Rainbow UAV flight conrol software

Software instruction manual

Introduction：DJI unmanned aircraft will encounter various problems in manual operation. Sometimes, there is a little deviation in the ideal path to fly. Rainbow realizes automatic flight. It can plan its own path, and the aircraft will fly automatically. It also adds some custom photographing functions, panoramic photography, delay Camera, etc.

一、Open Rainbow App

1. Find the Rainbow App icon on your desktop
2. Click the Rainbow icon to enter the app

二、Enter the connection interface to connect the aircraft

1.Enter the connection interface

1.1 Click“Connect Drone”button

1.2 Click“How to connect to the drone”button， Go to the wizard to view the connection tutorial

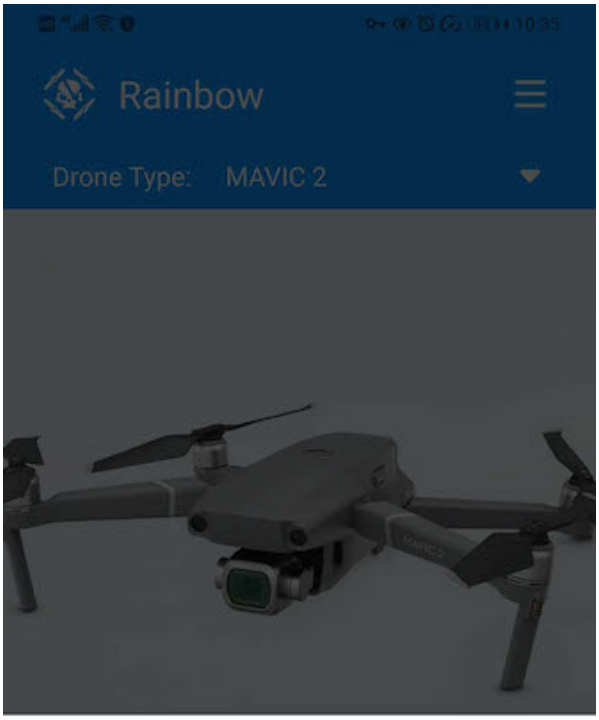
1.3 Follow the tutorial to connect the aircraft

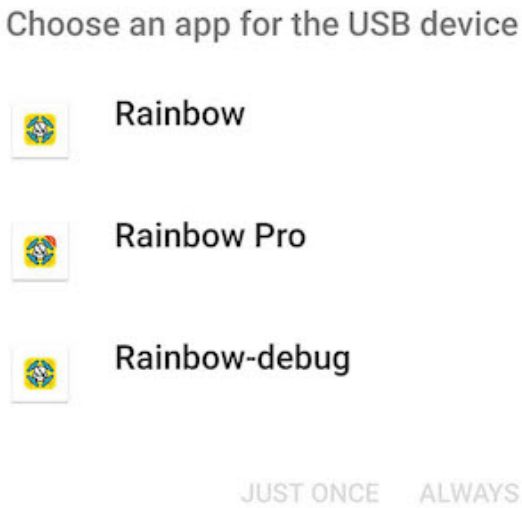
2. Connecting the aircraft

2.1 Install the battery and turn on the power to the remote control and the aircraft

Turning on the aircraft: Find the intelligent flight battery switch,short press one and then long perss until the starting noise sounds.

Turning on the remote controller: Find the remote controller power switch, short press one and then long perss until the starting noise sounds.





2.2 Connect the aircraft to the remote control via a data cable

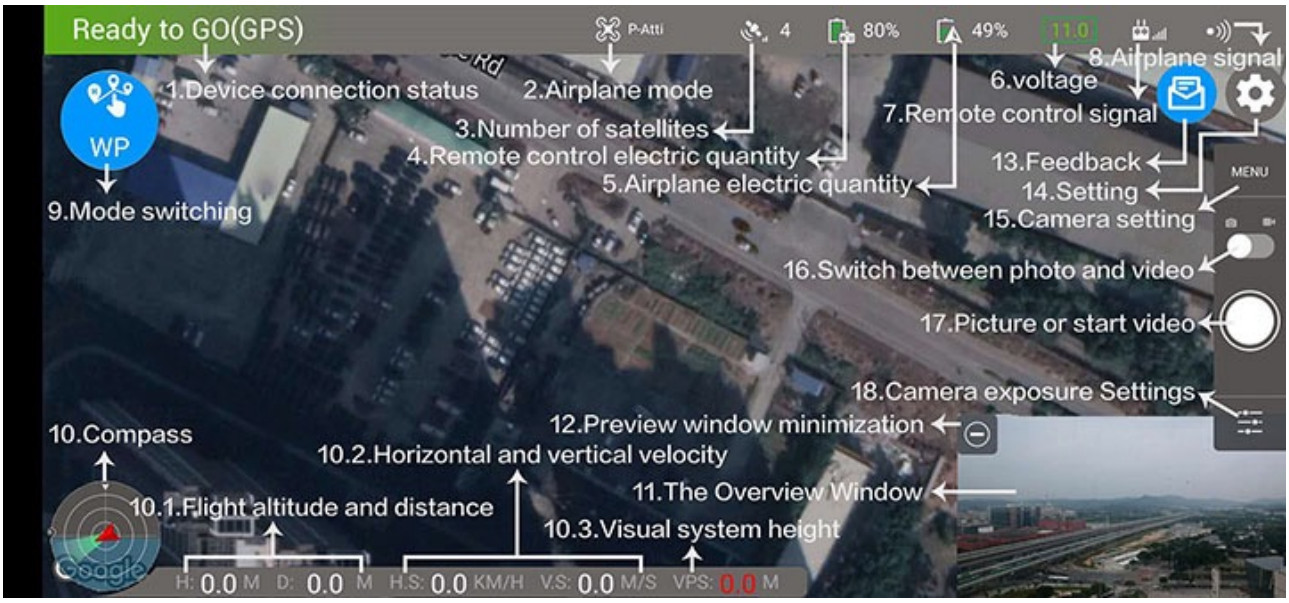
Now Rainbow opens the connection and selects an app connection

After connection, click “FLY Drone”button to enter the aircraft interface

三、UI Description of interface basic information

UI Interface basic operation instructions

Status bar, mode switch, compass, preview window, camera components, feedback, and settings



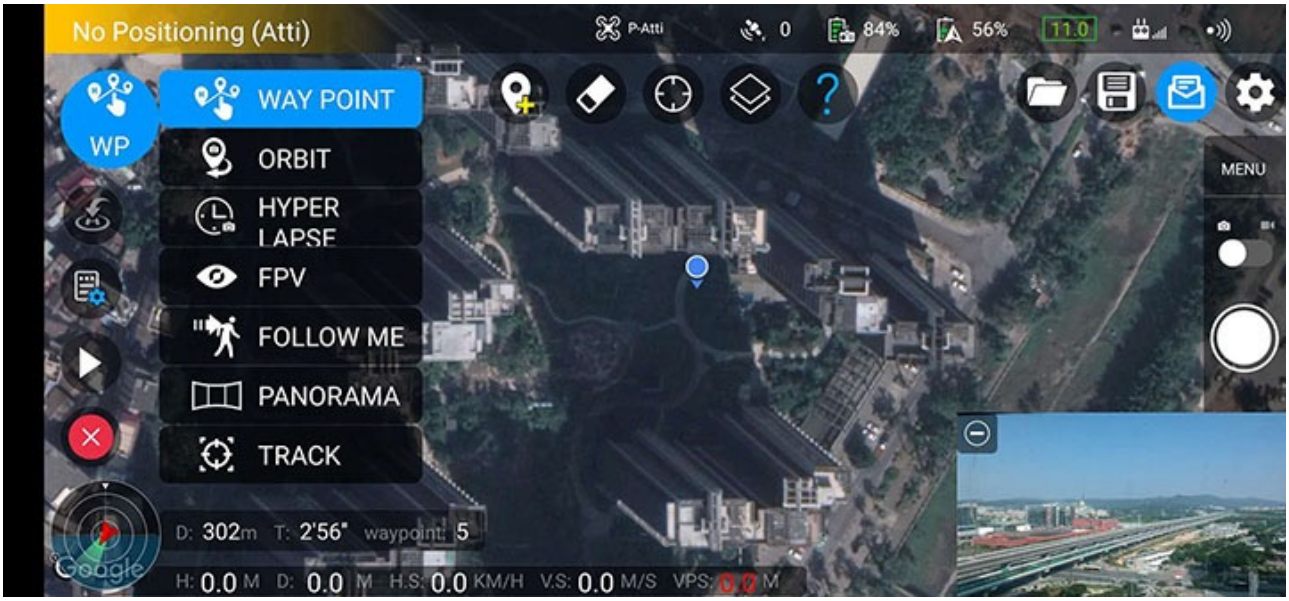
四、Switching between different flight modes

- Click the "mode switching" button in the upper left corner to switch the mode

  There are currently seven flight modes

- WAY POINT
- ORBIT
- HYPER LAPSE
- FPV
- FOLLOW ME
- PANORAMA
- TRACK

Enter different modes and use different operation modes. The specific usage of each mode will be described below



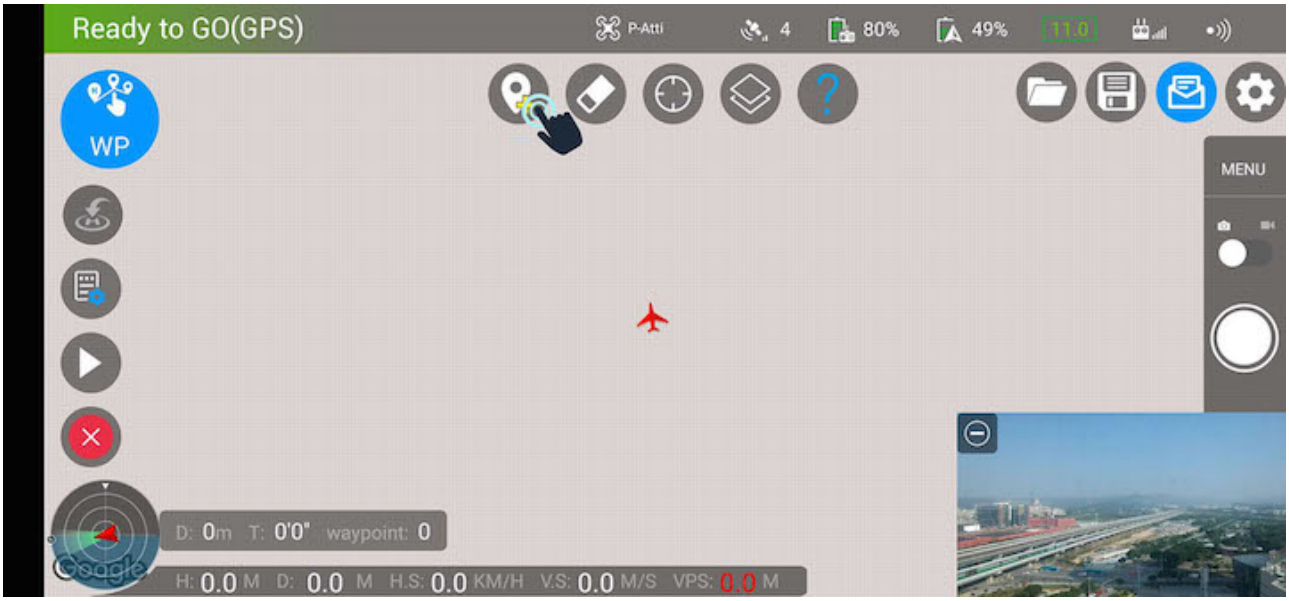
五、Use of each mode

1. WAY POINT

Click "mode switching" button to select waypoint mode

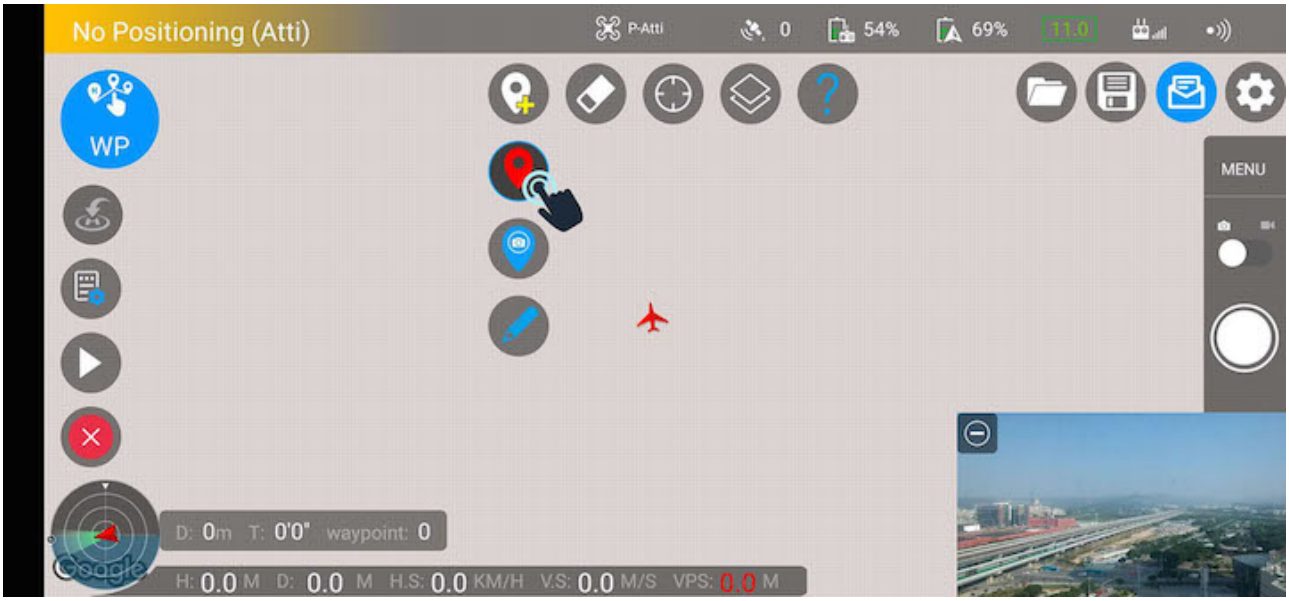
1.1Edit your own mission

- Click "5. Edit mission" button to add waypoints and Camera points

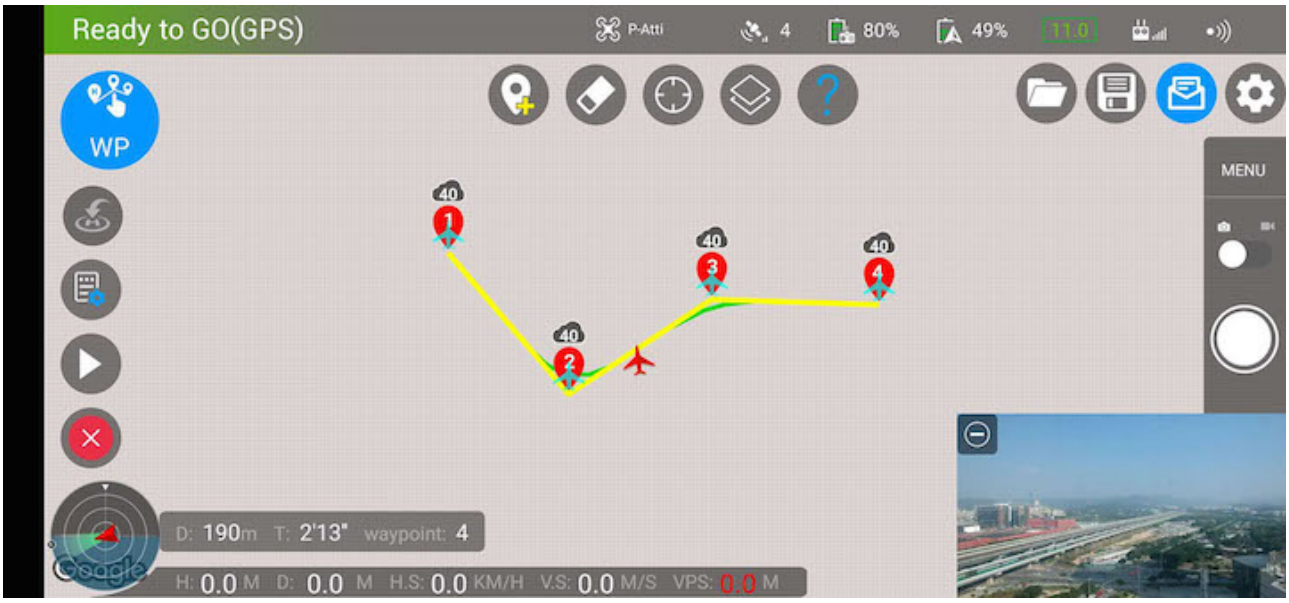


- Add waypoint

Select "5.1. Waypoint editing" from the drop-down menu

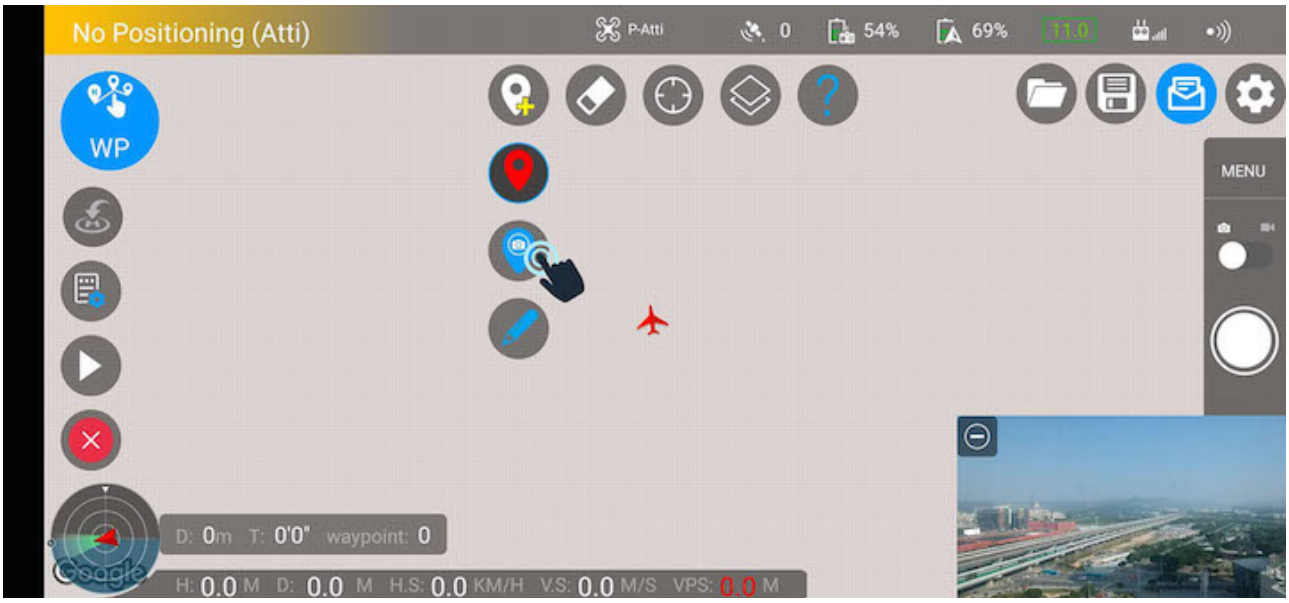


Add several points in the interface as flying points

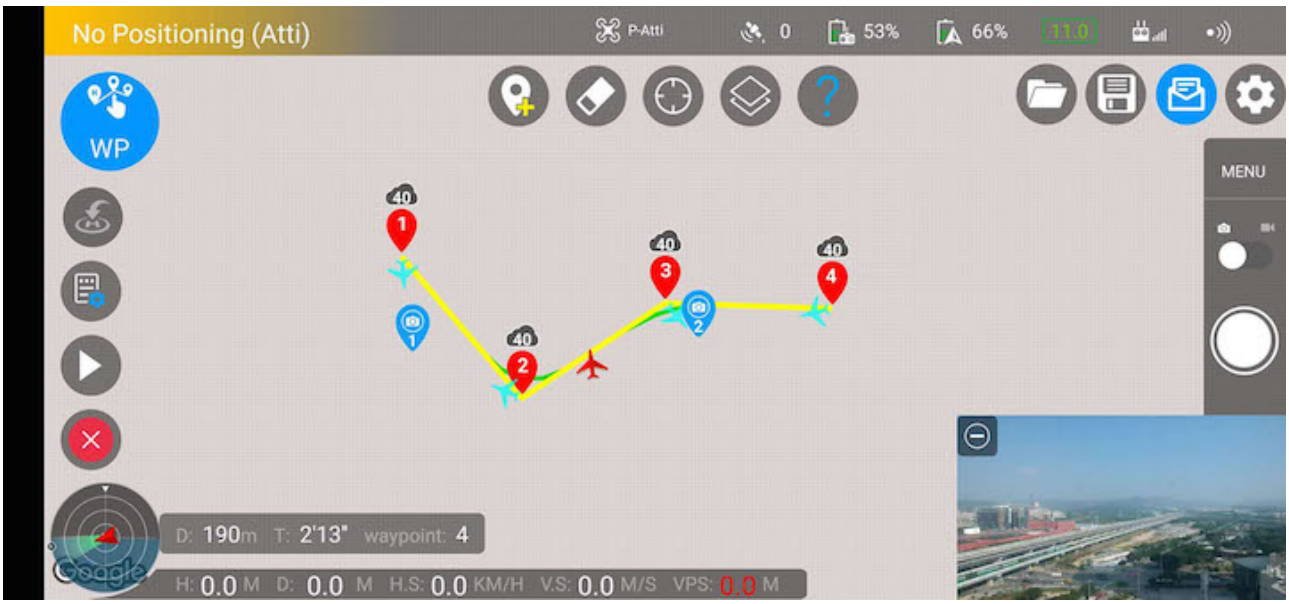


- Add Camera point

Select "5.2. Camera point editing" from the drop-down menu

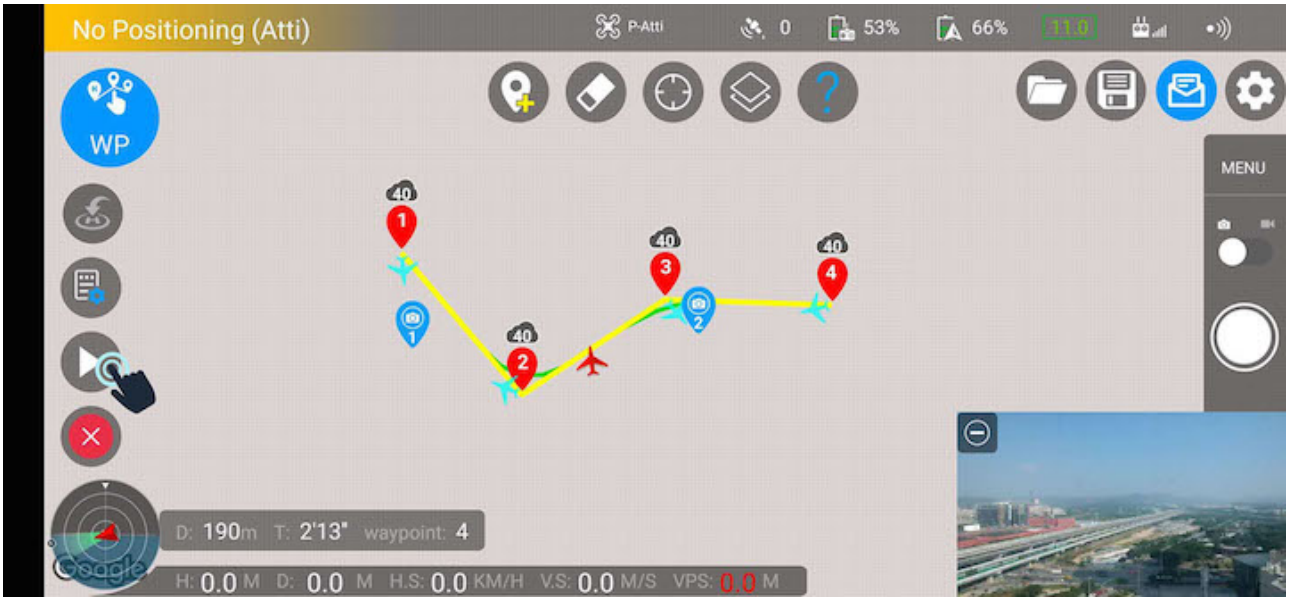


Add the point you want to shoot in the interface

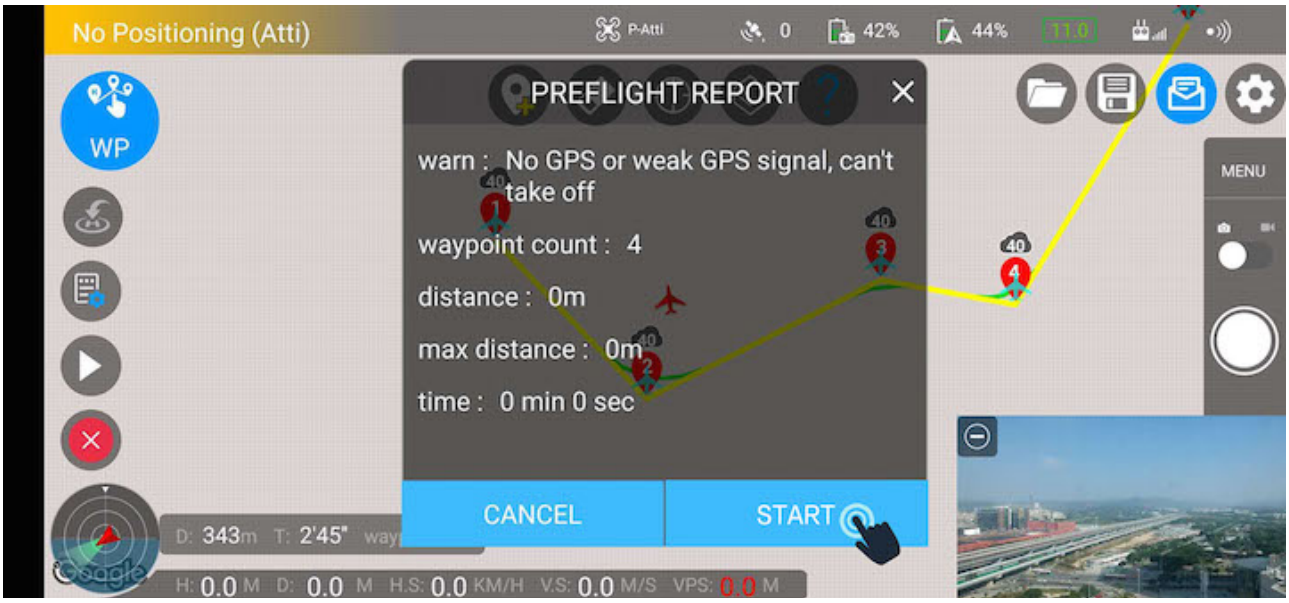


- Start mission

After setting, click the "3.Start mission" button

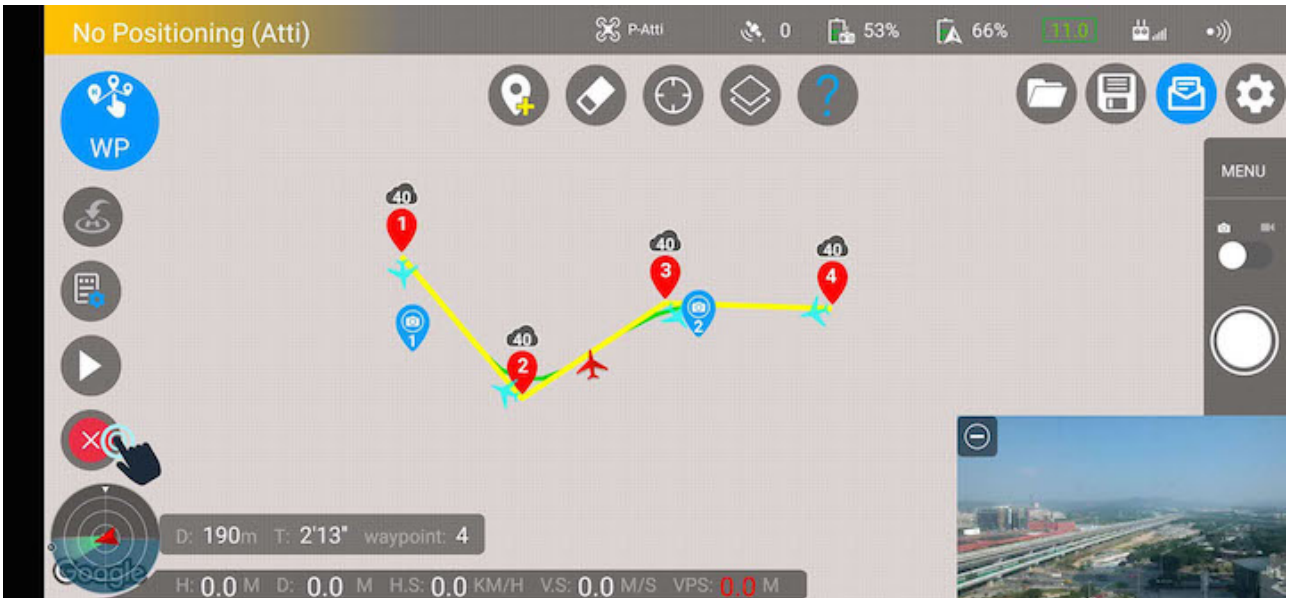


Click "START" to start the mission



- Terminate mission

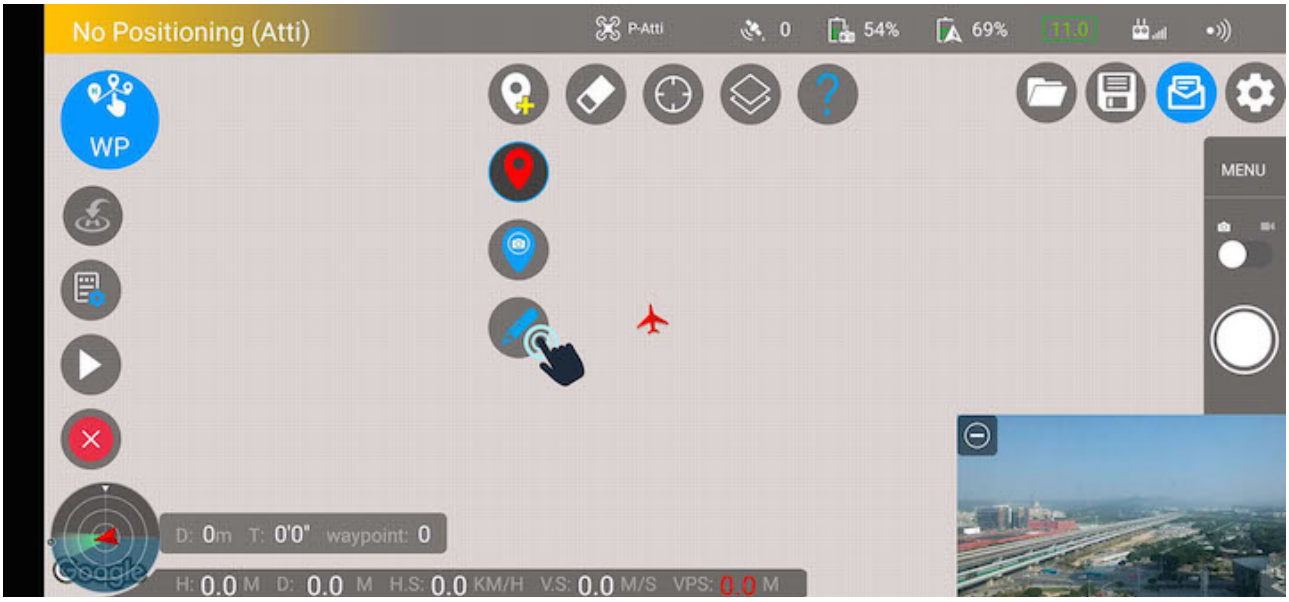
In case of any accident, click the "4. Terminate mission" button to end the current flight mission



1.2 Batch waypoint setting

- If you do not want to set waypoints separately, you can choose to set waypoints in batches

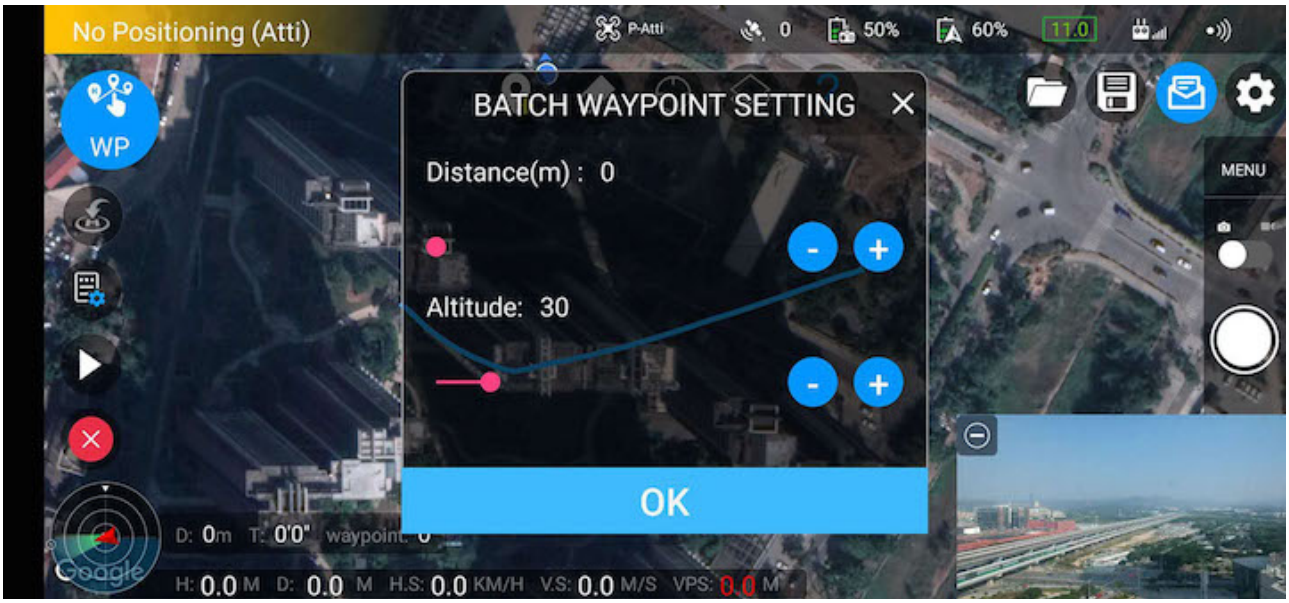
Click "5. Edit mission" button



Select "5.3. Batch waypoint setting" from the drop-down menu, draw the position to be flown, and the interface of "batch processing waypoint setting" will pop up. Set the distance and altitude, and click "OK", and the route will be automatically generated

Set the Camera point

Start / Terminate mission

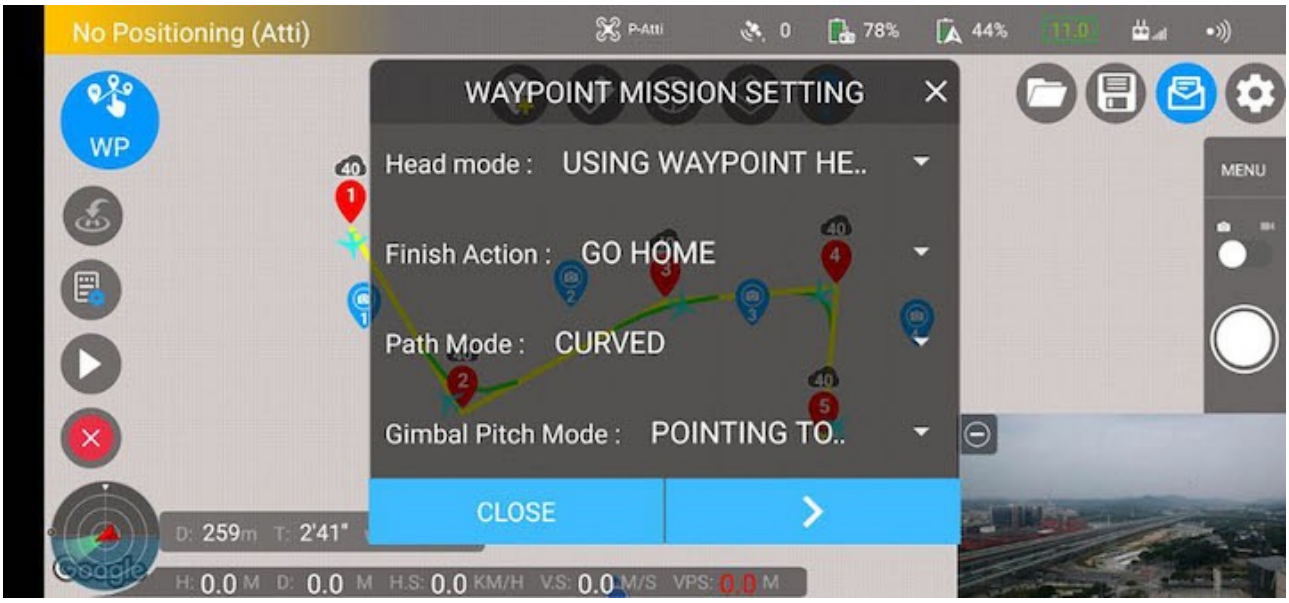


1.3 Set mission property

- Click the "2. Set mission property" button to enter the setting interface
- Waypoint mission setting

1. Head mode: POINT TO NEXT WAYPOINT、USING INITIAL DIRECTION、CONTROL BY REMOTE CONTROLLER、USING WAYPOINT HEADING
2. Finish Action: NO ACTION、GO HOME、AUTO LAND、GO FIRST WAYPOINT、CONTINUE UNTIL END
3. Path Mode: NORMAL、CURVED
4. Gimbal pitch Mode: POINTING TO WAYPOINT、INTEROLATION
5. Speed: - +

- After setting, click "close" to close the setting window, and click ">" to enter the waypoint editing window



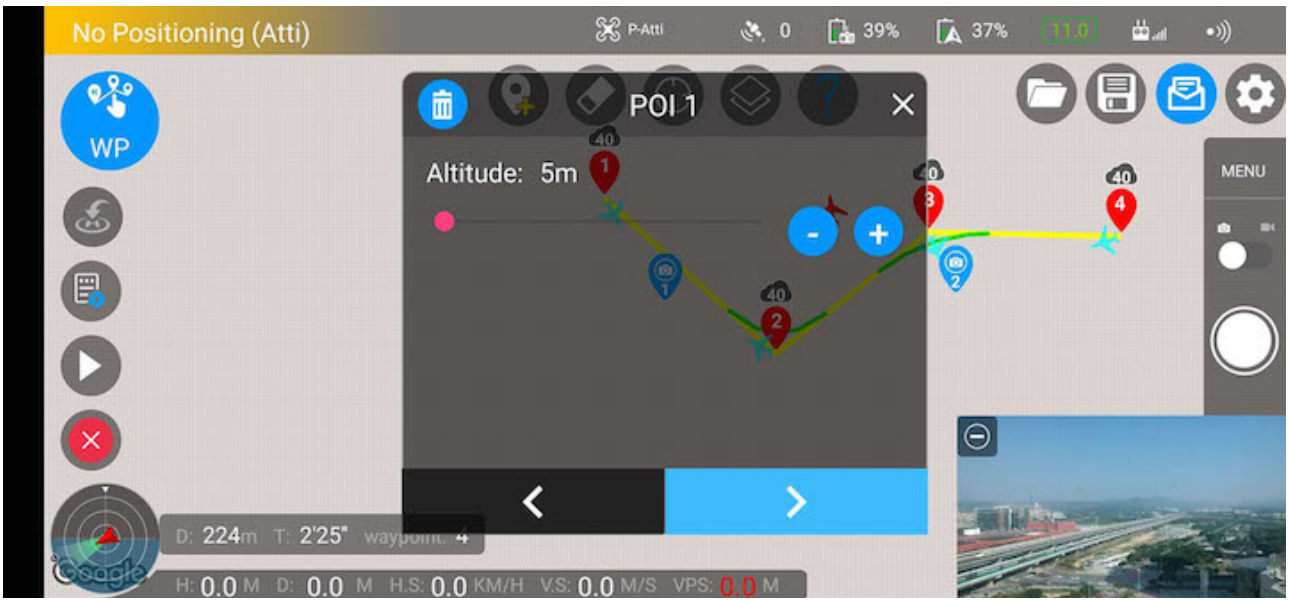
- Modify / delete flight waypoints

Through the task attribute window, directly enter waypoint editing or click any waypoint in the planned route.

You can edit the attribute of waypoint: Altitude, POI,Actions, or directly click the "delete" button in the upper left corner of the pop-up box to delete the current waypoint. The "<" > "button at the bottom can select the previous and the next waypoint for editing

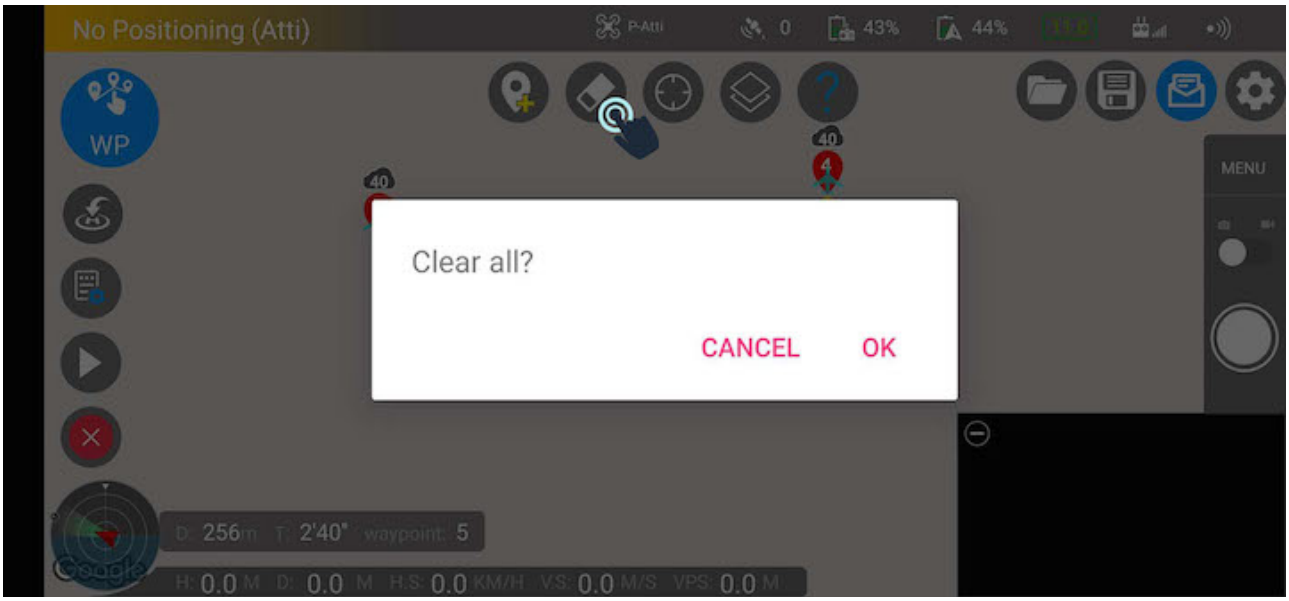
- Modify / delete Camera point

Click any Camera point in the interface to edit the Camera point attribute: altitude, or directly click the "delete" button in the upper left corner of the pop-up box to delete the current Camera point. The "<" > "button at the bottom can select the previous and the next Camera point for editing



- Clear all waypoints and Camera points

Click "6. Clear all" button to pop up "clear all". Click "OK" to delete all waypoints and Camera points



- Switch map mode

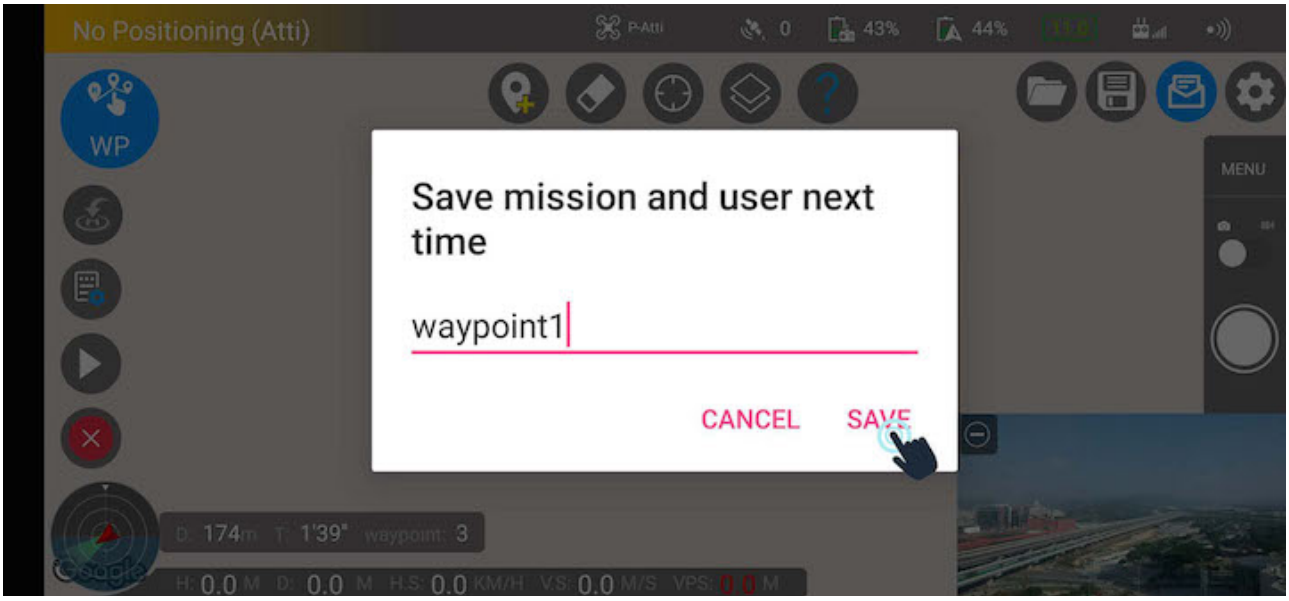
Click "8. Switch map mode" button to select the map mode from the drop-down menu

1.4 Save task

- Click "11. Save task" button

It can save the current mission and continue to use it next time

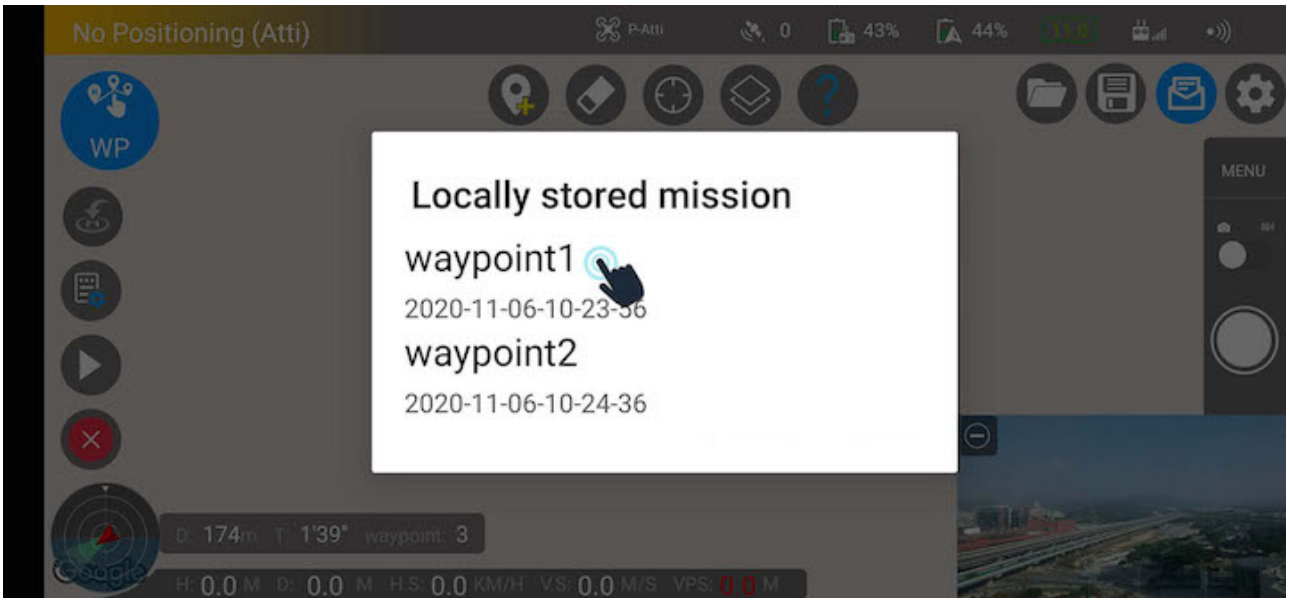
Input the task name and click "save"



1.5 Open locally stored tasks

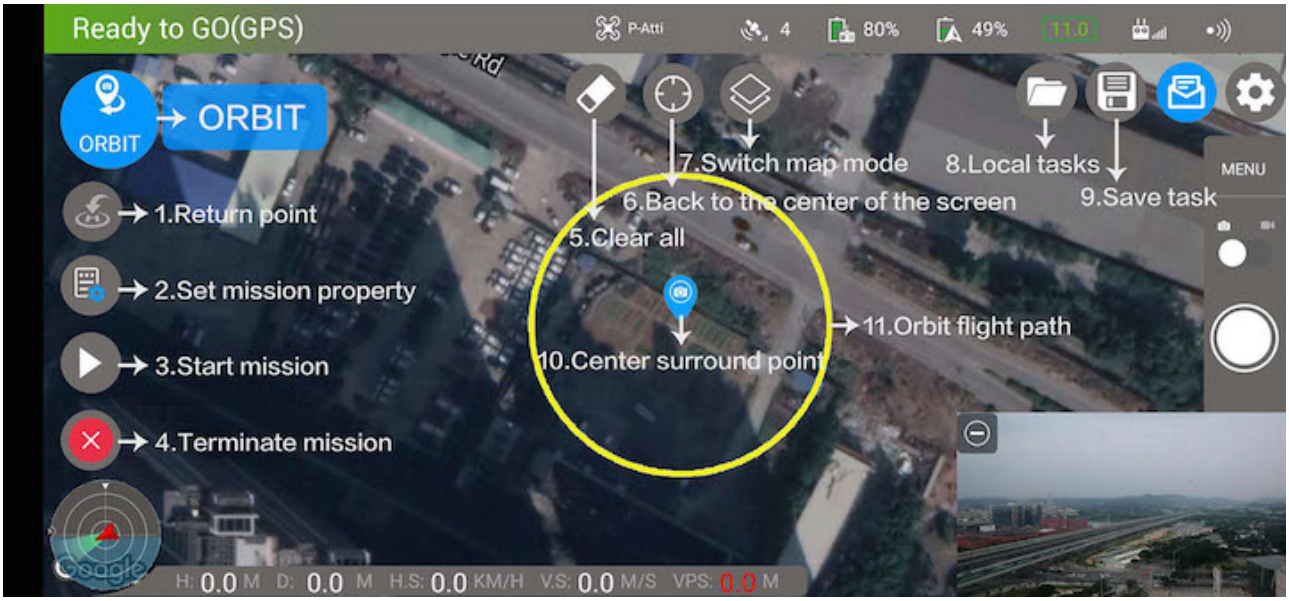
- Click "10. Local tasks" button

Select Open saved mission as flight route



2. ORBIT

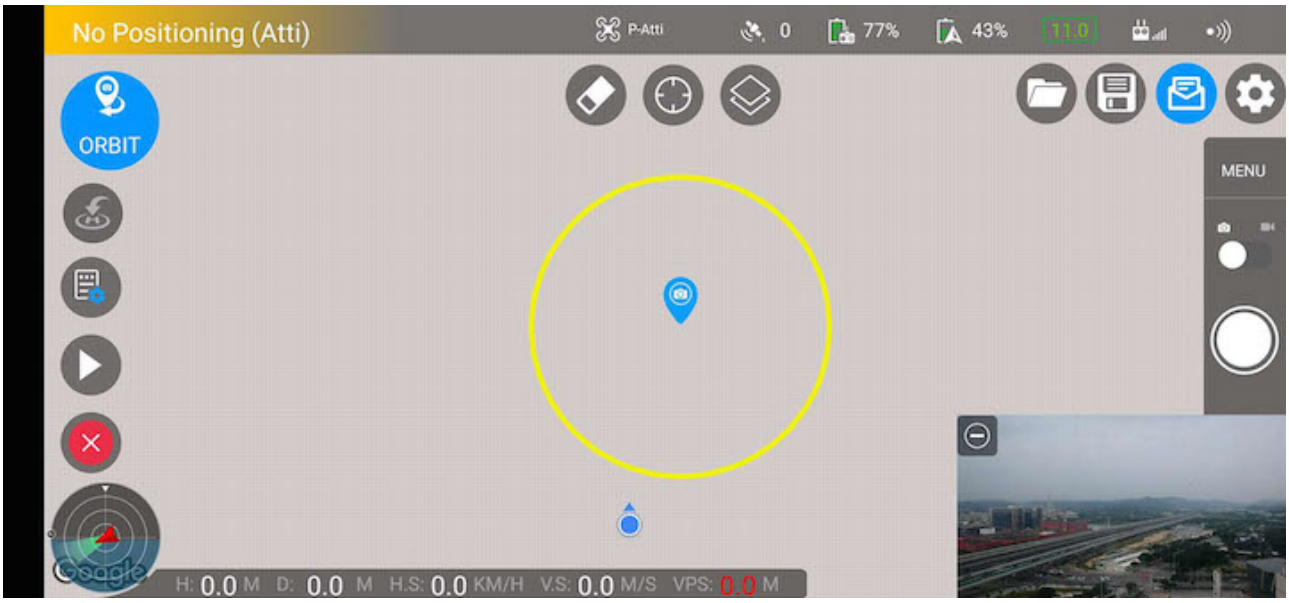
Click "mode switching" button to select Orbit mode



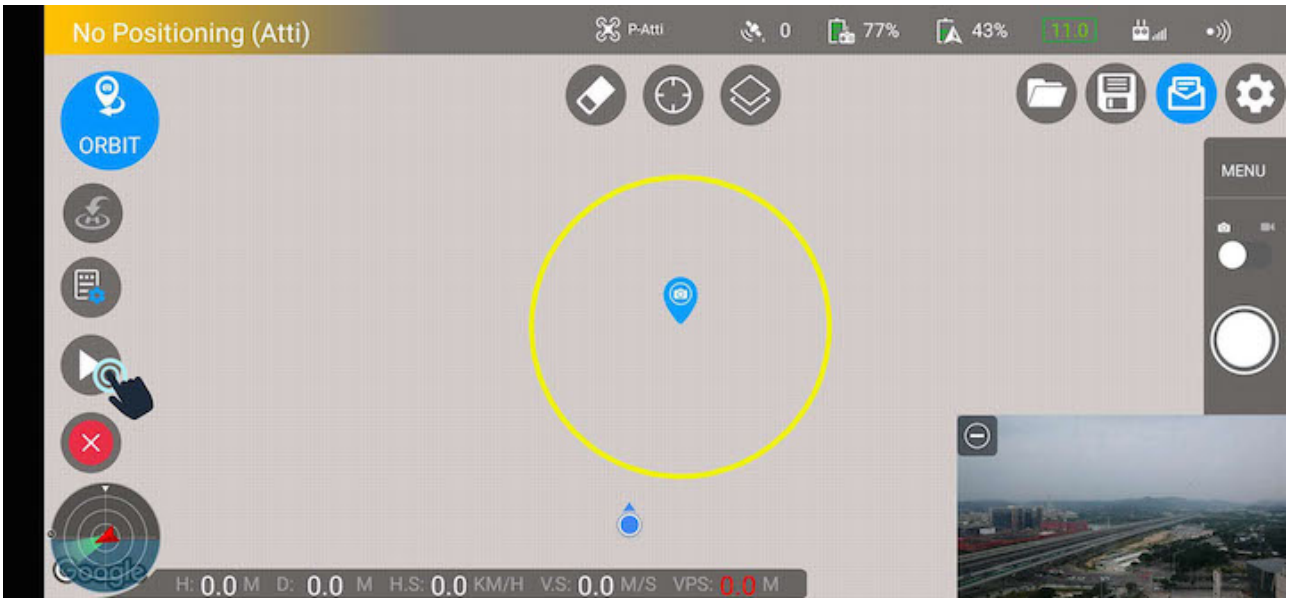
2.1 Edit orbit mission

- Select a location in the map and click

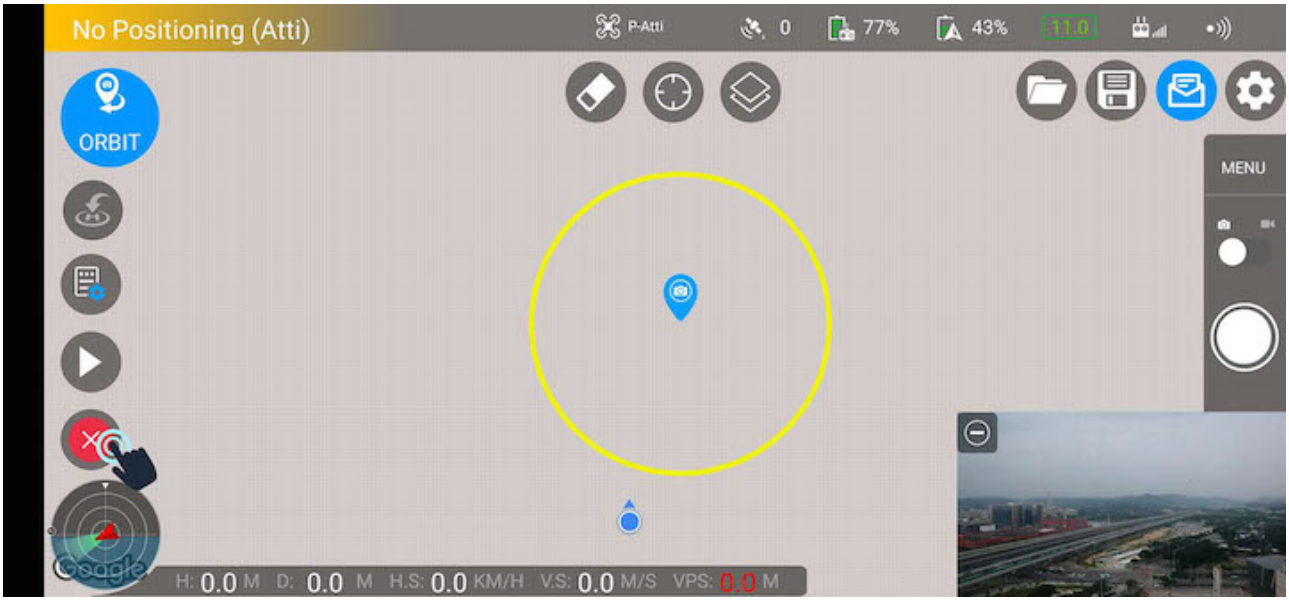
• There will be a shooting icon and a yellow circle. The shooting is the center of the flight mission, and the outer circle is the flight path of the aircraft



• Click "3. Start mission" button, and the aircraft will rotate 360 degrees along the trajectory after the mission starts



- Click "4. Terminate mission"



2.3 Orbit mission property

- Click "2.Set mission property" button or click the center surround point to open the "track mode setting" dialog box

Aititude: - +

Radius: - +

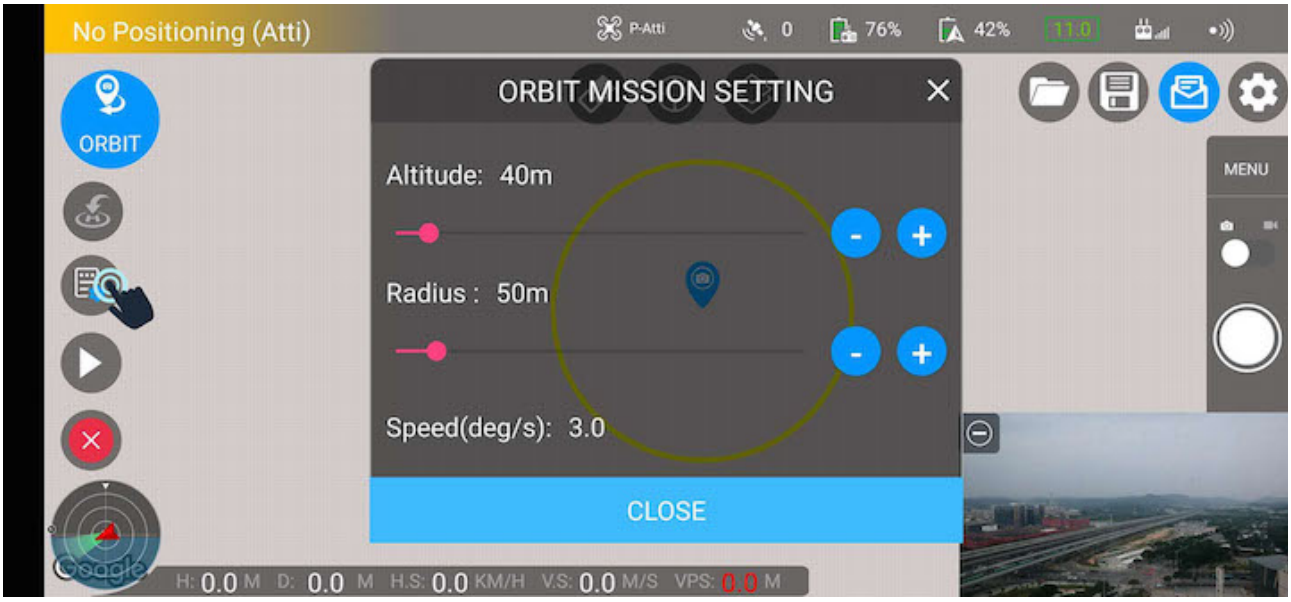
Speed(deg/s): - +

Subject Height: - +

Start point: North、South、West、East、Nearest

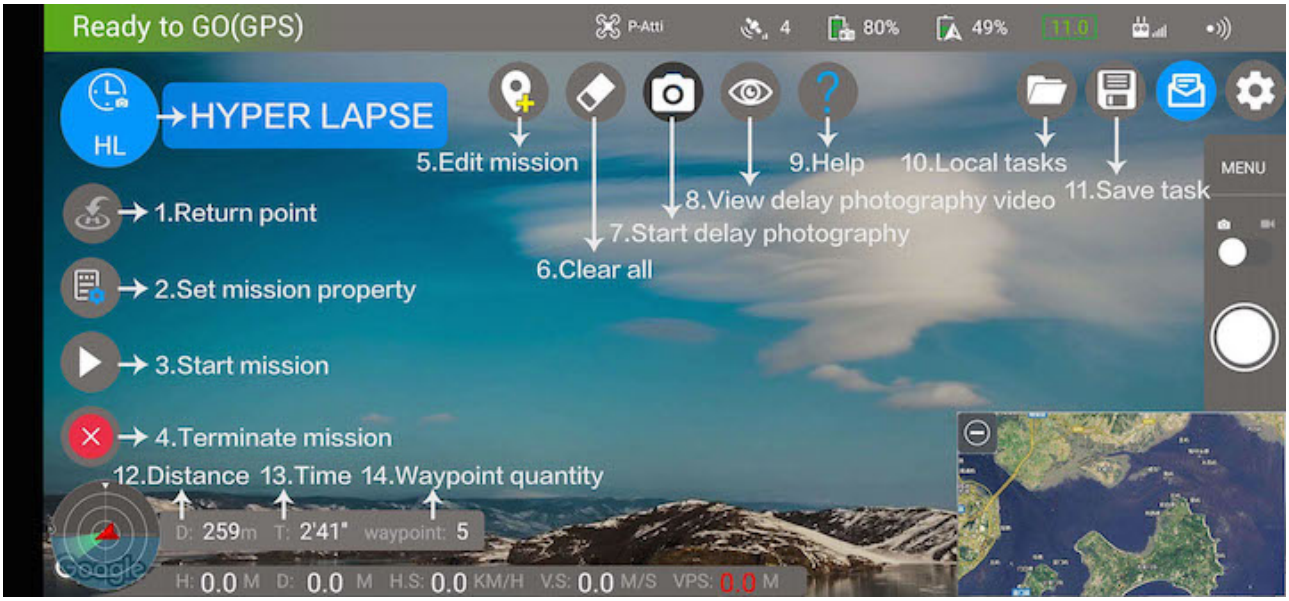
Head Mode: Along circle looking forwards、Towards hot point、Away from hot point、User controller、Initial heading、Along circle looking backwards

Direction: Clockwise、Anticlockwise



3. HYPER LAPSE

Click "mode switching" button to select Hyper Lapse mode



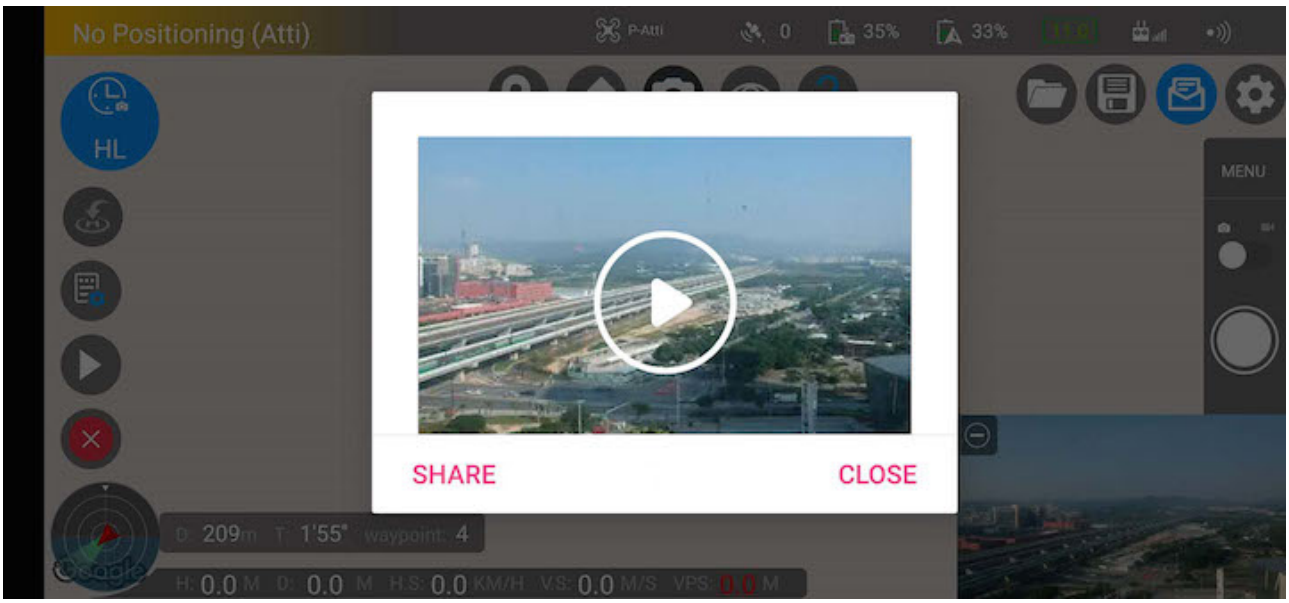
- Delay mode is a photography mode. This mode is an enhancement on the basis of waypoint mode. Therefore, route planning and task attribute setting are the same as waypoint mode (refer to waypoint mode for specific operation)

- After starting the flight mission, click "7. Start delay photography" button to start delay shooting

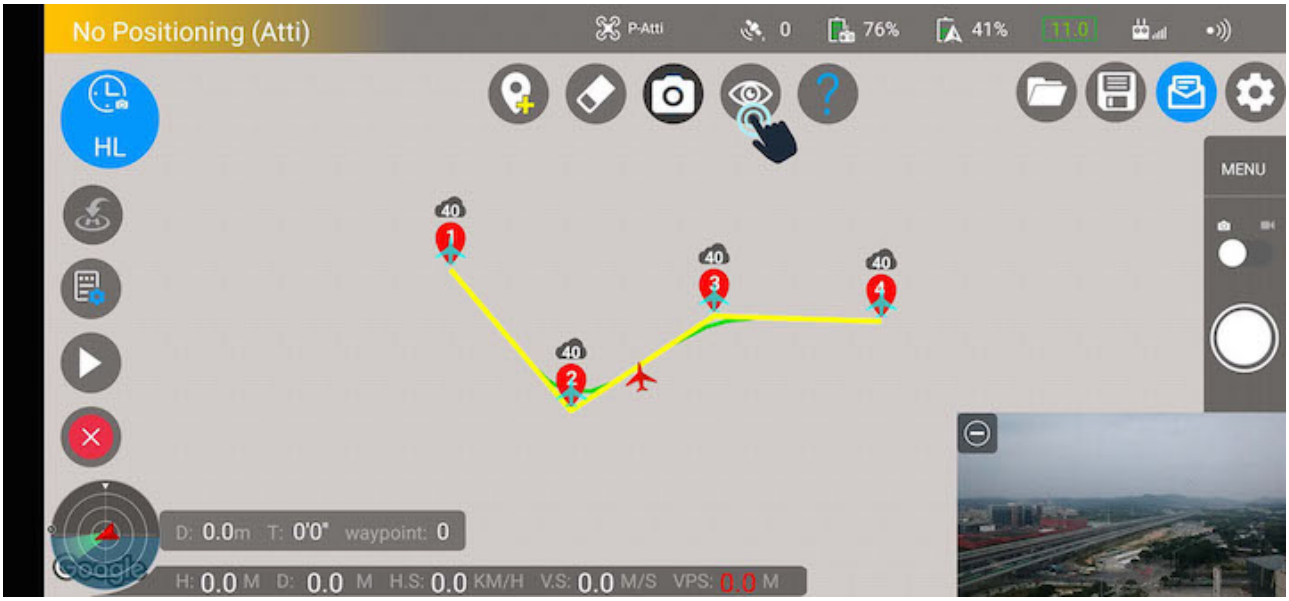
- After shooting, click "end button"

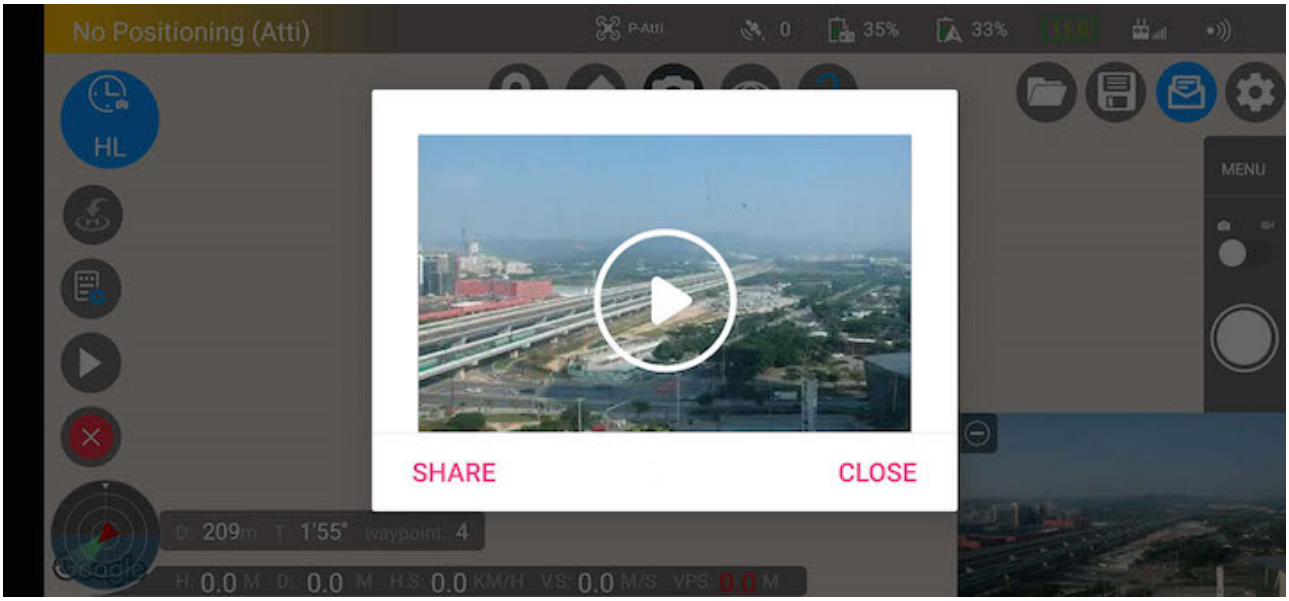
- Video Preview

After shooting, the video synthesis will be started automatically, and the preview video will be produced after waiting for a period of time



- Click "8. View delay photography video" button to view the last shot video

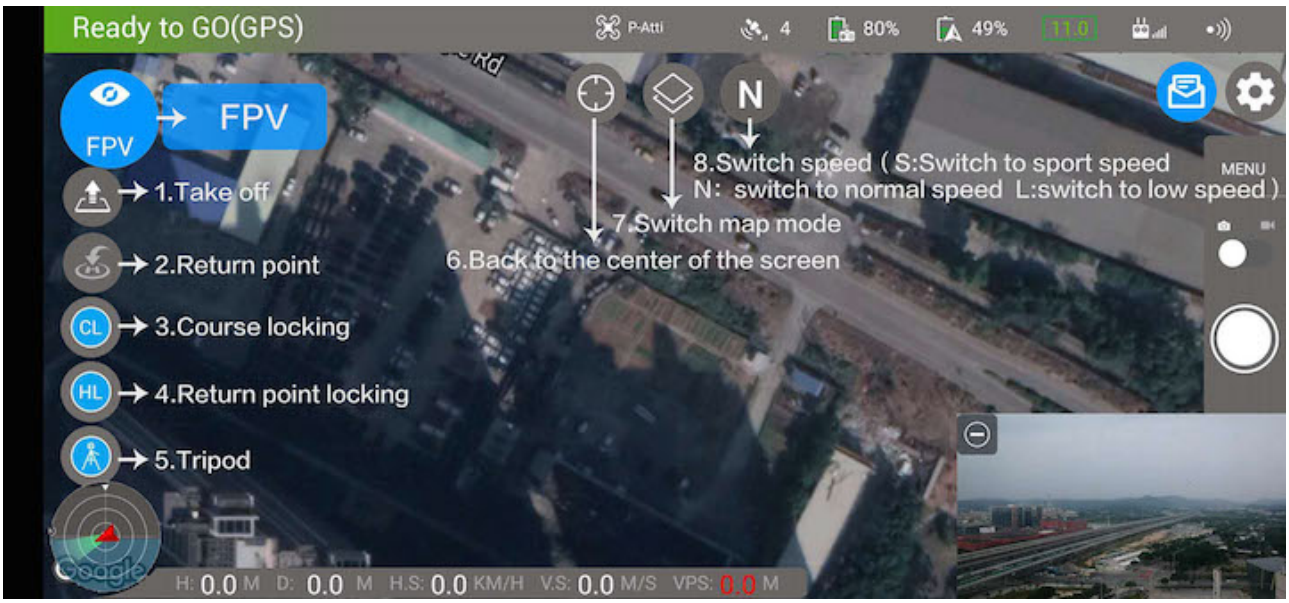




4. FPV

Click "mode switching" button to select FPV mode

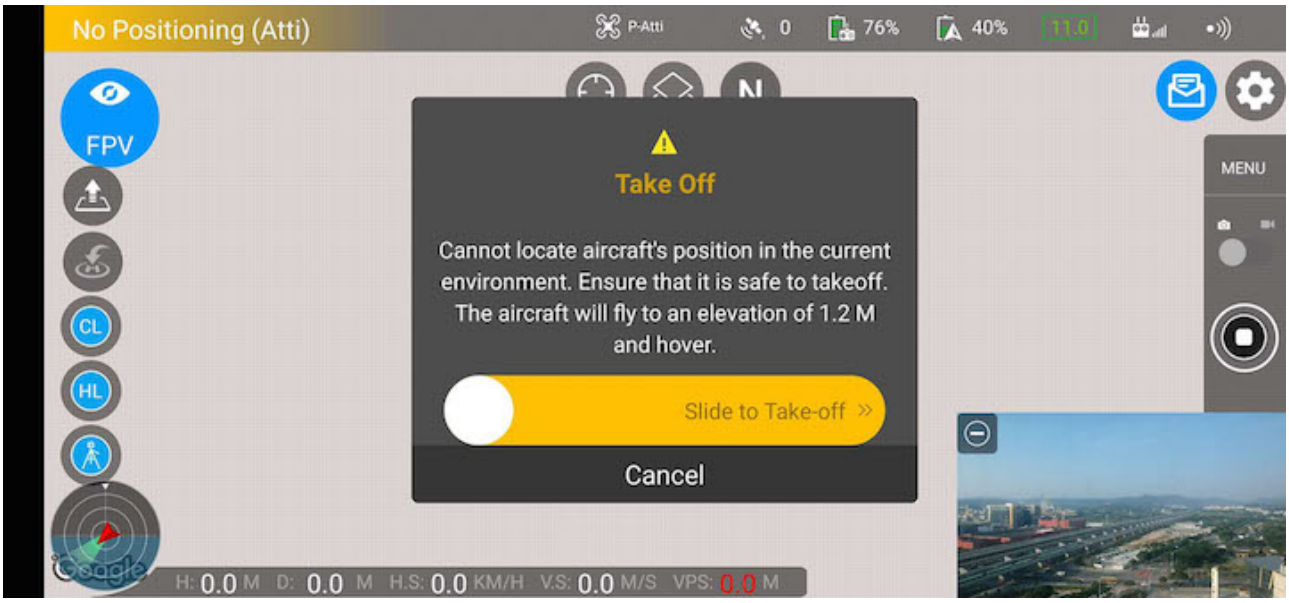
- FPV means the first person perspective, so the mode is mainly manual operation

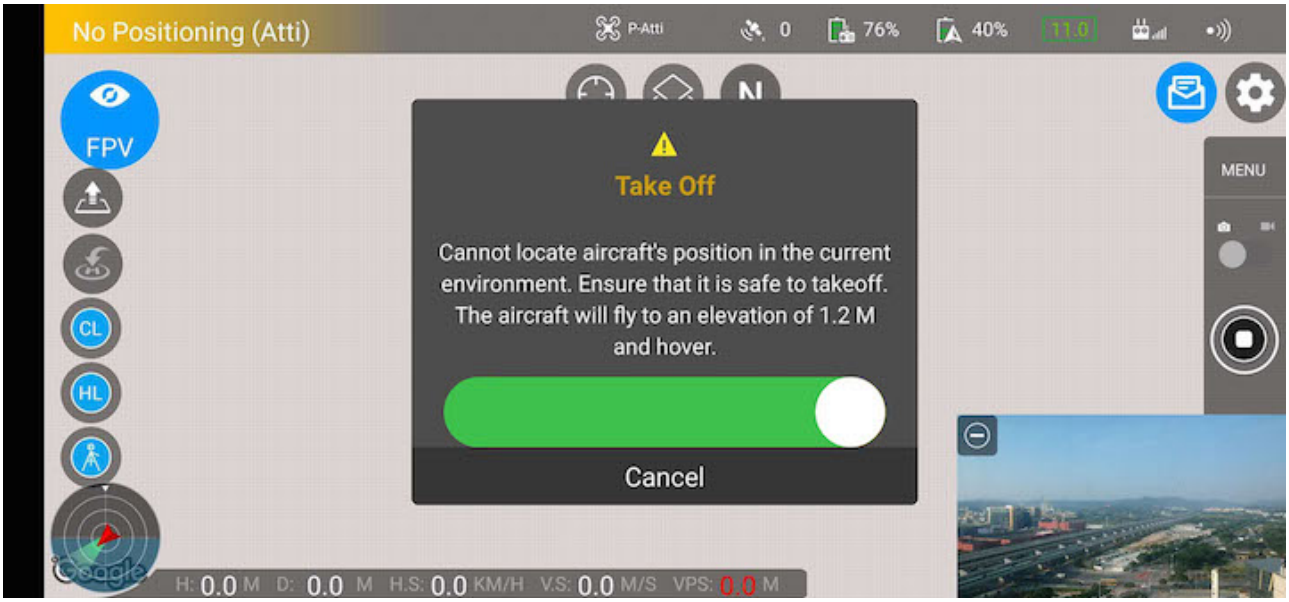


4.1 Take off

- Click "1. Take off" button

- A confirmation dialog box will pop up, and slide "slide to take off" to confirm takeoff

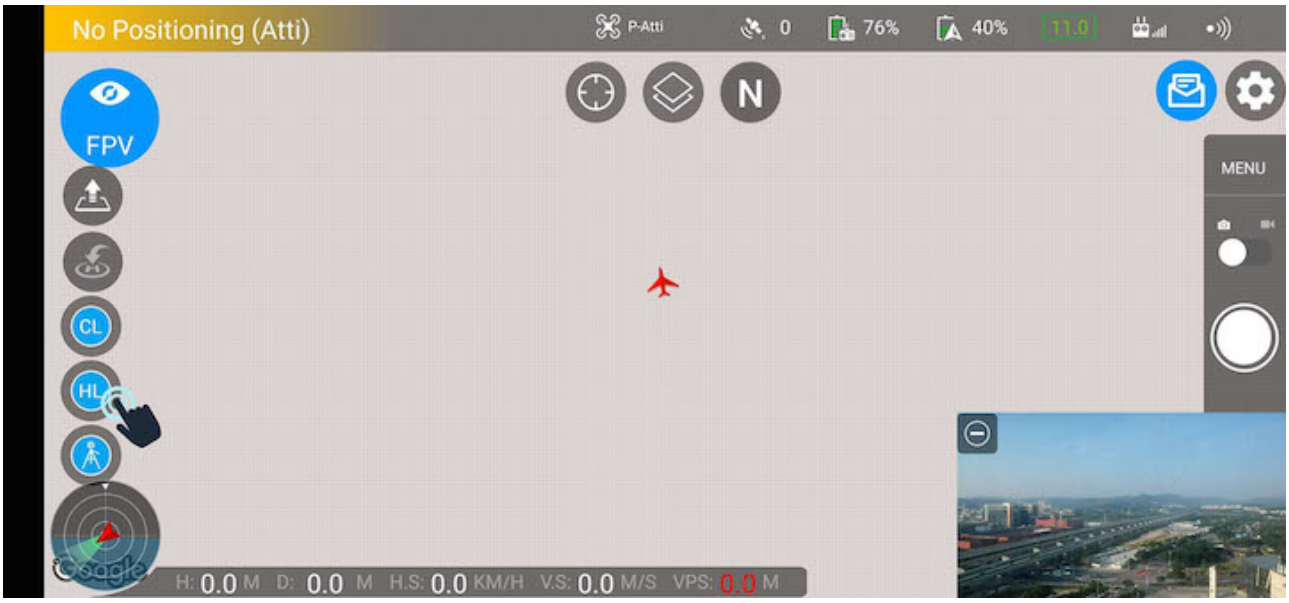




4.2 Aircraft Return point

4.3 Nose course locking mode

4.4 Aircraft return point locking mode



4.5 Tripod mode

4.6 Switch speed

- Click "8. Switch speed" button

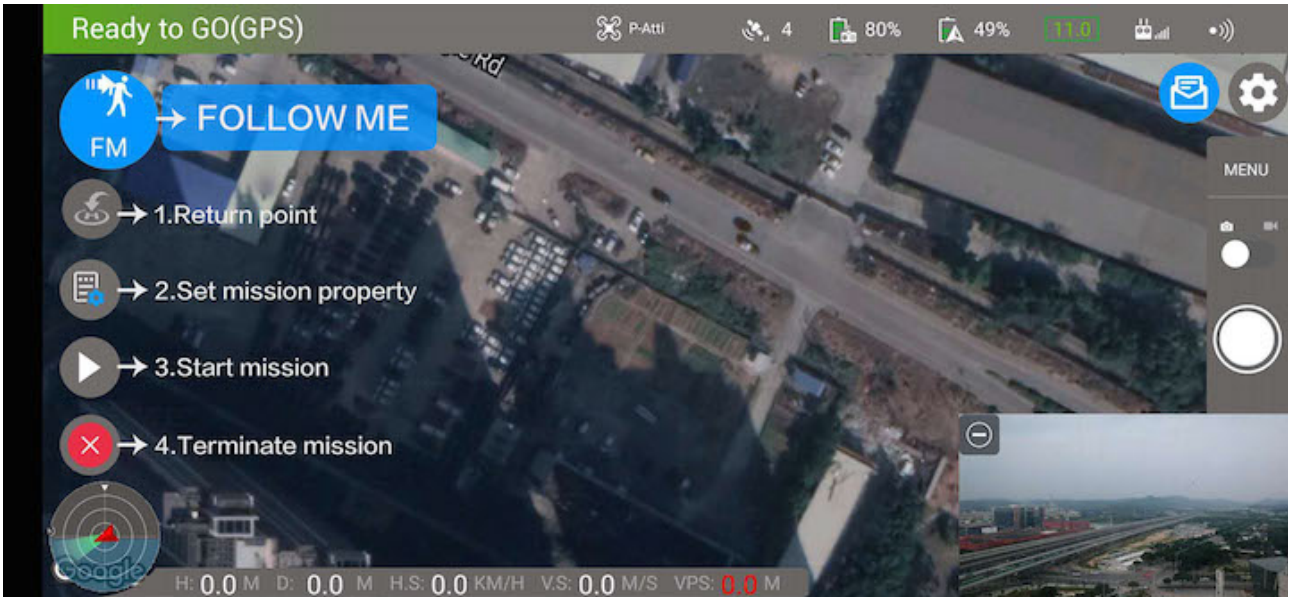
N: Switch to normal speed

S: Switch to sport speed

L: Switch to low speed

5. FOLLOW ME

Click "mode switching" button to select Follow me mode



5.1 Follow me mode

• Follow mode refers to the aircraft following an object with GPS positioning (mobile phone), after entering this mode, the mobile aircraft through the mobile phone will also follow the movement, and save a certain distance with you

Usage: connect to the aircraft, enter the mode, start the aircraft manually, fly to the corresponding altitude, and click"3. Start mission" button

5.2 Follow me mission property

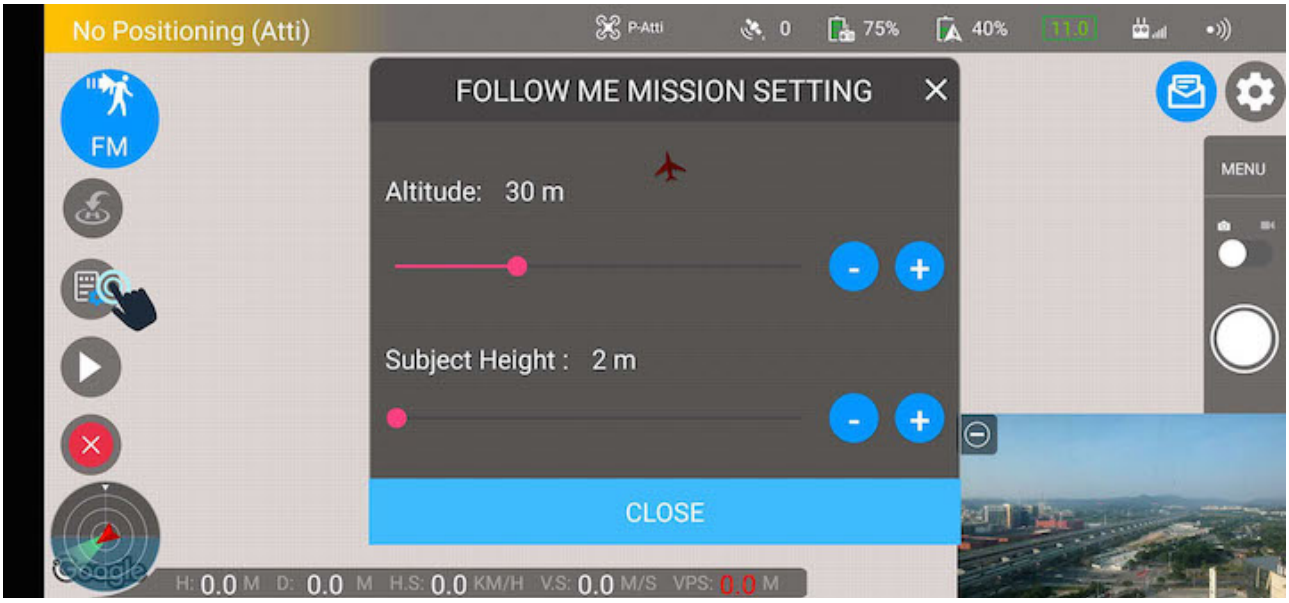
- Follow me mission property

Click “2.Set mission property” button to enter the setting interface and set the task properties

Altitude： - +

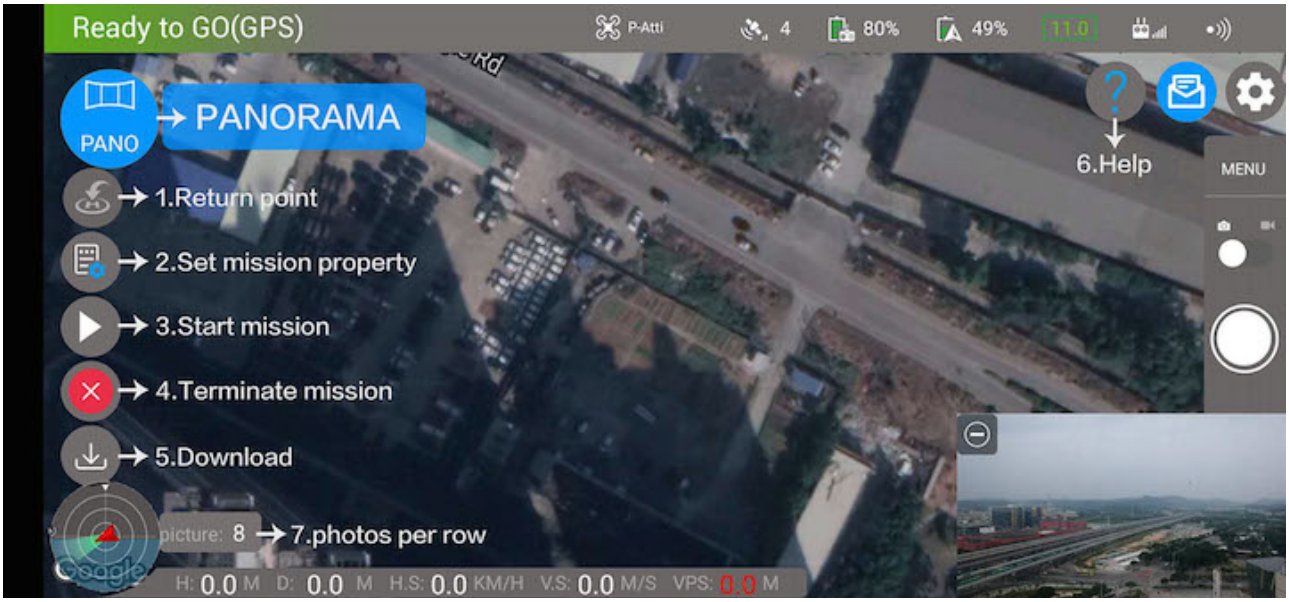
Subject Height： - +

Head mode： TOWARD FOLLOW POSITION、CONTROLLED BY REMOTE CONTROLLER



6. PANORAMA

Click "mode switching" button to select panorama mode



Set mission property

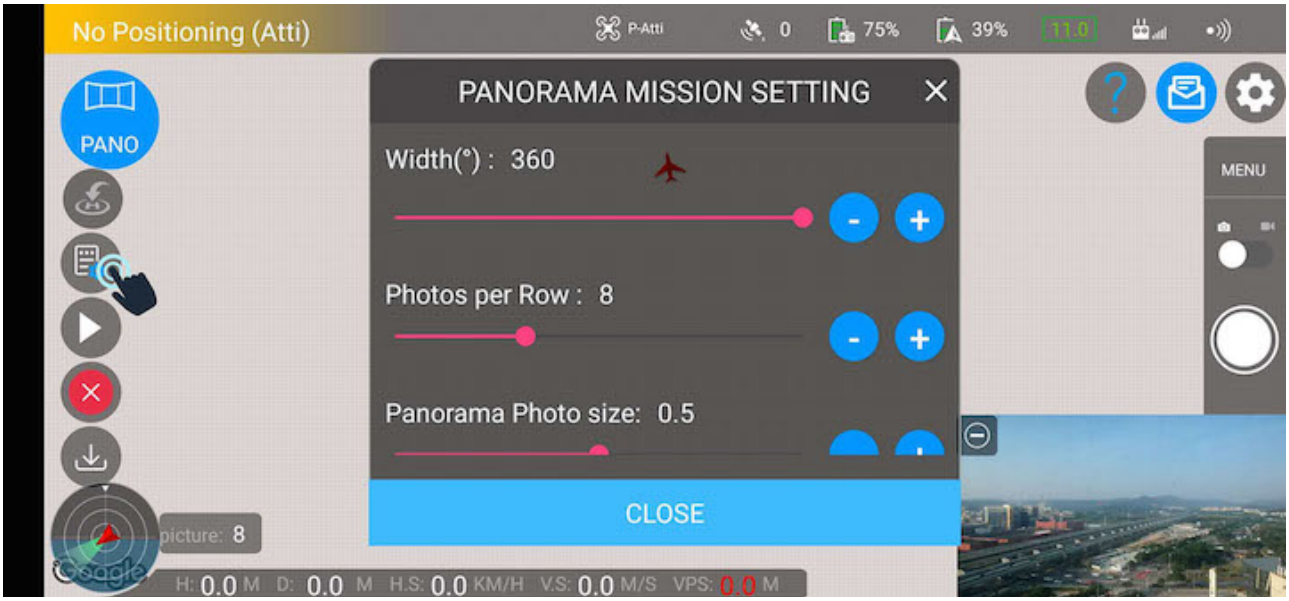
- Panorama mission property

Click “2.Set mission property” button to enter the setting interface and set the task properties

Width（°）：- +

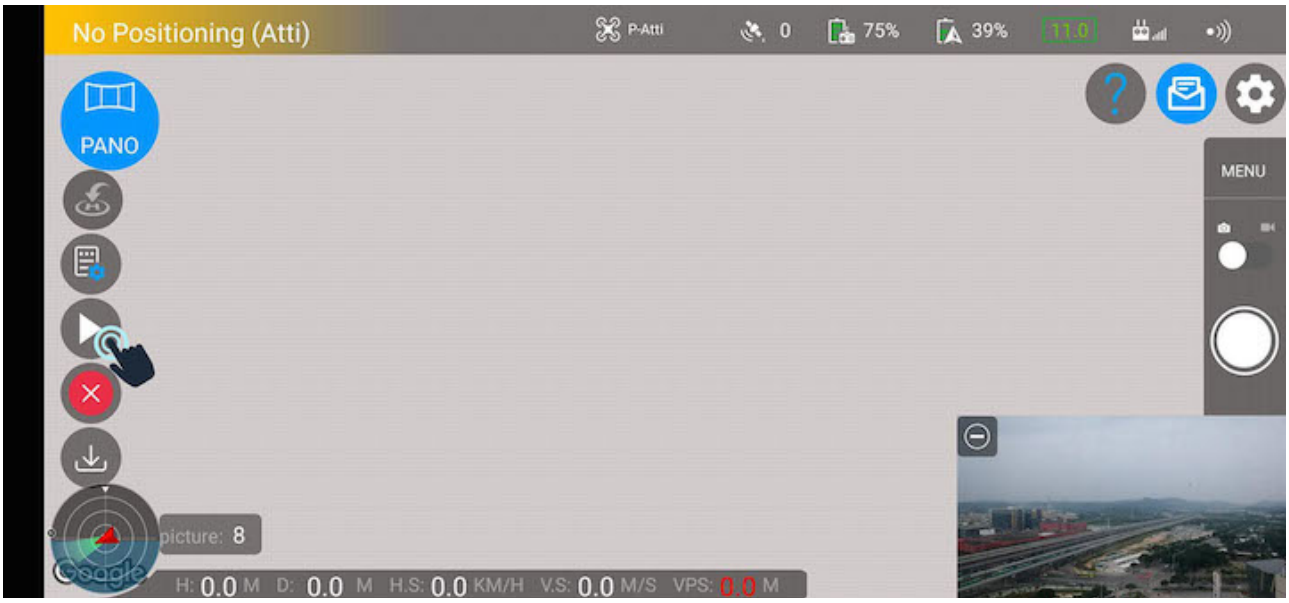
Photos per row：- +

Panorama Photo size：- +

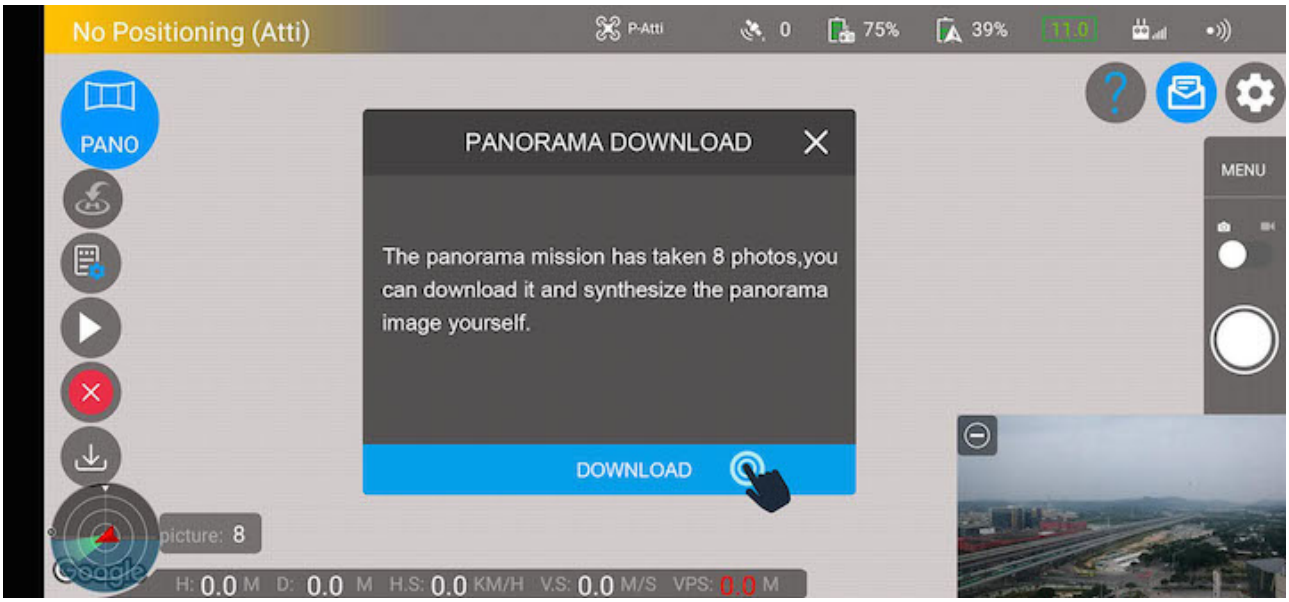


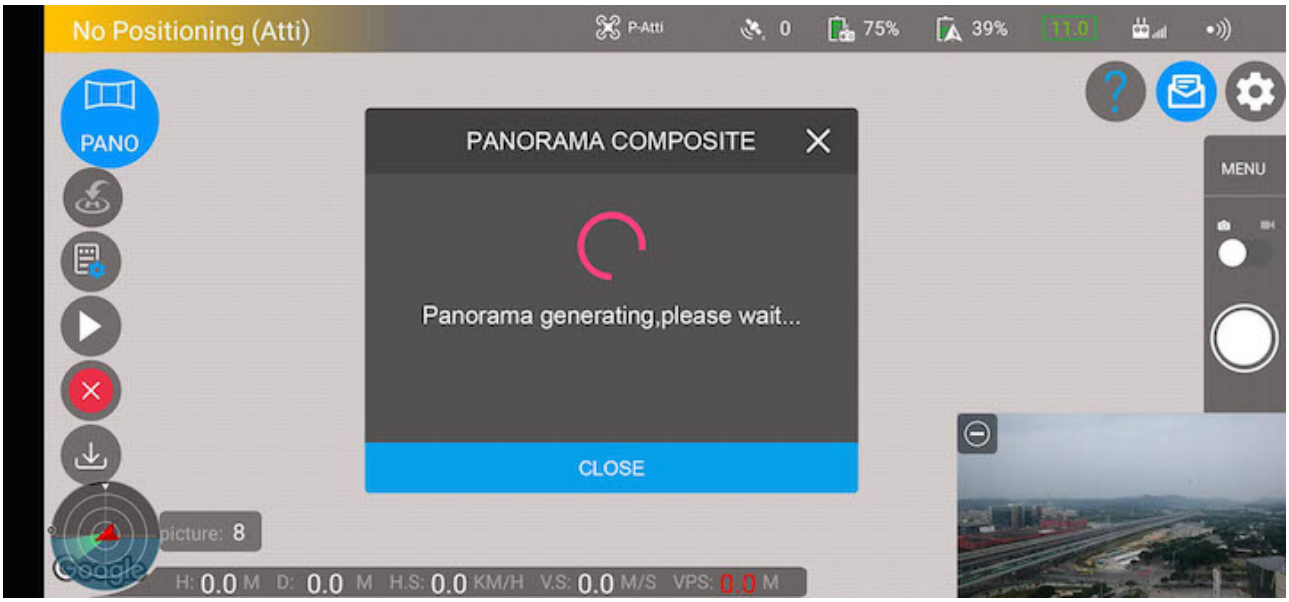
- Perform the shooting task

After setting, fly the plane to the position you want to fly to, and click the "3. Start mission" button to perform the shooting task

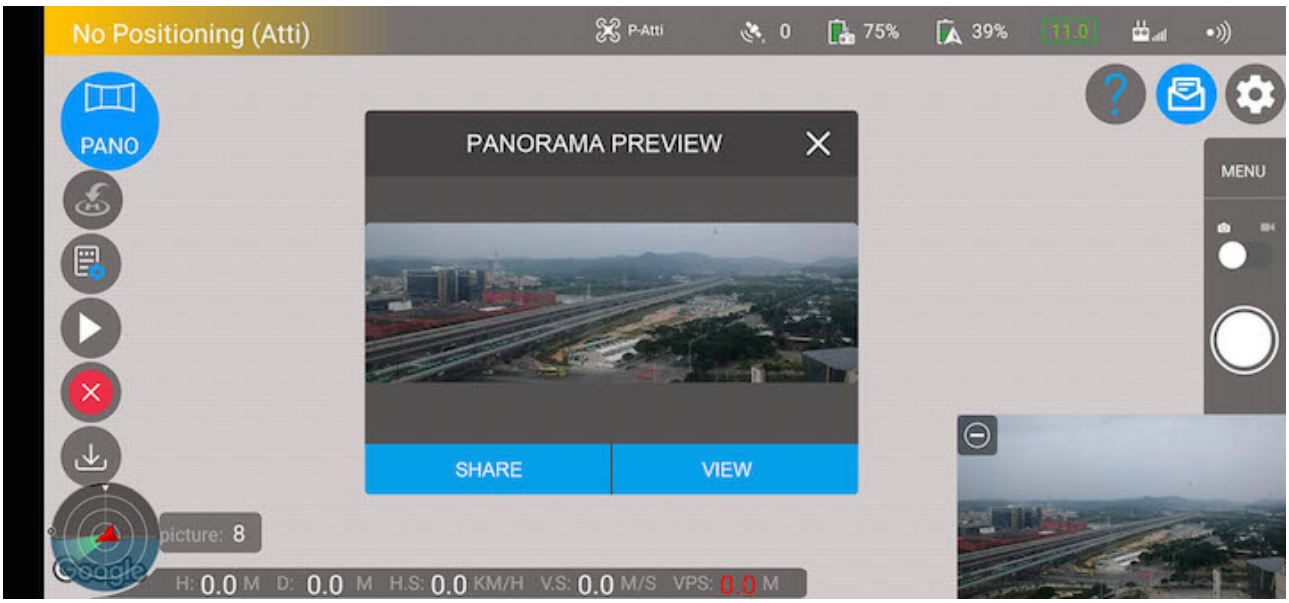


When the task is completed, open the download image. When the download is completed, the composition task will be started automatically, and the picture can be previewed when the synthesis is completed.



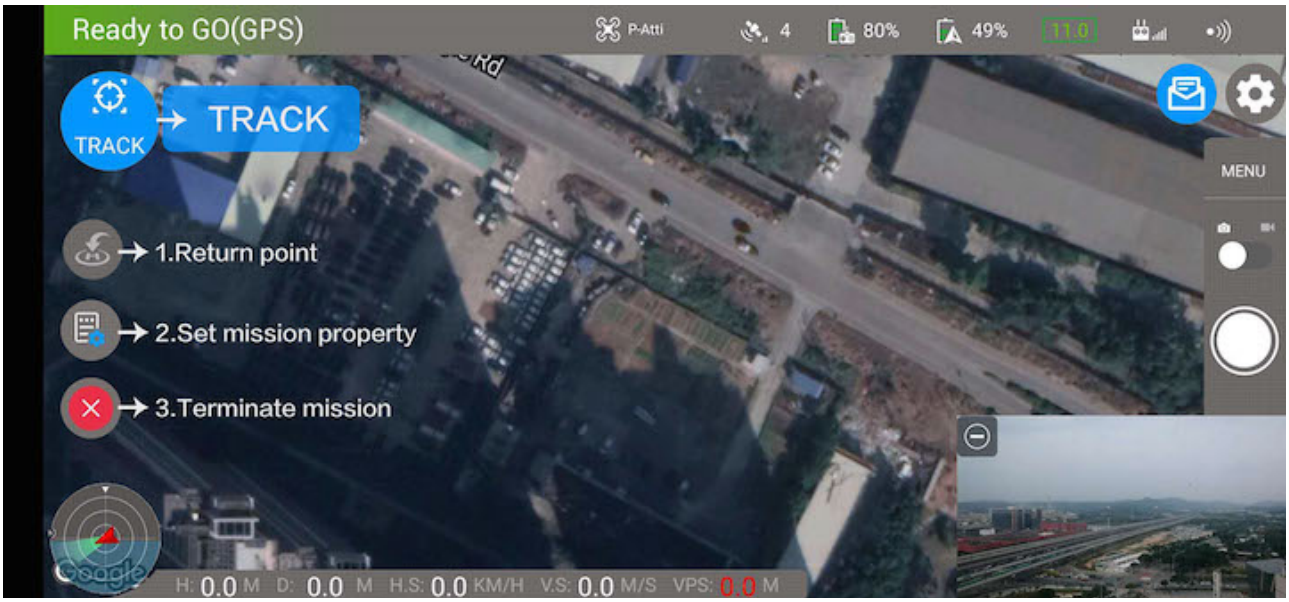


- Panoramic image preview



7. TRACK

Click "mode switching" button to select Track mode



7.1 Select visual tracking target

- Enter the visual tracking mode, frame out the target to be tracked with two fingers, select the tracking target, turn on the tracking mode, and enter the visual tracking mode

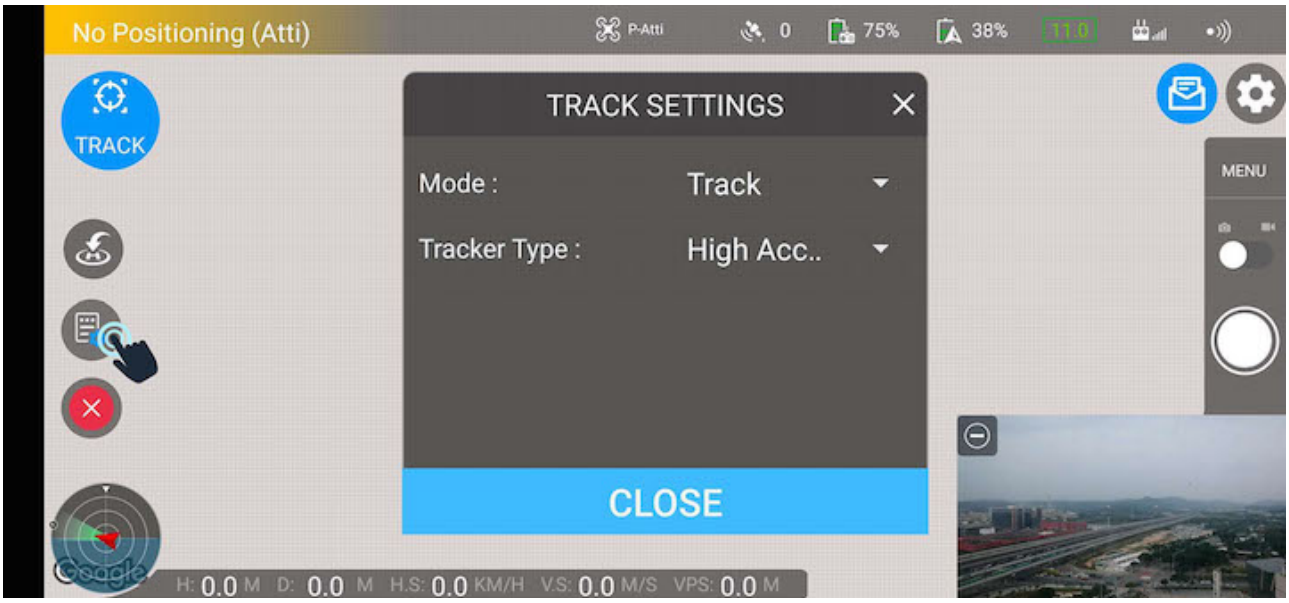
- After selecting the target, click "start icon" to start following the task

7.2 Track settings

- Click “2.Set mission property” button

Mode：Track、Profile、Spotlight

Tracker Type：High Accuracy、Medium accuracy、Low accuracy



六、Setting

1. Camera setting

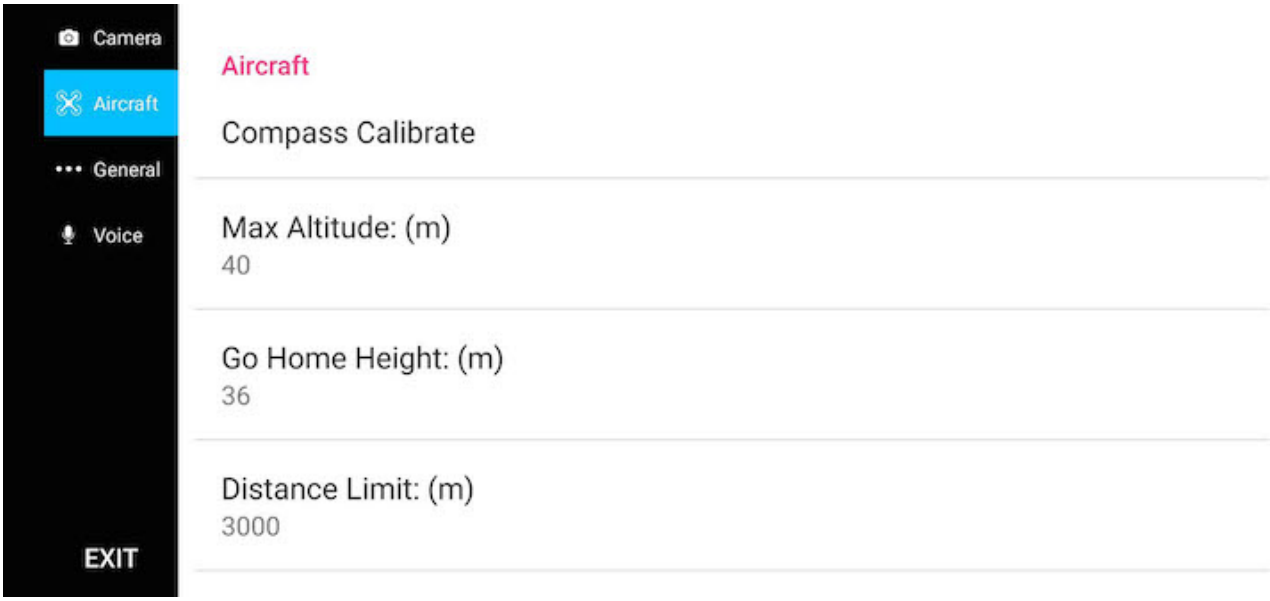
You can set the video format of the camera, white balance, display machine control to No

Camera parameters can also be set in the aircraft interface

Set the exposure parameters of the camera

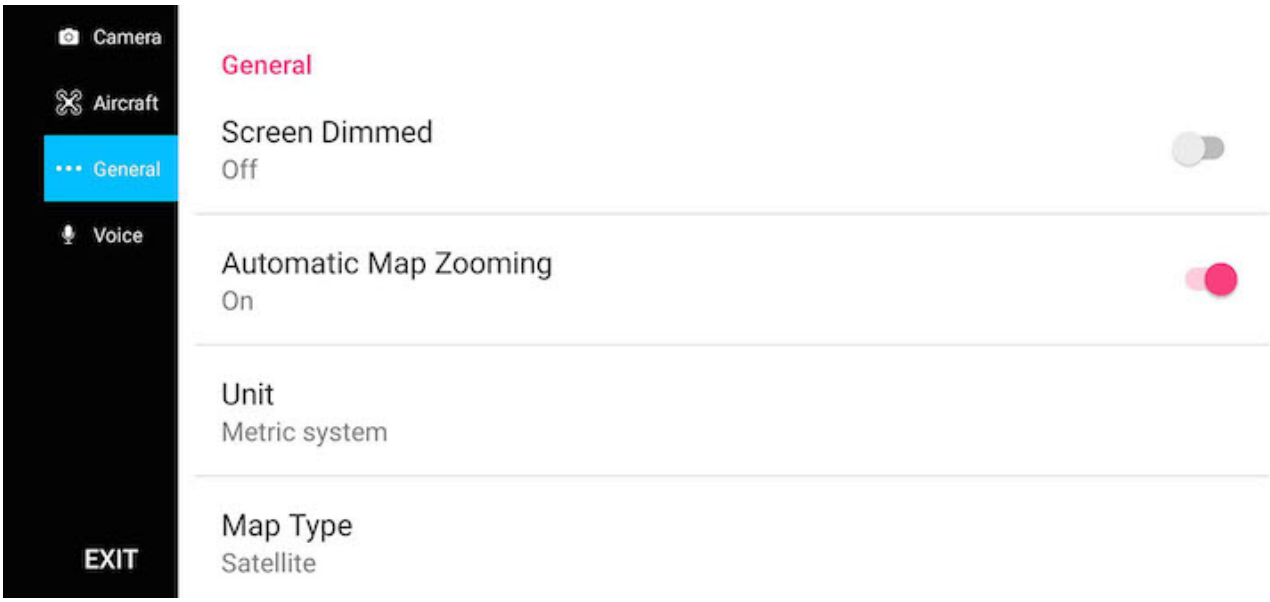
2. Aircraft setting

Set the maximum altitude of the aircraft, return altitude, distance limit, and switch of aircraft indicator light



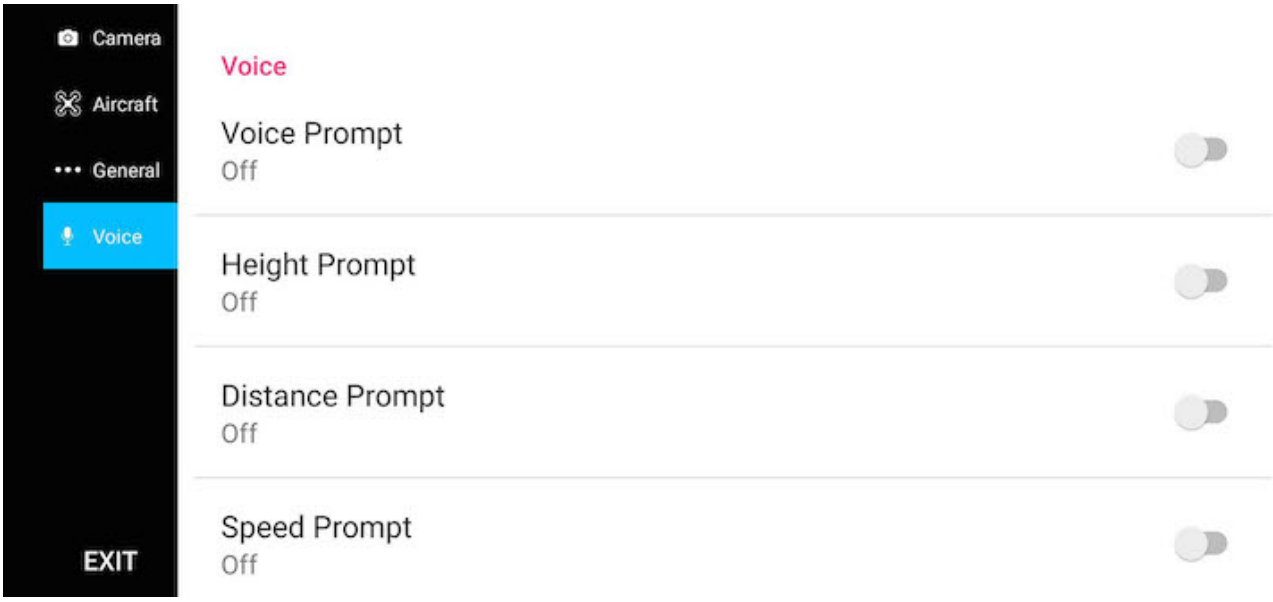
3. General setting

Set the plane's screen to darken, auto zoom map, unit used, map type, language settings, feedback, and privacy terms.



4. Voice setting

Set voice, height, distance, speed prompt on and off settings



七、Put forward feedback questions

1. This application provides a more convenient and simple flight control experience for DJI aircraft users

2. Problems encountered in use or new requirements can be raised through feedback

3. Feedback is very important. Encouraging and criticizing are the biggest driving force to improve software quality and service level