GDU O2 user manual

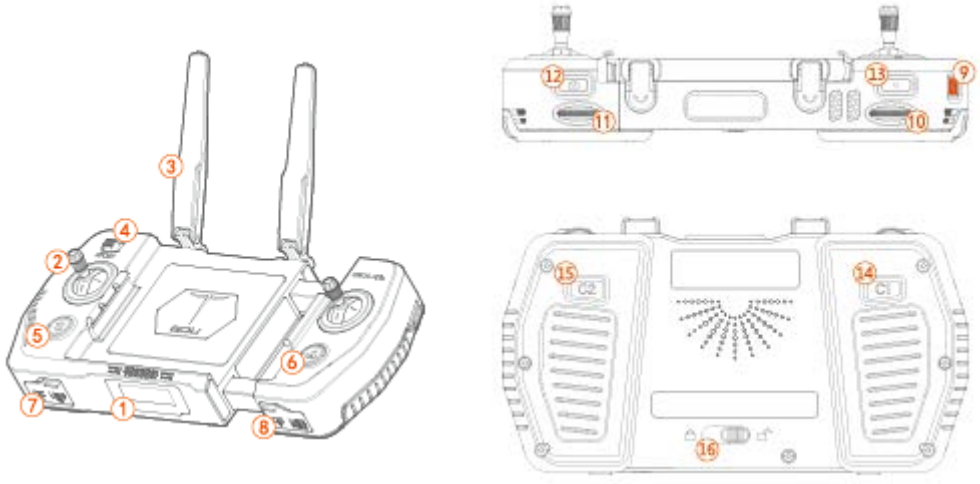
Aircraft

The GDU O2 aircraft, featuring innovative sliding metal arm, aircraft and controller are combined in one, making it portable to carry, easy to use. The three-axis mechanical gimbal camera can capture 4K videos and 13.25 megapixel photos; and it is equipped with advanced binocular vision system, support intelligent obstacle avoidance, visual tracking, gesture recognizing, and other funny functions.

1. Integrated gimbal Camera	7.Head LEDs
2. Downward Vision System	8. Propellers
3. Forward Vision System	9. Intelligent Battery
4. Parameter adjustment/ Data Interface (Micro USB)	10. Battery Level indicators
5. Motors	11. Power Button
6.Tripods	12. Tail LEDs

Remote Controller

O2 remote control is using pulling slide design, making it easy to place mobile devices. It can offer a long-range and real-time data transmission, maximum distance of 2 kilometers. Maximum working time is 1.5 hours.



Unfolded Remote Controller

1. LCD Screen	9. Power Button
2. Control sticks	10. Gimbal yaw dial
3. Antennas	11. Gimbal pitch dial
4. Flight Mode Switch	12. Shutter Button
5. One-button Take-off/Vertical landing	13. Record Button
6. RTH Button	14. Customizable Button C1
7. Power Port (Micro USB)	15. Customizable Button C2
8. USB cable Port	16. Remote Lock/unlock Button

The remote controller can reach to its maximum transmission distance (FCC standard) in a wide open area with no electro-magnetic interference, and at height of 120m (400 feet). The maximum run-time is tested under laboratory environment, only for your reference.

Specifications

Aircraft	
Take-off weight (without cover)	703 g
Take-off weight (with cover)	820g
Max Ascent Speed	5m/s (Sport mode)
Max Descent Speed	3m/s
Max horizontal speed	15m/s (Sport mode, without wind)
Max flight altitude	3500m(11482 feet)
Max Hovering Time	20 minutes (without wind)
Max Flight Distance	13km (without wind)
Operating Temperature	0℃ to 40℃
Satellite Positioning system	GPS/GLONASS (dual modules)

Gimbal	
Controllable range	Pitch: -80° ~30° Roll : -30° ~30° Yaw : -30° ~30°
Forward Vision System	
Sensing range	0.5 to 15 m
Operating Environment	Obstacle with clear texture and adequate lighting (lux>15 Common room lights)
Downward Vision System	
Velocity Range	≤10m/S（2m above ground，adequate lighting）
Altitude Range	0.3 to 13 m
Hovering range	0.3 to 13 m
Operating Environment	Floor with clear texture and adequate lighting (lux>15 Common room lights)
Camera	
Image Sensor	1/3 inch CMOS Effective pixels : 13.25 Megapixels
Lens	FOV 75°, 28 mmf/2.2 , Focus range: 0.5 m to ∞
Distortion	<1.5%
ISO Range	100 – 3200 (Video): 100 – 1600 (Photo)
Shutter Speed	8-1/8000 s
Max Photo Resolution	4000×3000
Video Recording Modes	4K: 3840×2160 @30/25fps 1080P:1920×1080@30fps 720P:1280×720@30fps
Max Video Storage Stream	60Mbps
Photo format	JPG

Video format	MP4
Supported SD card	32GB
Remote Controller and Aircraft	
Digital transmission frequency	
Operating Frequency	5.745GHz - 5.810GHz
Max Transmission distance	2km
Operating Temperature	0- 40℃
WIFI (Image transmission)	
Transmitting frequency	2.412GHz - 2.462GHz
Control distance	>1000m
Supported protocols and standards	802.11 b /802.11 g /802.11 n 20
Battery	1200mAh
Working voltage	7.6 V
Supported Connector Port	Lightning, Micro USB, Type-C
Charger	
Voltage	13.05 V
Rated Power	39.15 W
Intelligent Battery	
Capacity	4000 mAh
Voltage	11.4 V
Battery Type	LiPo 3S

Energy	45.6 Wh
Net Weight	Approx 240 g
Max charging Power	78W

Notice：

In order to avoid property loss or personal injury, please read through the following messages carefully before using the drone for the first time:

Warnings:

- The Quick Start Guide is designed to help the user to perform the first flight. For more flight experience, please read the User Manual online.
- It is prohibited for those who under 18 to use this product.
- It is prohibited to use this product in heavily populated areas.
- It is prohibited to use this product in legally restricted areas.
- Please put the product out of children’s reach.
- It is prohibited to use this product when you are drunk, tired or in poor spiritual conditions.
- Please fly the drone in open outdoor space during good weather.
- All the images shown in this document are just for reference; subject to our available products for more details.

1. Download the GDU Mini App and Watch the Tutorial Videos

Search for “GDU Mini” on the App Store or Google Play, or scan the QR code to download the app on your mobile device.

*Watch the tutorial videos at www.gdu-tech.com or in the GDU Mini App.

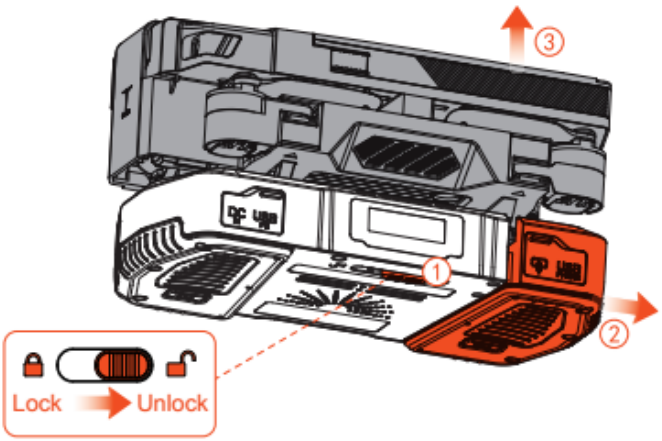
GDU Website

GDU Mini APP

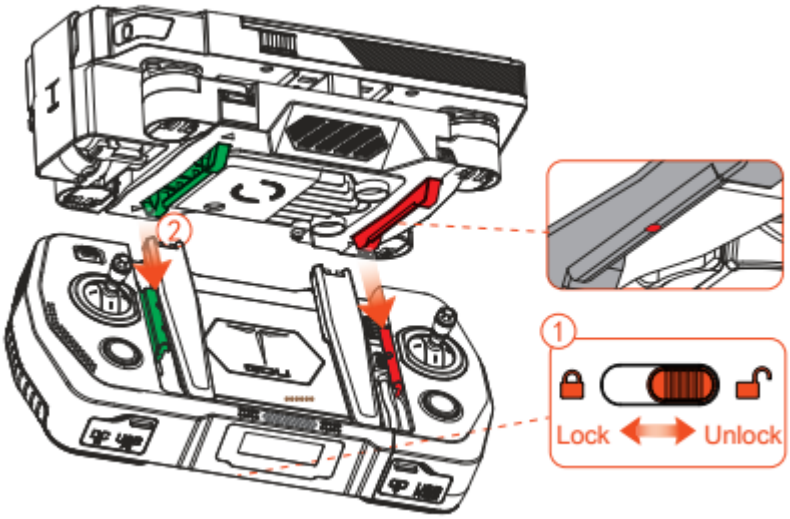
* GDU Mini APP required system version equal or above iOS9.0, Android4.4 .

2. O2 Detachment & Combination

Detachment：Before operating O2, please unlock the limit switch of remote controller; then use index finger to push the mobile end (where the C2 customizable button is on its back); remove the remote controller and separate it from the drone; seen the pictures below



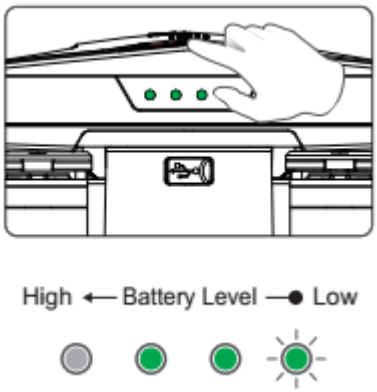
Combination： When packing O2, please unlock the limit switch of remote controller; then make green& red points at the bottom of aircraft to be in parallel with mobile phone locking position on the controller; push the mobile end (where the C2 customizable button is on its back) of the controller and press the aircraft down slightly. Finally lock the limit switch of remote controller.



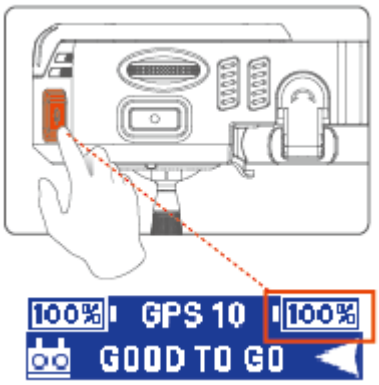
3. Check the Battery Levels:

Check the battery levels of aircraft: short press the power button to check the battery level. Press one time first, and then press and hold the power button for another 2 seconds to power on/off the

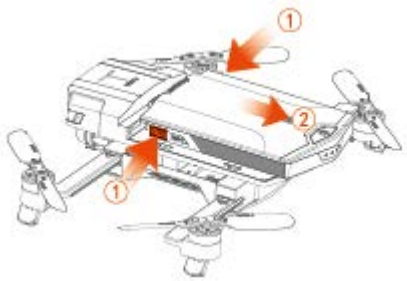
intelligence battery.



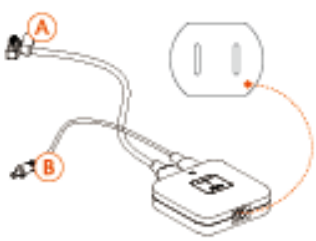
Check the Battery Levels of remote controller: Press and then hold the power button for three seconds to turn on the remote controller. Check the battery level on screen (left side for remote controller; right side for aircraft). Then again press and hold the power button for three seconds to turn off the remote controller.



4. Charge the Batteries



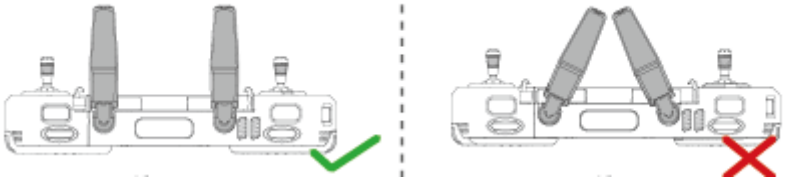
Remove Intelligent Battery



Input voltage: 100-240V　　Charge Time: 2 Hours　　Charge Time: 2 Hours

5. Prepare the Remote Controller

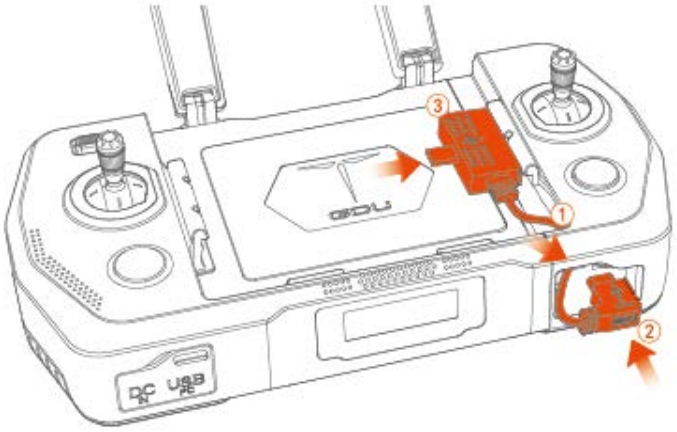
1）　　Unfold the Remote Controller Antenna



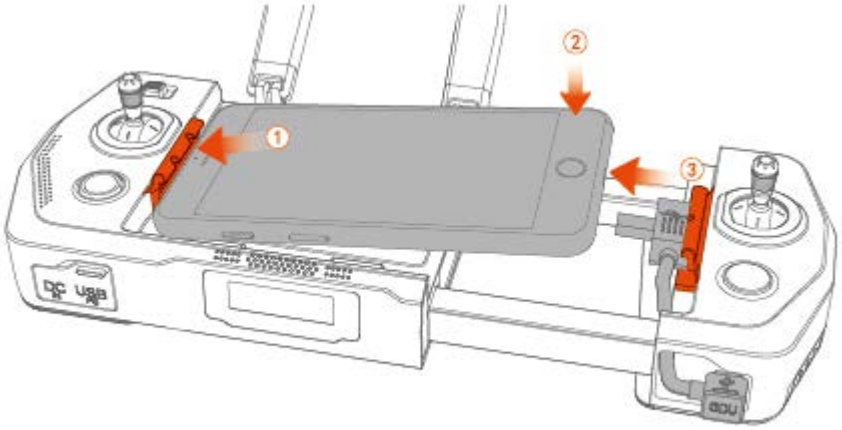
Strong signal　　Weak signal

2）　　Unlock the Remote Controller

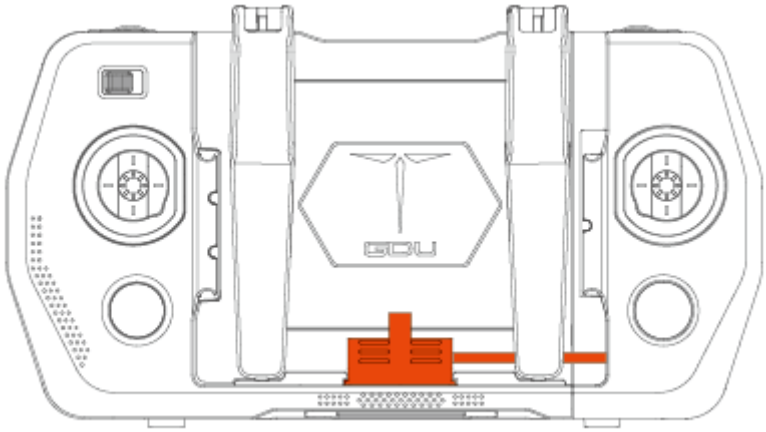
3）　　Take out the right connecting cable, and get the smaller end go through the slot first.



4) Lock the phone to its proper position and connect the larger end of the cable with the phone charging port; make sure the backward switch is locked.

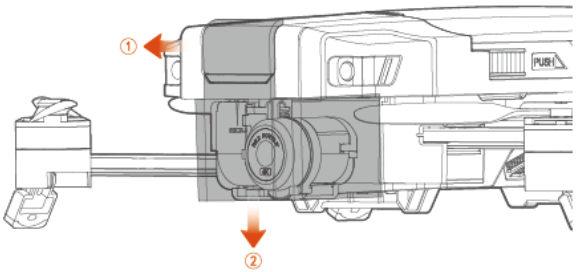


5) After use, please remove the mobile phone, and fix the connecting cable in the card hook



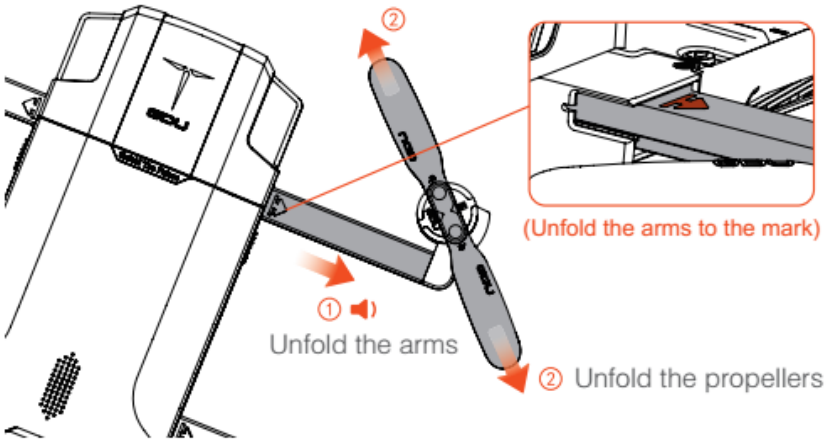
6. Prepare the Aircraft

1) Remove the gimbal protective cover.

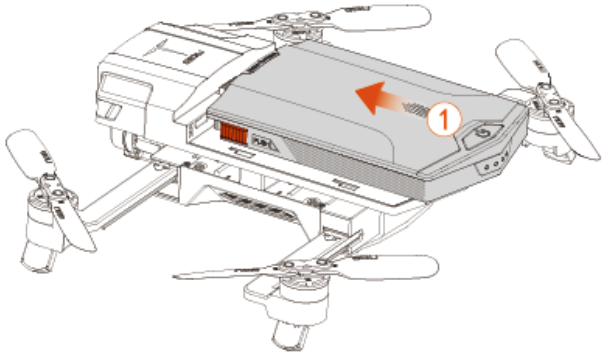


* The gimbal protective cover is used to protect the gimbal; make sure the gimbal protective cover is removed when you are ready to use the aircraft.

2) Unfold the arms and the propellers；



3) Install intelligent battery



7. Prepare for Takeoff

Power on Remote Power on Aircraft Launch GDU Mini App

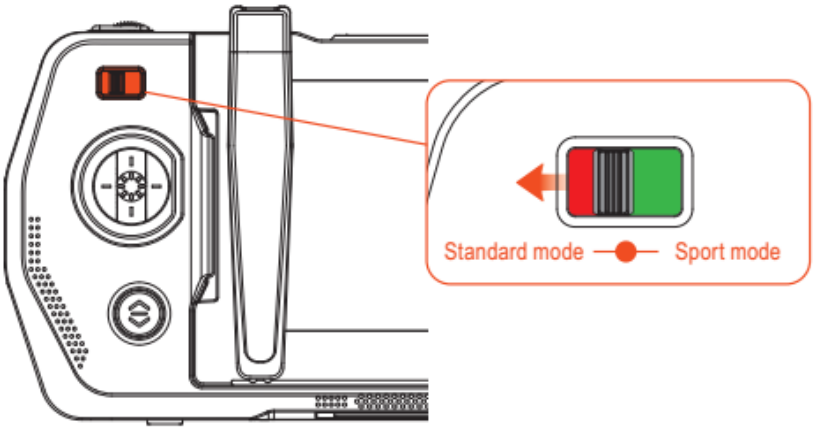
* Ensure the arms and propellers are unfolded before taking off.

* The GDU O_2 can be controlled by using the Remote Controller or the GDU Mini app. To switch control mode, please restart the aircraft and then select control mode switch and the corresponding device.

8. Flight

a) Switch the flight mode to standard mode.

The default setting of remote control is American mode.



b) Take off

Take off: Move the control sticks in the toe-in directions to unlock the aircraft and activate the motors：

Push left stick up slowly to take off. Or press the AUTO TAKEOFF button on the remote controller.

Landing: push left stick down slowly until the aircraft lands on the ground. Hold a few seconds until the motors stop. Or press the RTH button on the remote controller.

Unlock the Aircraft  Unlock the aircraft motor (Toe –in)

Take off: ① push left stick up slowly 

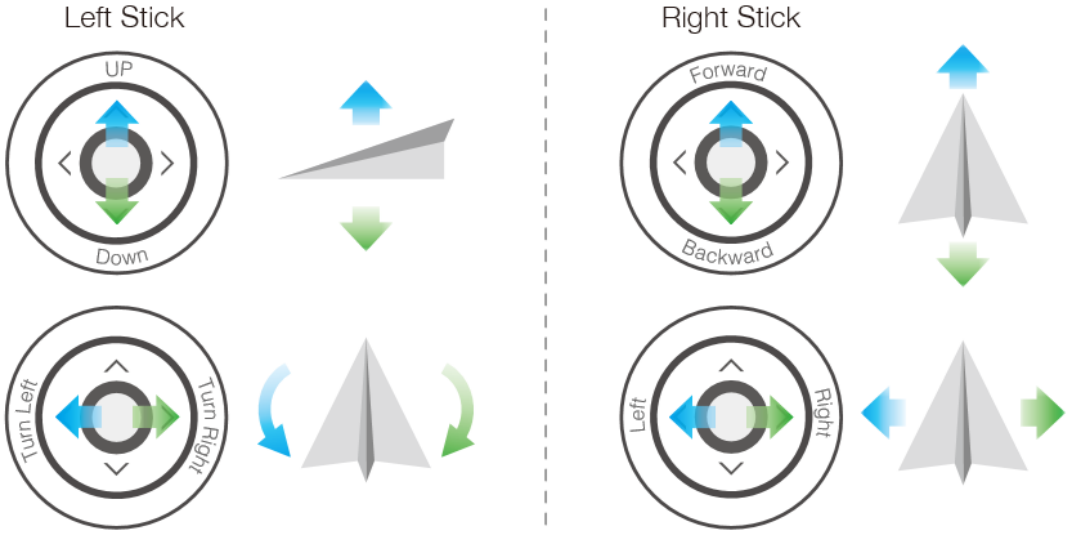
Or ② Press take-off button on Remote controller 

Landing: ① push left stick down slowly until 

Aircraft lands on the ground, and motors stopped

Or ② Press the RTH button smoothly 

The default setting of remote control is American mode (including virtual buttons). The left stick controls the aircraft's altitude and rotation, while the right stick controls its forward, backward, left and right movements.



*The motors can only be stopped mid-flight when the flight controller detects critical error.

2) Controlling flight with GDU Mini app.

1) Power on the aircraft

2) Turn on your mobile device's Wi-Fi, and connect to GDU-02-A-xxx through entering the Wi-Fi Password: 12345678

3) Launch the GDU Mini app, then click to start shooting into the flight interface.

4) Tap One-button Take-off and the aircraft will hover at 2m height. At the same time the virtual sticks will show up on the screen, it can control the flight.

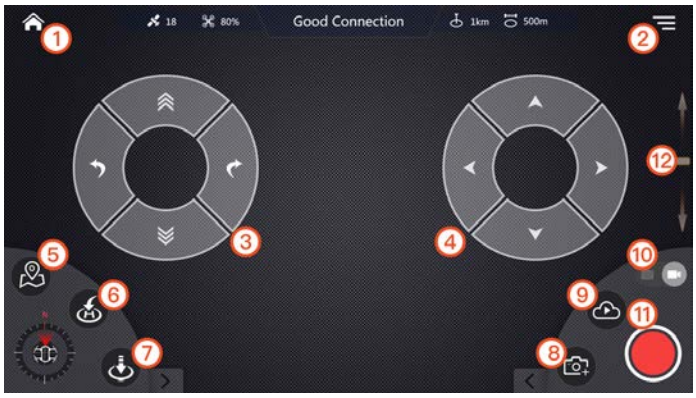
GDU Mini App Operation Interface:

1） Shot mode: smart shot and classic shot mode. Smart shot mode is

designed for beginners and classic shot mode is for professionals.

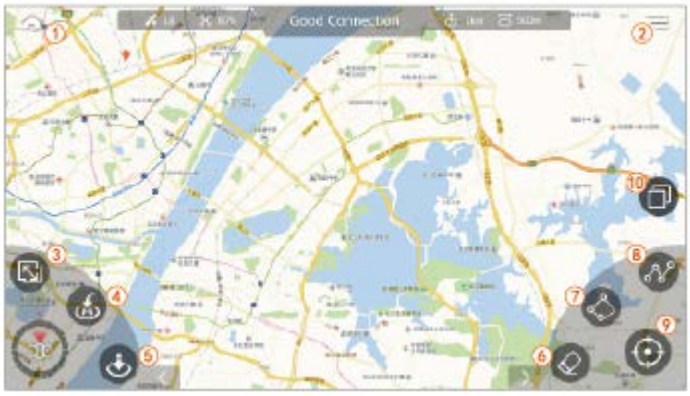
Smart Shot Mode　　Classic Shot Mode

2) Classic Shot Mode



1. Home	5.Waypoint	9. Media in Cloud
2. Settings	6. RTH	10. Photo/Video switch Button
3. Left stick	7.Auto landing	11.Photo/Video Button
4. Right stick	8. Camera settings	12. Dail for pitching

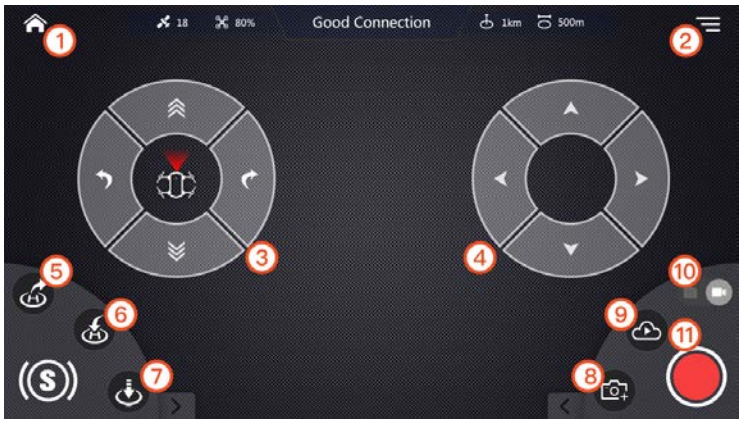
3) Route Planning



1. First Page	5.Auto Landing	9. Current location
2. Settings	6. Erase	10. Map Switch
3. Route planning/Real-time page exchange	7.Electronic fence	
4. RTH	8. Plan Waypoints	

*Please watch the tutorial videos on GDU Mini app or GDU official website www.gdu-tech.com so that you can handle the aircraft and use the functions of intelligent following properly.

4) Instructions for Smart Mode



1. First Page	5.One-button Take-off	9. Media Cloud
2. Settings	6. RTH	10. Photo & Video Switch
3. Left Stick	7. Auto Landing	11.Photo/Video Button
4. Right Stick	8. Camera Settings	

10. Fly Safe

Open Areas Strong GPS signal Keep Within sight Height under 120m (400 feet)

Please fly the drone in wide-open area with good weather and strong GPS signal, and always keep the drone within your sight.

Keep the height under 120m (400 feet).

For the safety of you and others around you and the environment, it's very necessary to know No Fly Zone and basic flight guidelines.

Please read the Disclaimer carefully.

FCC Compliance

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: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

GDU O2

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled

environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

GDU Remote Controller

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 0mm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.