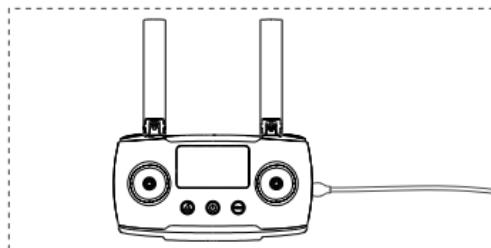


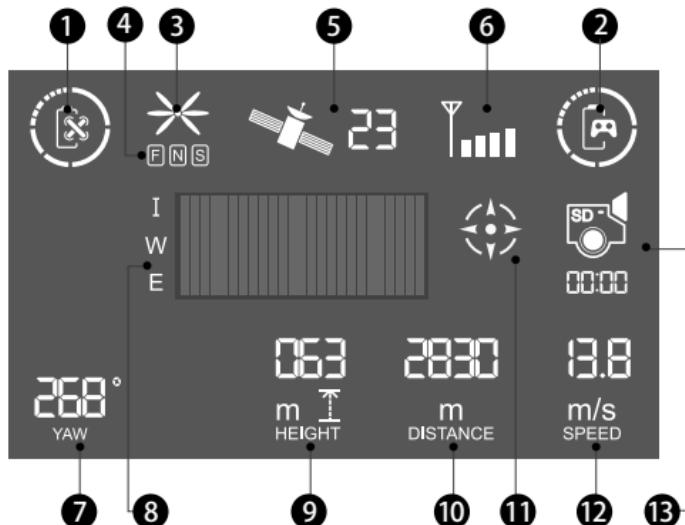
2.3 Charging The Transmitter Battery

The remote is charged using the Micro USB cable as shown:



The remote control charging time is about 2.5 hours. The remote control battery indicator light flashes during charging. When charging is complete, the LEDs will stay on solid.

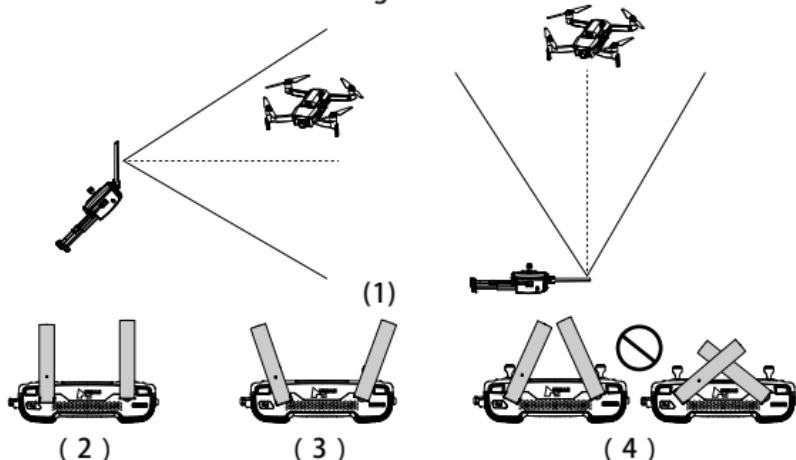
2.4 Remote Control Diagram



- 1 Aircraft Battery level
- 2 RC Battery level
- 3 Propellers Status
- 4 Aircraft Mode
- 5 Aircraft GPS Satellite
- 6 Aircraft Signals
- 7 Heading Angle

- 8 Character Area
- 9 Flight Height
- 10 Flight Distance
- 11 Compass Calibration
- 12 Aircraft speed
- 13 Photo / Video

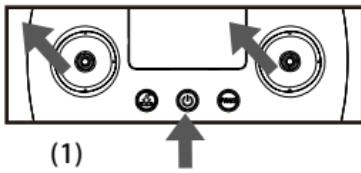
2.5 Remote Control Antenna Angle



- (1) Adjust the angle of the remote control antenna and let it face the flight direction of the aircraft as much as possible.
- (2) Long-distance state, the distance between the two antennas is properly tightened to maintain the antenna directivity.
- (3) Closer State, the two antennas are properly separated to maintain a wide receiving range.
- (4) Do Not Form an occlusion or cross between the antennas.

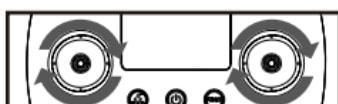
2.6 Transmitter Sticks & Thumbwheel Calibration

Enter Calibration:(Picture 1) Push and hold both sticks to the upper left corner as shown in picture below, and power on the transmitter, the transmitter will enter calibration state and start Beeping; release the power button in calibration.

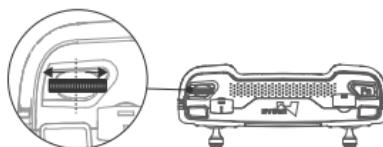


Exit: (Picture 2) Rotate both sticks in circles to their maximum travel for three times, and release the sticks;

(Picture 3) Next, move the thumbwheel back and forth to the maximum range on both sides three times, and finally release the thumbwheel to return to the center. Long press and hold any button except the power button until the remote control stops beeping and the screen lights on. Calibration is completed, and the remote control automatically exits calibration mode.



(2)



(3)

3 Flight

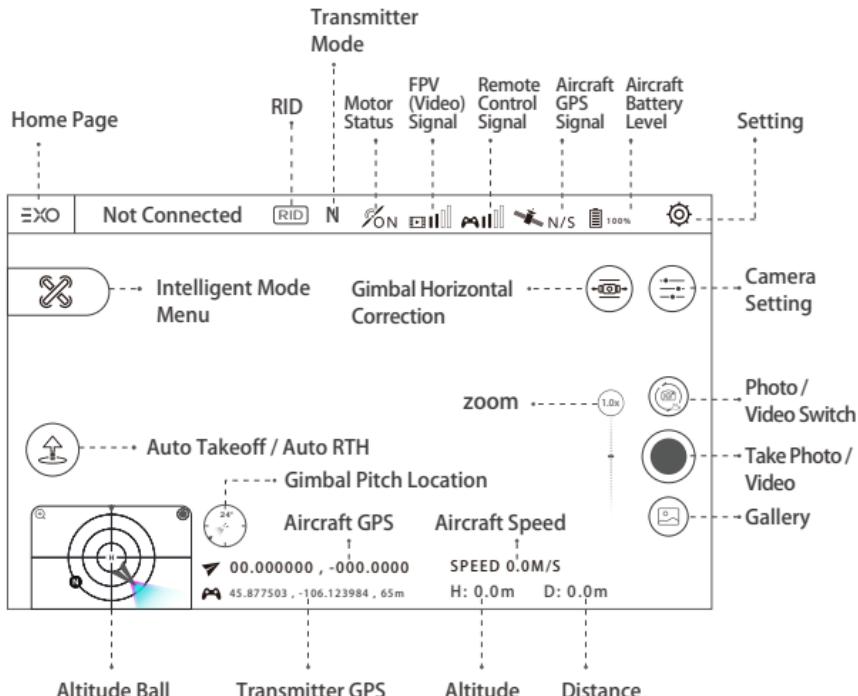
3.1 Download the EXO Pro App

Before flying, download and install the EXO Pro app. You can download the app for free by searching in the App Store (IOS) Or Google Play store.



EXO Pro

3.2 EXO Pro app flight control interface



(Note: You need to turn on the "longitude and latitude coordinates" switch in the settings and then can get the aircraft GPS coordinates and the transmitter GPS coordinates.)

3.3 Pairing The Aircraft

- (1) Run the EXO Pro app, and select the aircraft model.
- (2) Short press, the aircraft power button, then press and hold for a few seconds to turn it on.
- (3) Short press the transmitter power button, then press and hold for a few seconds to turn it on, connect the transmitter to your mobile device with the RC cable.



- (4) Start binding (This step is only required when first binding or replacing the transmitter, you need to do it manually.)

1. Long press the aircraft bind button to enter the binding mode.
2. Press and hold the FN+ Video button combination to enter the binding mode, put the aircraft close to the remote control to complete the bind.

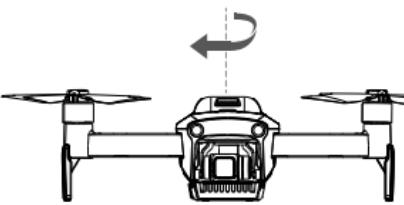
Tips:

- The binding process has been completed in the factory. The aircraft can take off directly.
- After entering binding mode, the image transmission indicator (green) flash rapidly and become solid (green) after binding is successful.
- Please keep the remote controller at least 1 meter away from drone during binding process.
- The aircraft is unable to activate the binding during flight.

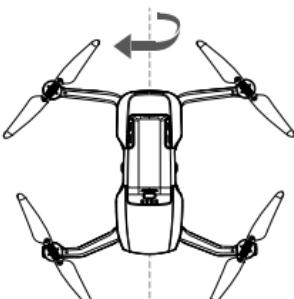
3.4 Compass Calibration

When using the drone for the very first time, the compass calibration message will pop up before takeoff. Follow the instructions on your screen, rotate the drone horizontally, then point the drone nose to ground and rotate it clockwise. The compass calibration message will disappear once it is completed. You must complete the compass calibration before flying the aircraft for the first time.

The compass is susceptible to interference from other electronic devices, resulting in abnormal flight data. Regular calibration helps to keep the compass and its readings accurate. select "Compass Calibration" under the app setting interface.



Compass 1

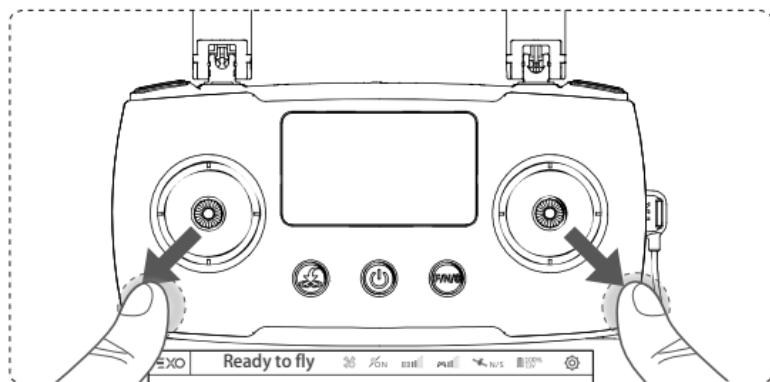


Compass 2

3.5 Starting/Stopping the Motors

Motor starting condition

- (1) The aircraft, remote control, and mobile phone have been connected successfully ;
- (2) The aircraft compass has been calibrated (The Exo Pro app doesn't prompt to calibrate the compass) ;
- (3) The aircraft must be placed on a horizontally leveled ground ;
- (4) Aircraft has not locked sufficient GPS satellites for positioning. please don't force take-off ;
- (5) The power of the drone should be $\geq 15\%$;



Starting the Motors

Push both sticks down and outwards as shown in picture to start the motors. Once the motors start spinning, Release both sticks.

Stopping the Motors

When the motors are running, Push both stick down and outwards again to stop the motors. Release both sticks once motors stop.

Forced Motor Stop

When flying in the air, the motors can be forced to stop in 2 seconds with outer eight bar. Use this function with caution, as it can cause the aircraft to fall and may endanger personal safety.

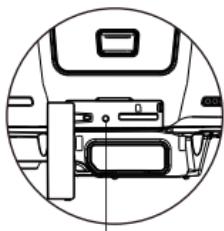
4 Aircraft Functions

4.1 Flight Control Mode

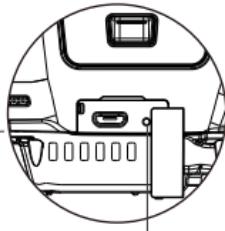
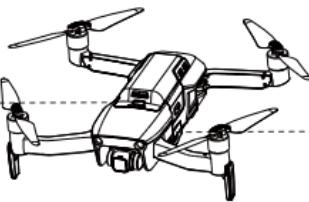
Flight Control Mode (The flight controller monitors the GPS signals and switches to the corresponding flight modes)	
GPS Mode	Use GPS and downward vision positioning system to achieve precise hovering, stable flight, intelligent flight mode, etc. The vision system works in a well-lit environment .
Optical flow mode	This mode works indoors only if the altitude is less than 4 meters. more than 4 meters altitude requires the GPS mode and Attitude mode. In optical flow mode, the maximum flying speed of the aircraft is 2m/s.
Attitude mode	The aircraft automatically changes to Attitude (ATT) mode when the Vision System are unavailable or disabled and when the GPS signal is weak or the compass experiences interference. It only supports manual flight, and prohibits smart flight modes. In Attitude mode ,the aircraft won' t hold position itself, Fly with caution (this mode is only for experienced Drone pilots)

Flight Speed	
Movie Mode	Maximum speed 3m/s
Normal Mode	Maximum speed is 8m/s, adjustable in app settings from 10% -100%
Sport Mode	The maximum speed is 16m/s, the sport mode is only available in the GPS mode.

4.2 Aircraft Indicator



FPV indicator(right of aircraft)



The image indicator(left of aircraft)

Video Indicator (red)	
Camera Error	Red LED flashes slowly (1 time/second)
FPV Board Error	Red LED off
Working	Red LED solid
Upgrading	Red LED flashes quickly (5 times/2 seconds)

Image Indicator (green)	
Working (Date link normal)	Green LED solid
Booting	Green LED off
Boot and complete	Green LED flash quick and slow
Error (System is backing up)	Green LED flashes slowly
Binding mode	Green LED flashes quickly
Disconnected	Green LED flashes quick and slow
Upgrading	The green light flashes quickly and then flashes slowly (when transmitting files) Flash (slow flash when writing flash)

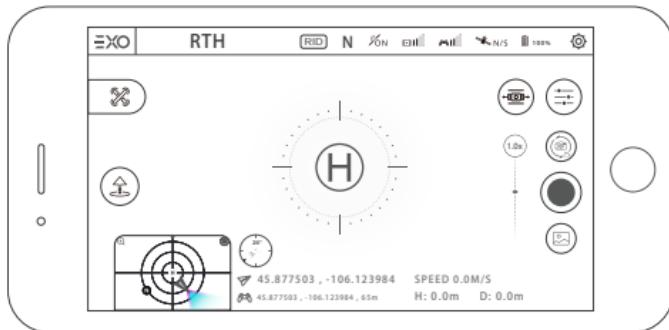
4.3 Return-to-home(RTH)

There are three types of RTH: One-key RTH, Low Battery RTH, and Failsafe RTH. When taking off, and GPS has locked more than 6 satellites, the aircraft will mark take off point as home point. If there is no GPS signal and drone is forced to take-off, Whenever GPS locks more than 6 satellites, it will record that point as home position.

RTH-Process
1. Record "Home Point" 2. Trigger return to home conditions 3. Adjust the direction of the head 4. Climb to the return altitude set in the Exo Pro app (1) Regardless of the current height of the aircraft, if the aircraft is within 5 meters of the horizontal distance from home point, it will land; (2) When the return distance is 5-20m, the aircraft will adjust the direction of the nose towards the return point. If the current altitude is lower than 5m, it will rise to 5m, otherwise it will return at the current altitude. ; (3) When the return distance is more than 20m, the aircraft adjusts the direction of the nose towards the return point, and rises to the set altitude before returning home. 5. Search for the drone apron during the landing process (This feature must be turned on in app before taking off and or landing)
One-key RTH
APP one-Key RTH / remote control one-Key RTH
Low Battery RTH
1. The aircraft will automatically Return to home according to its own power calculations and the distance from the Home Point. 2. Aircraft will land automatically at the same point upon low battery RTH activation, If there is no GPS signal or weak GPS signals 3. When taking off, if it is forced take off with weak GPS signals or GPS signals are not good, the aircraft will automatically return to the place where it achieved, good GPS signal for the first time. 4. When the aircraft battery power percentage is lower than 10%, the aircraft will start landing automatically if there is no joysticks operation. We can cancel it by using the operate the transmitter joystick, and let the aircraft land slowly or climb again. 5. If the battery level is lower than 1%, the aircraft will forced to landing, which cannot be manually canceled or forced to climb again.
Failsafe RTH
When the aircraft loses connection with the remote control for more than 5 seconds, the aircraft automatically returns or land directly. Performance requirements: (1) After the aircraft loses control for 5 seconds, it triggers automatic return; (2) If the drone reconnects, it will continue to perform the returning procedure when Failsafe RTH mode is activated; (3) Landing directly when there is no GPS signal or the signal is not strong.

4.4 Landing Apron Search

When the aircraft is landing or returned to a height of about 10 meters from the ground, it will automatically enter the search for the drone apron function.



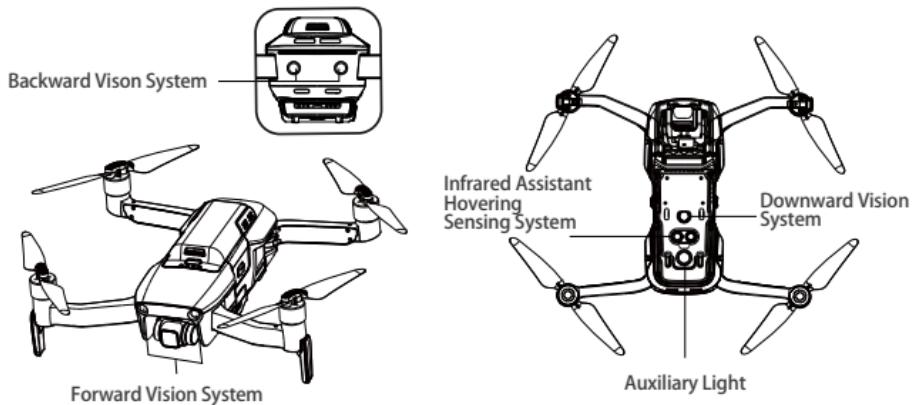
- (1) The gimbal camera points downward to optically search for the drone apron [H],
Apron requirements: 1 Sharp contrast, 2 white "H" lettering, 3 Apron without obstruction.
- (2) Once drone locks the apron visually it will descend smoothly on apron. When landing to a height of less than 3 meters, the aircraft camera will switch to forward view and no longer adjust the position of the aircraft. From this altitude aircraft will land quick. If an error is identified or other unexpected circumstances occur, press the stop button to exit the function.
- (3) If aircraft can't find the apron or battery is critically low, the aircraft will land directly.
- (4) The search for the drone apron function cannot be performed if video is being recorded.
- (5) If you do not need to use this feature, please turn it off in the app.

4.5 Vision Systems and Infrared Sensing Systems.

BLACKHAWK 3 PRO is equipped with Forward, Backward, and Downward Infrared Sensing Systems, providing omnidirectional obstacle sensing. The main components of the Forward, Backward, and Downward Vision Systems are two cameras located on the nose, rear side, and the underside of the aircraft. Lateral Vision Systems are two cameras located on either side of the aircraft.

The main components of the Upward and Downward Infrared Sensing Systems are two infrared modules located on the upper and underside of the aircraft. The Downward Vision System and Infrared Sensing System helps the aircraft maintain its current position and hover in place more precisely.

The Auxiliary Bottom Light located on the underside of the BLACKHAWK 3 PRO aircraft improves visibility for the Downward Vision System in weak light conditions.



Detection Range

Forward

Accurate ranging range: 0.5m - 12m; horizontal 62° , vertical 48 °

Backward

Accurate ranging range: 0.5m - 9m; horizontal 62 ° , vertical 48 °

Downward

Accurate Hover Range: 0.5m - 5m, Vision Hover Range: 0.5m - 5m

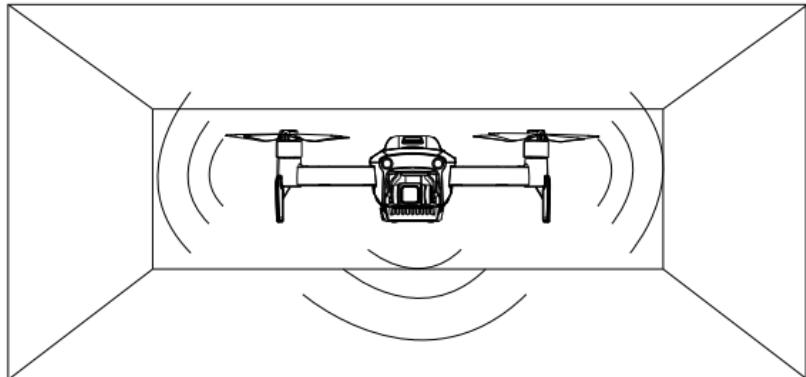
Visual Calibration

The vision system has been calibrated before the drone leave the factory and can work normally.

When the EXO Pro app prompts the user that advanced calibration is required, pls connect the aircraft to the computer and use the EXO Visual Calibration Assistant visual calibration software, complete the calibration by referring to the visual calibration tutorial. For calibration software please visit the official website on EXO Drones. www.exodrones.com - Service Support - Download Center to download and install.

Using the Vision Systems

The Downward Vision System is typically used in indoor environments where GNSS is weak or unavailable. The Downward Vision System works best when the aircraft is at altitudes of 0.5-5m, which is automatically switched on in normal or film mode.



Forward and Backward Vision Systems manually switched on in normal or film mode (Choose to avoid obstacles or actively brake on the EXO Pro app). Using the Forward and Backward Vision Systems, the aircraft can actively brake when detecting obstacles in front. The Forward and Backward Vision Systems work best with adequate lighting and clearly marked or textured obstacles.

⚠ Vision Systems and Infrared Sensing System have limited ability to sense and avoid obstacles, and the performance may be affected by the surrounding environment. Be sure to maintain line of sight with the aircraft and pay attention to prompts in EXO Pro app takes no responsibility for any aircraft that is damaged or lost while using Vision Systems.

Without GNSS, the maximum hovering height of the aircraft is 5m when using the vision system in an open and flat field. The Vision System is only effective when the aircraft is at an altitude of 0.5 to 50meters. Please note that the Vision Positioning function may be affected if the aircraft's altitude is above the limit.

In the EXO Pro app you can set the Auxiliary Light (on, off or automatic). If Auto is selected, the Auxiliary Light is automatically enabled when the environment light is too weak. Please note that the Vision System cameras performance may be affected when the auxiliary bottom light is enabled. Fly with caution if the CNSS signal is weak.

⚠ The Vision System may not function properly when the aircraft is flying over water or snow-covered areas. Therefore, when the landing function is triggered, the aircraft may not be able to actively avoid the water below. It is recommended that the user maintains full control of the flight and makes reasonable judgements based on the surroundings, without over-reliance on the visual system.

The Vision System cannot work properly over surfaces that DO NOT have clear pattern variations, environments with insufficient or excessive light intensity. Operate the aircraft cautiously when in any of the following situations:

1. Flying over monochrome surfaces (e.g., pure black, pure white, pure blue, pure red)
2. Flying over highly reflective surfaces. (e.g., water surfaces, ice surfaces, glass curtain walls, smooth surfaces, etc.);
3. Flying over transparent surfaces. (e.g., transparent glass etc.);
4. Flying in an area where the lighting changes frequently or drastically. (e.g., backlighting, etc.);
5. Flying over extremely dark or bright surfaces;
6. Flying over surfaces that strongly reflect or absorb infrared waves (e.g., mirrors);
7. Flying over moving surfaces or objects. (e.g., above the flow of people, above the grass blown by the wind, etc.);
8. Flying over surfaces without clear patterns or texture;
9. Flying over surfaces with repeating identical patterns or textures (e.g., tiles with the same design);
10. Flying over obstacles with small surface areas;
11. The safe working temperature of the visual system is 0-50 degrees, or it will influence the stability of Vision System, Please use the Vision Assistance System within the safe temperature.

Keep the sensors clean at all times. Do not obstruct the Infrared Sensing System.

If the aircraft experiences a collision, camera calibration is required.

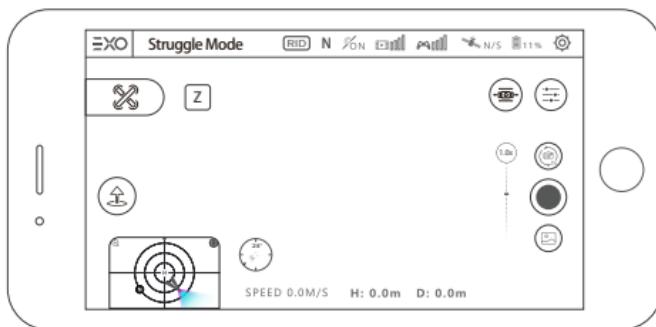
Do not fly on days that are rainy, smoggy, or if there is no clear sight. (less than 100 lux).

Check the following every time before takeoff:

- a. Ensure there are no stickers or any other obstructions over the glass of the Infrared Sensing and Vision System.
- b. If there is any dirt, dust, or water on the glass of the Infrared Sensing and Vision System, clean it with a soft cloth. Do not use any cleaner that contains alcohol.
- c. Contact EXO Support if there is any damage to the glass of the Infrared Sensing and Vision System.

Do not obstruct the Infrared Sensing System.

4.6 Power Struggle Mode



When the aircraft battery power drops to 11% during the flight, the "Z" icon will pop up in the upper left corner of flight control interface on the EXO Pro app . Click it will open the Power Struggle Mode.

When the struggling mode turns on, the aircraft will limit the battery power output so that the aircraft flight distance can be optimized; the aircraft will reduce the power consumption of its own non-power parts to ensure that the battery power is all used for flight power as much as possible , in that case the stability of the gimbal, image and image transmission may be affected.

When in struggling mode, the aircraft will not automatically enter the low-power slow landing mode when the battery power is lower than 10%, and will not trigger a low-power forced landing when the battery power is lower than 1%. The system will allow the aircraft to completely drain the battery power.

The behavior of draining the lithium battery in the struggling mode will cause irreversible damage to the battery. This behavior will be automatically recorded by the system. There are only five times opportunities to use the struggling mode for each aircraft. Please use this function with caution.

If the battery is damaged due to use Struggling mode, EXO Drones reserves the right to refuse free battery after-sales service.

The original intention of this function is that when the drone flies too far away, the drone cannot return smoothly due to strong winds or other emergencies, and when the flight environment at that time does not have the conditions for forced landing, try best to allow you to let the drone fly to a safe place before the battery power runs out, and make a final effort

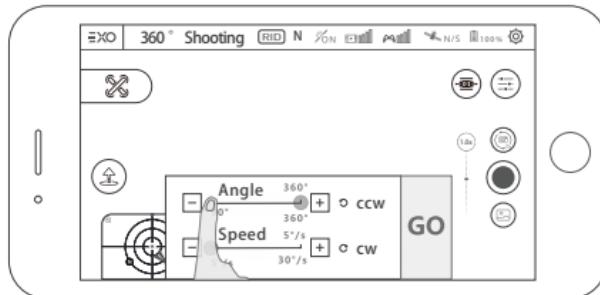
to save the drone. After turning on the struggling mode, the drone is expected to fly 3-4 minutes longer than normal flight (the duration is for reference, the actual duration may vary depending on the flight environment and aircraft status), when the battery power is lower than 1%, the battery's continuous discharge capacity will have great uncertainty. The power data provided is only for reference, and the aircraft may be completely exhausted at any time.

4.7 Smart Mode

4.7.1 Creative Video

360° Shooting :

- (1) Select the direction of rotation (clockwise / counterclockwise);
- (2) Set the rotation angle, the range of rotation angle (90° -360°, accuracy 1°);
- (3) Set the rotation speed (1-30° / sec, accuracy 1);
- (4) Click GO, the aircraft rotates in place hovering at its position, shooting a video during the rotation;
- (5) You can click the exit button any time to exit the mode and save the video.

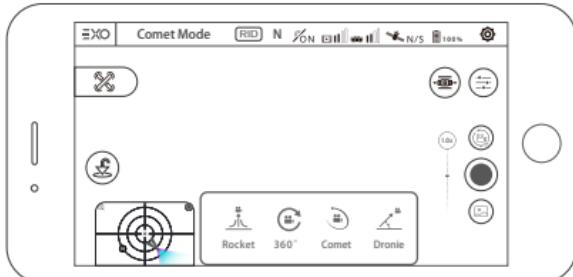


Comet Mode :

After selecting the center point on the app, the aircraft will automatically fly along the eclipse track and record video. Please only use it in an open area.

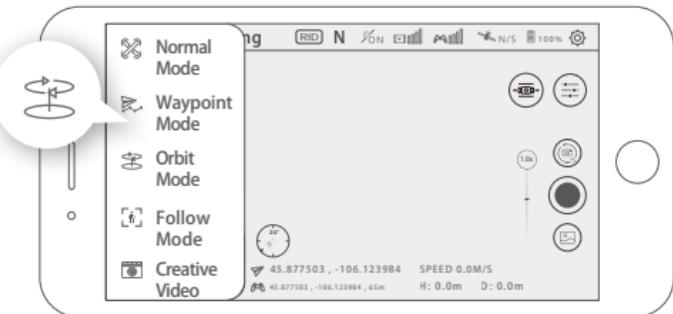
APP operation:

- (1) Select the target, the aircraft camera is always aimed at the selected target when shooting
- (2) Select the flying direction (clockwise/counterclockwise)
- (3) Click GO, the aircraft starts recording the video and performs eclipse flight move.



4.7.2 Orbiting

Tap on "Mode Selection" then "Orbit Mode" to set the current location or the position of the mobile device as the center. During Orbit mode, you can adjust the speed and direction by moving the control stick left and right and adjust the orbit radius by moving the control stick forward and backward.



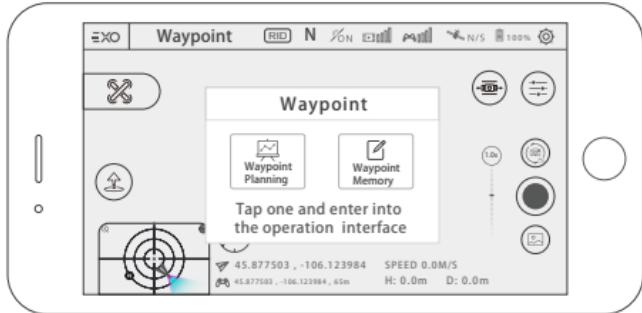
4.7.3 Waypoint

The aircraft will fly along the set flight path drawn on-screen or saved ,you can adjust the speed of the aircraft during flight .

Waypoint Planning: You can preset the waypoint parameters such as the number of waypoints, the altitude of each waypoints and other parameters. The aircraft will follow the preset parameters after you activate waypoint mode. You can control the flying speed during flight or you can pause or resume the Waypoint mode.

Waypoint Memory: After entering the mode, fly the aircraft and tap on "Memorize Waypoints" on the Exo Pro app and the aircraft will mark the location. After memorizing all the waypoints, upload and execute, aircraft will fly according to recorded waypoints.

If the aircraft is not in the starting position, the aircraft will fly to the starting waypoint position before starting this function.



4.7.4 Line Fly Mode

Tap on "Mode Selection" then "Line Fly Mode". Set the angle, distance and speed of the aircraft.

Performance requirements:

1. Set the angle (0 ~ 360°, accuracy 1°);

Set the distance (10-6000 meters, accuracy 1 meter);

Set the speed (1-8 m / s, accuracy 0.1);

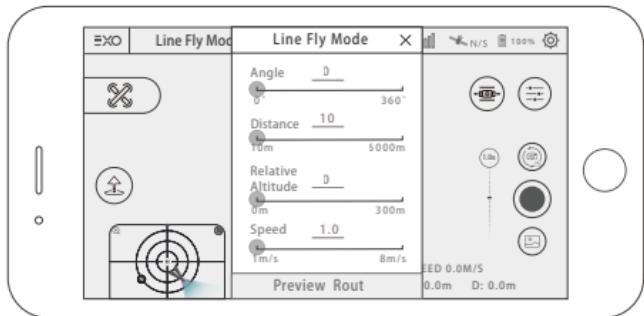
2. Once setup is complete, the aircraft will execute Line Fly mode.

During the flight, pilots can take photos or videos manually, or pause / resume / stop the flight at any time.

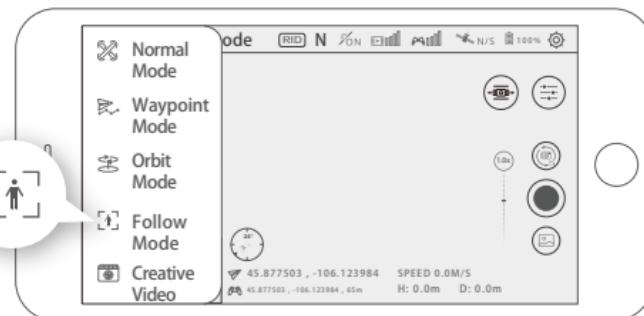
During the flight, you can control the altitude only.

3. You can pause/resume/stop the flight at any time.

4. When the aircraft is low on battery or lost connection from radio, aircraft will always return to home.



4.7.5 Follow Mode



Active Tracking 3.0

EXO Pro Active Tracking 3.0 includes Spotlight, Active Tracking, Circle Tracking.

Spotlight: The aircraft remains in the current position, and only adjusts the heading and gimbal camera to lock the target in the middle of the screen. Use the stick to control the movement of the aircraft: the roll stick controls the aircraft to rotate around the target, the pitch stick controls the aircraft to approach or move away from the target, the throttle stick controls the aircraft height, and the yaw stick controls the composition.

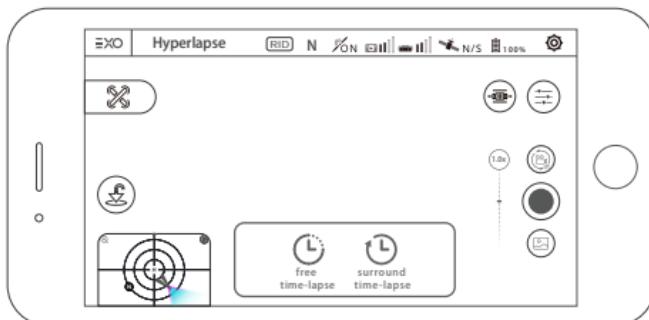
Tracking Mode

Under tracking mode the aircraft keeps the relative distance between itself and the target, and moving with the target synchronously. The maximum flight speed is 8m/s.

Circle Tracking: The aircraft flies around the target with a set radius and speed and supports static and dynamic targets (dynamic targets refer to people, vehicles, and ships, and the speed should not be too large, and the following height will not change with the dynamic target). The maximum circle speed is 5m/s, and there is no obstacle avoidance function.

4.7.6 Hyperlapse

When you choose Hyperlapse Mode you can choose Free and Circle.



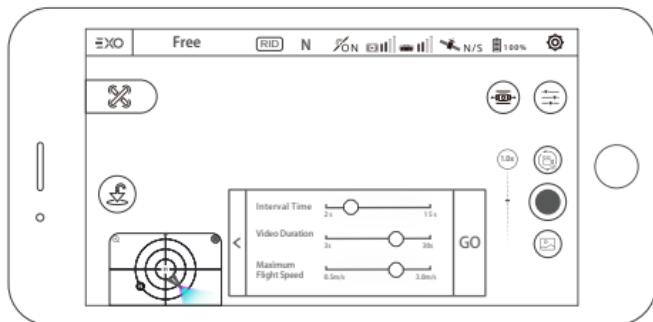
Free

The aircraft will take a certain number of photos and compose time-lapse videos automatically according to the parameters set. During the process of shooting, the user can control the flight of the aircraft freely.

(1) choose free;

(2) set the shutter interval, the video length, and the maximum flight speed;

(3) after done, please click 'GO' and start shooting.



Circle

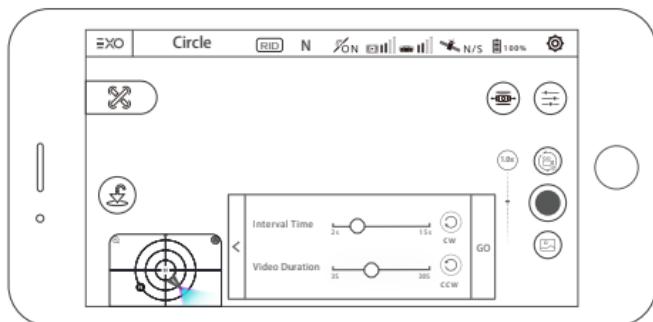
The aircraft will take a certain number of photos and compose time-lapse video automatically according to the circle point of interest and the parameters set. During shooting, moving any sticks on controller will automatically quit the task.

(1) select circle.

(2) set the shutter interval, video length and maximum flight speed.

(3) set the circle direction, and position the circle center by adjusting the circle radius and the direction of the aircraft nose.

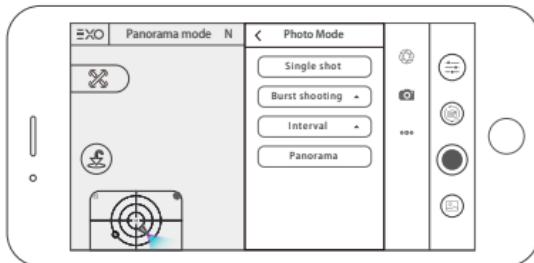
(4) click 'GO' and start shooting.



4.7.7 Panorama mode

In the panoramic mode, you can choose spherical, 180°, vertical shooting and wide angle shooting. In this mode, the aircraft will perform the shooting task automatically. After the shooting done, you can view photos and videos from the TF card, also export photos and videos and compose them. You can quit this mode any time during shooting.

Note: Aircraft will not stitch and compose the final panoramas or spheres, you will need to use after market software to perform the stitching.



4.8 Gimbal Pitch Adjustment



- Please make sure there are no stickers or impurities on the gimbal before take off, and place the aircraft on flat and open ground. Please do not bump the gimbal after the power is turned on.
- The gimbal contains precision parts. If it is hit or damaged, the precision parts will be damaged, which may cause the performance of the gimbal to decrease. Please take good care of the gimbal and camera from physical damage.
- Please keep the gimbal clean and avoid the gimbal from contacting foreign objects such as sand or stone, otherwise it may block the movement of the gimbal and affect its performance.
- If the aircraft is placed on uneven ground or grass, the ground object touches the gimbal, or the gimbal is subjected to excessive external force (such as being bumped or broken) may cause the gimbal motor to be abnormal.
- Do not add any objects to the camera head, otherwise it will affect the performance of the head and even burn the motor.
- Remove the gimbal protection latch before use and then turn it on. Reinstall the gimbal latch to protect the gimbal during storage or transportation.
- Flying in heavy fog or clouds can cause the gimbal to condense, resulting in temporary failure. If this happens, the gimbal can return to normal after drying.