Channel for How to Videos and More!

P70-GPS

GPS SHADOW DRONE

INSTRUCTION MANUAL

CONTENTS

INTRODUCTION 2
WARNING 3
MAINTENANCE 4
DRONE PARTS 4
REMOTE CONTROL 4
QUADROTOR LI-POLYMER 5
LITHIUM BATTERY CHARGING INSTRUCTIONS 5
PREPATATION FOR FLIGHT/GPS CALIBRATION 5-6
KEY FEATURES OF QUADCOPTER 6
INSUFFICIENT POWER 7
BE AWARE OF YOUR SURROUNDINGS 7
PRECISION HOLD 7
FOLLOW ME 7
HEADLESS MODE 7
PROMARK GPS APP 8
APP INTRODUCTION 8
VIRTUAL REALITY MODE 8
CAMERA CONFIGURATION 8
TAKING PICTURE & VIDEO-RECORDING 9
COMMON PROBLEMS AND SOLUTIONS 9
PARTS LIST 9

INTRODUCTION

Thank you for purchasing the P70-GPS Shadow Drone. Please read all instructions and warnings carefully before operating. Please also keep this instruction manual for future reference and maintenance.

IMPORTANT:

1. This product is not a toy. It is a precision device; integrating machinery and electronics with air mechanics and high frequency transmission. It requires correct assembly and debugging to avoid any accident. The user should operate and control this product in a safe manner. In case of incorrect operation, it may cause serious injury or damage property. It can also be lost due to incorrect operation.
2. This product is suitable for experienced UAV pilots no less than 14 years of age.
3. In the event of a problem during using, operating, or maintenance, please contact the local sales agent or retailer or keep in touch with the responsible staff of our company.

SAFETY PRECAUTIONS:

This R/C flying model can be dangerous when in use, please make sure you keep it far away from any persons or spectators when flying.Incorrect installation, poor conditions, or users not familiar with operation may cause damage to the aircraft or injure people or may cause an unexpected accident. Please pay close attention to flying safety and learn to recognize more dangerous conditions which may cause an accident due to your own negligence.

1. **Keep it far away from any structures or crowds.**
   This R/C aircraft may vary slightly in speed or sensitivity while flying and can cause potential danger. Therefore, please keep it far away from crowds, buildings, trees, structures, high-voltage wire, etc. Please also avoid flying in adverse weather conditions such as rain, electrical storms, and high winds to ensure safety of the user, any spectators, and surrounding property.
2. **Keep it away from any moist environment.**
   The inside of the aircraft is composed of many precision electronic and mechanical parts. Therefore, please try to avoid any moisture or water content from entering the main body of the aircraft as it may cause a breakdown of the mechanical and electronic parts and thus cause an accident.
3. **Only operate with included parts for intended use.**
   Please use the original parts made by Promark for any re-equipping or maintenance to ensure flying safety. Please operate and use only under the scope of the product function permitted. Using un-approved parts will void warranty.
   DO NOT use for any illegal purpose or use beyond the scope of which your local laws and regulations have stipulated.
4. **Avoid controlling it independently.**
   New users may have certain difficulties during the early stages of learning to operate this aircraft. Please try to avoid operating the aircraft alone. When available, always operate this aircraft under the guidance of a more experienced user.
5. **Do not operate under the influence of drugs or alcohol.**
   Please operate this R/C aircraft according to your own state and flying skill. Any fatigue, bad mental state, or incorrect operation may increase the probability of accidental risk.
6. **Please keep a safe distance from aircraft when using top speed.**
   When the operator is flying in high speed, please keep the aircraft far from the pilot and any surrounding persons or objects so as not to cause danger or damage.
7. **Store it in a cool, dry place.**
   The R/C aircraft is composed of material such as metal, fiber, plastic, electronics, etc. Therefore, please keep it away from any heat source and avoid prolonged exposure to direct sunlight. Excessive heat exposure can cause distortion and damage.

- 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.
- Please note that changes or modifications not expressly approved by the party responsible for compliance could void the use's authority to operate the equipment.

WARNING

1. There is important information contained in this package and instruction manual, please keep it for future reference.
2. You have the responsibility to make sure that this model of aircraft won't cause injury to others' body or cause any damage to property.
3. Please operate strictly as shown on the instruction manual when debugging or assembling this aircraft. During the process of flying or landing, please pay more attention to keep 1-2 meters between the user and the aircraft to avoid colliding to the head or face or body, which may cause injury.
4. Our company and distributors won't be responsible for any incorrect operation, which may cause loss or damage or injury to the body.
5. Children ages 14 and up should use this product under the guidance of an adult. This product is FORBIDDEN to be used by children under 14 years old.
6. Please correctly assemble and use this product as shown on the instruction manual or packing instruction. Some parts should be assembled by an adult.
7. Small parts are included with this product. Please place it beyond the reach of the children to avoid a CHOKING HAZARD or parts being mistakenly swallowed.
8. Playing on the road or near high traffic areas is strictly FORBIDDEN so as not to cause an accident.
9. Please dispose of the packing material timely so as not to cause injury to children.
10. Please DO NOT disassemble or re-equip the aircraft as it may cause a breakdown of the aircraft during flying.
11. Batteries in the battery compartment of the charger should be inserted into the designated power source which has the same logo as the product.
12. Built-in rechargeable 3.7V lithium polymer battery included in the transmitter.
13. Only the original charger made from our factory can be used.
14. Charger is not a toy.
15. When charging the battery, please conduct it under the surveillance of an adult. Please also keep it far away from any combustible object when charging. Please keep this aircraft within eyesight when charging.
16. Please DO NOT make it short-circuited or squeeze the battery so as not to cause an explosion.
17. DO NOT mix the Li-ion battery with a different type of battery.
18. Intelligent lithium battery is loaded in the Quad-rotor. Both built-in or external can be used for charging.
19. Please DO NOT make the battery short-circuited or decompose the battery or throw the battery into the fire; DO NOT place the batteries near the high temperature or heated area (such as near the fire or near the electric heating device).
20. Aircraft should be kept far away from any other electric compliance or equipment as far as possible or kept far away from the place where having the magnetic object nearby as they may cause interference with each other.
21. Please keep the safe distance from the high-speed rotating rotor so as not to cause twisted or danger of being wounded or being cut.
22. Engine will heat up. Please DO NOT touch it to avoid being burned or injured.
23. Please DO NOT close this product to your ear as it may cause injury to your hearing.
24. Mini USB 5V wall charger recommended for charging. DO NOT use any charger stronger than 5V.
25. To comply with the command of the magnetic environment requirement formulated by the Aviation Radio Bureau and the related authority, during the regulated period in certain areas, please stop using the transmitter of this model when such regulation command is issued.
26. Fly at or below 400 feet and stay away from surrounding obstacles.
27. Keep your UAS within sight.
28. Never fly over groups of people.
29. Never fly over stadiums or sports events.
30. Understand airspace restrictions and requirements.

⚠ WARNING:
CHOKING HAZARD -Small parts. Not for children under 3 years.

WARNING: CHARGE ONLY USING FACTORY USB CHARGING CABLE & UP TO 5V WALL PLUG

WARNING: CHARGING OF THE DRONE BATTERY MUST BE SUPERVISED AT ALL TIMES BY AN ADULT. UNPLUG THE BATTERY WHEN FULLY CHARGED. DO NOT OVER-CHARGE THE BATTERY.

FCC RF Radiation Exposure Statement Caution:
This Drone must be installed to provide a separation distance of at least 20 cm from all persons.

FAA REGISTRATION: PLEASE FOLLOW ALL FEDERAL, STATE AND LOCAL FAA LAWS. YOU MAY BE REQUIRED TO REGISTER YOURSELF AND YOUR DRONE WITH THE FAA. MORE INFO CAN BE FOUND AT: HTTPS://WWW.FAA.GOV/UAS/GETTING_STARTED/
After receiving the certificate of registration, you must mark your **unique FAA registration number** on the drone by any means, such as permanent marker, label, engraving. This number must be readily accessible and maintained in a condition that is readable and legible upon close visual inspection.
WARNING: Do **NOT** fly drone near airports or any other un-authorized areas.5 miles from airports.
Follow all rules for Federal Aviation Administration (FAA) regulation summary for Small Unmanned Aircraft Systems (sUAS).
Read: Academy of Model Aeronautics (AMA) Know Before You Fly Important information brochure.
WARNING: Product should only be used by adults and children 14 years and older.
Adult supervision required for children under 14 years of age.

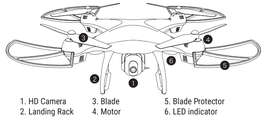
Tested according to international standards

MADE IN CHINA

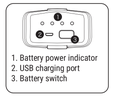
MAINTENANCE

1. Use a clean soft cloth to clean this product frequently.
2. Avoid heating or prolonged exposure to the sun.
3. Don't put the product in water. It will damage electronic parts.
4. Please check the plug and other accessories aregular intervals. If there is any damage, please stop using it immediately until it is repaired completely.

DRONE PARTS

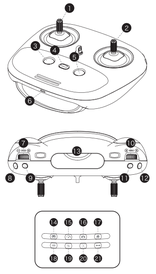


1. HD Camera
2. Landing Rack
3. Blade
4. Motor
5. Blade Protector
6. LED indicator



1. Battery power indicator
2. USB charging port
3. Battery switch

REMOTE CONTROL



1. Throttle joystick.
2. Direction joystick.
3. Press for one button RETURN HOME; press again to cancel Return Home.
4. ON / OFF.
5. One button take off with auto hover, one button landing
   Hold 3 secs for Emergency stop.
6. USB charging port.
7. Speed+/Speed-.
8. Click once,enter Follow-me mode; Click again, cancel the follow-me mode.
   Hold the button for 3 seconds, enter Trim mode. Click the button, cancel Trim mode.
   Note: No need to trim under the GPS mode.
9. Click once to toggle headless/normal mode. Hold the button for 3 seconds to turn off GPS mode.
10. Adjust the angle of camera: Spin button down: camera down. Spin button up: camera up.
11. Click the button to take photo.
12. Click the button to take video; Click the button again to cancel video mode.
13. Phone Holder.
14. Power
15. Speed
16. Video
17. Return Home
18. Charging
19. Headless Mode
20. Follow-me
21. Trim-See #8 above for access to trim mode

QUADROTOR LI-POLYMER

Press the battery shortly to switch on, hold for 2 seconds to switch it off.

LITHIUM BATTERY CHARGING INSTRUCTIONS

1. Balanced charging: If the power switch of the quad-copter is on the state ON/OFF, The Quad-copter can be charged. Insert the USB cable into the USB port of a computer, and then connect with the charging port of the drone. When charging, the indicator on the power switch will turn red; when fully charged, the indicator on the power switch is OFF.
2. Quad-copter can be charged by the mobile power or car-loaded power.
3. Full charging time takes about 6 hours, Flight time about 12 minutes.

CAUTIONS WHEN CHARGING:

1. When charging, please put this product in a dry ventilated area and keep it far away from heat sources or flammable products.
2. When charging, it is recommended to remove the batteries from the quadcopter. Charging process should be supervised by an adult so as not to cause an accident. The battery can also be charged while in the quadcopter.
3. After flying, please do not charge the battery if the surface temperature is still warm. If the battery has been used for a long time, or appears to be swollen, please replace them.
4. Please make sure that you use the original USB charging cable provided.
5. A battery when not in use for a long time will lose its charge automatically. Charging or discharging too often may reduce the life of the battery.

DISCLAIMER: You must use the original USB cable and standard 5V wall charger.
WARNING: Never charge with an input stronger than 5V. This can cause the battery to overheat.

PREPATATION FOR FLIGHT/GPS CALIBRATION

Please choose the spacious indoor or outside environment for flying, also it requires that it should be flied under the weather of non- snow or non-storm with wind force less than Level 4. When flying, please DO keep it far away from the crowd, tree, electric wire, skyscraper, airport or signal transmitting tower, etc.

1

Step 1: Turn on drone and set down on a *level surface**
– *The drone will auto-trim to this level surface.
– All lights blinking red

2

Step 2: Turn on remote
– Press Up, then Down on the left joystick
– Lights flashing blue (back) and white (front)
– NOTE: *You can connect to the WiFi at this time to view the current drone status on the Promark GPS App, or wait until after GPS is calibrated.

GPS CALIBRATION (CONTINUED)

3

Step 3: Reset to Factory Setting / Calibrate Gyroscope
– Press the joysticks into the 11 & 1 clocks positions
– Lights rapid-blinking blue (back) and white (front)
– App Drone Status: 'Gyroscope is being calibrated', 'Gyroscope okay'

4

Step 4: Initiate GPS Compass Calibration
– Lights rapid-alternate between inverted (back) and whitered (front)
– App Drone Status: 'Compass calibration'

5

Step 5: GPS Compass Calibration Part 1
– Keeping the drone level, pick up the drone from the back and rotate your body in one full circle (360°)
– Back lights will turn to a solid blue

6

Step 6: GPS Compass Calibration Part 2
– From the bottom, hold the drone face-down and rotate the your body in one full circle (360°)
– Front lights will turn to a solid white
– App Drone Status: 'Compass calibration okay'

7

Step 7: Finalize GPS Calibration
– Set drone back down to level surface.
– Lights return to rapid-blinking blue (back) and white (front) — This means the drone is finalizing its GPS Calibration.
– *This process can take a few minutes.
– App Drone Status: 'Waiting for GPS signal'

Once the lights have switched to all solid, you are ready to fly!
– Blue (back) and white (front) lights are a solid (no blinking)
– App Drone Status: 'Ready to fly'

KEY FEATURES OF QUADCOPTER

1. Intelligent Tracing
2. Wifi 6-Axis Gyro
3. Wifi Headless Mode
4. Wifi blade protector
5. Wifi 2.4GHz Radio Control Technology
6. Wifi cooling flashing lights
7. Easily to replace the battery
8. Take photos and video by the transmitter

- Control Distance: Up to 1,640' (500 meters)
- Video transmission distance: Up to 492' (150 meters)
- Quadcopter battery: 2.4V 2,500mAh Lithium-ion
- Remote Battery: 3.7V 300mAh Lithium-ion

INSUFFICIENT POWER

CAUTION:

1. When there is insufficient power, the Quadcopter will start Auto-Return. When safe return is confirmed, please DO NOT operate the transmitter any more. If it is not safe, you can push the throttle lever to raise the flying height and control the Quadcopter , people or animal after losing power.
2. Please make sure the Quadcopter can return and make landing in order to prevent the Quadcopter from causing danger to stewing direction of the Quadcopter , so as to fly in the appropriate area for landing.

BE AWARE OF YOUR SURROUNDINGS

1. Please avoid the following objects on the track of the Quadcopter for example, the people, animal, tiny things (such as the branch or electric wire etc.) or the transparent object (such as the glass or water).
2. Pay more attention to the surrounding object of the Quadcopter (especially the backward or the left or right direction) and avoid any accident (such as colliding accident) through manual operation.
3. Be ready any time on manual control the Quadcopter or click the 'STOP' on the screen in case or any Emergency Condition.
4. When initiating the Return Home or Follow Me functions, surrounding the Quadcopter. Be aware of your surroundings.*

•WARNING: This drone is NOT equipped with obstacleavoidance.

PRECISION HOLD

After syncing your quadcopter, press the One-Key Take-off button. The Quadcopter will lift off and stay steadily at the current height. Push the throttle lever up and down, to increase or decrease the height accordingly. Release the throttle to set the new drone height.

FOLLOW ME

When the Follow Me function is enabled, the drone will sync to the GPS in your smartphone to follow you wherever you go (smartphone and Promark GPS app required, not included).*

To enable Follow Me mode:

1. Set drone to desired height and position. Note: make sure camera is pointed in desired direction and angle.
2. Wait for the Promark GPS app drone status to read 'Follow Me ready'. – the drone will now follow the phones coordinates.
3. Click the 'Follow Me' button on the remote control or app interface.
4. To disable Follow Me mode, simply click the 'Follow Me' button on the remote control or app interface.

Common problems:

1. *'Drone signal too weak'. This means that phone's GPS signal is too weak to connect to the drone. This could be due to the signal bars from surrounding buildings, trees, or connection from too many mobile phones in the area.
2. *use in open area and be mindful of your surroundings. Drone is NOT equipped with obstacleavoidance. Promark is not responsible for damage to persons or property due to operator error, or when drone is in Follow Me mode.

HEADLESS MODE

Please put the quadcopter in a forward-facing position. After syncing, and before take-off, press the headless mode button on the remote control to enter Headless Mode. Press it once again to exit Headless Mode.

PROMARK GPS APP

SCAN
to download and install Android systems software

SCAN
to download and install Apple iOS system software

Download the upgraded Promark GPS drone app to save pictures, videos and stream live video from your Promark P70-GPS Shadow Drone directly to your smartphone. The app works as a 3D FPV (First Person View), but can also connect the video feed to your Promark VR goggles (included).

The Promark GPS app has been upgraded with live positioning and status updates. These updates display the drone's real-time status during GPS syncing, position in-flight, and other operating functions including battery level, acting as a secondary remote control, the app enables users to control Auto Takeoff and Landing, GPS Return home, and GPS Follow Me, which syncs the drone to your smartphone's GPS making it to follow your device or as your travel.

INSTRUCTIONS: Making sure that your remote and drone batteries are fully charged, plug in the drone battery and turn on the drone. Enter the drone flight-up, go to your smartphone and access your Wifi settings, and search for the 'PROMARK-XXXXX' Wifi signal. Once connected, exit your settings and open the Promark GPS app and click 'QUICK START', to begin your GPS pairing procedure and begin flying your Promark GPS Shadow Drone!

APP INTRODUCTION

VIRTUAL REALITY MODE

The Promark GPS app is equipped with a Virtual Reality mode. When initialed, the app will convert the video into a split screen. Close the screen a split, place your smartphone into the Promark VR goggles (included), and center the screen. Close the front cover and focus the picture by adjust the width and depth toggles on the top of the goggle. You are now ready to enjoy the full-immersive VR experience.

CAMERA CONFIGURATION

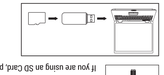
Insert the optional SD card (not included) into the webcam module's card channel which is on the bottom of the quad-copter, connect the quad-copter's power, sync quadcopter and remote control. The webcam indicator light on the webcam module will constantly stay on, and the camera is ready for photos and videos (SD Card available separately)

PARTS LIST (included)

COMMON PROBLEMS AND SOLUTIONS

THE PROBLEM	REASON	COUNTERMEASURES
Drone lights flashing and no response from the drone when operating.	1. Remote is not synced or out of range. 2. Insufficient battery power	1. Refer to the Quick Start guide and re-sync drone. 2. Recharge the battery
The blades spin, but the drone cannot takeoff.	1. Insufficient battery power 2. The blades distorted	1. Recharge the battery 2. Replace the blades
The quadcopter shakes heavily.	The blades distorted.	Replace the blades
Drone cannot stay balanced in flight.	1. The blades distorted 2. The motor doesn't work properly.	1. Replace the blades 2. Replace the motor
Drone is unstable after crashing.	Three-axis acceleration sensor loses it's balance after crashing	Restart and re-calibrate the drone.

PICTURE & VIDEO-RECORDING



When you press the power button on the remote control, the red light will flash once, that means the quad-copter is taking photo. When you press the video button, the red light turns into constant on, that means the quad-copter is taking video. Press the video button again to stop video.

NOTE: When using the Promark GPS app, photos and videos will automatically be saved directly to your smartphone. If you are using an SD card, photos and videos will automatically be saved directly to the card.