



- Auto Take off
- Auto Landing
- Follow me mode
- Circle flight
- Fence flight
- Single Waypoint flight

- Altitude hold mode
- One key Return To Home
- Automatic Cruise
- Hyper IOC mode
- Backtracking
- Waypoint record

Match with GCS Ground Station Software Quick Start Guide and Systems Flowchart

Specifications:

Main Rotor Dia.: 233mm

Overall (L x W x H): 335 x 335 x 275mm

Weight: 1770g(Battery included)

Takeoff Weight: <2270g

Transmitter: DEVO F12E

Receiver: DEVO-RX707(CE) / RX709(FCC)

Brushless Motor: WK-WS-34-002

Brushless ESC: WST-16AH (R/G)

Main Controller: FCS-X4

Battery: 22.2V 5400mAh Li-Po

Ground Station: GCS

2.4G Bluetooth Datalink: BT-2401A(FCC) / 2401B(FCC)
BT-2402A(CE) / 2402B(CE)

- , , , , ,
- Flight Time: Non-Load 25minutes, Loaded Gimbal and Camera 20minutes.
- M1/M3 rotate in clockwise, motors are the levogyrate thread.

● BT-2401B(FCC)/BT-2402B(CE) Battery Working Time: 6-8 hours.

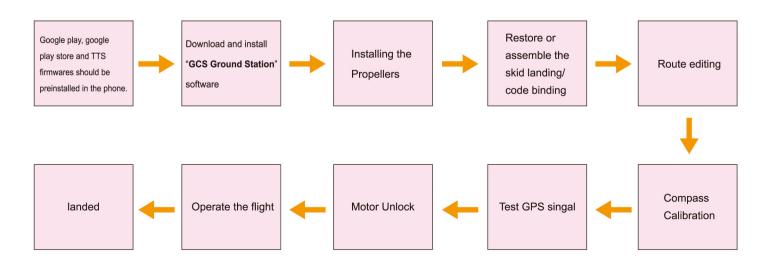
- M2/M4 rotate in counterclockwise, motors are the dextrogyrate thread.
- When assemble the propellers, rotating direction is oppsite to the arrow direction, the directions are the same when take down the propellers.



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Simple operate steps



1.0 Devices that support Ground Station: Android and Apple phone

Android phone requirements:

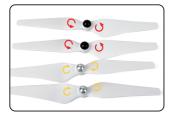
- (1) The Android version should be 4.0 or above, the screen resolution should be 480 x 800 pixels or above.
- (2) Google play services, google play store and TTS software should be preinstalled in the phone.

2.0 Download and install software

- (1) Please download the "GCS Ground Station" software from walkera official web (www.walkera.com) / Google for Android version 4.0 above.
- (2) Apple IOS system, Please download the "GCS Ground Station" software from APP Store.

Suggestion: please set the phone to flight mode when you are using the GCS software to control the flight.

3.0 Installing the Propellers



3.1 Prepare forward propeller (Clockwise arrow mark), counter propeller (counterclockwise arrow mark)



3.2 Match the arrows on the propellers to the arrows on the arm next to each motor. Screw each propeller onto the motor, secure by hand, no need for tools.



3.3 Prepellers assembled (assembled skid landing)



3.4 Prepellers assembled (unassemble skid landing)

4.0 Restore or assemble the skid landing/code binding

4.1 Skid landing assembled(restoration/code binding)

The Landing gear is shipped in the retracted position. **DO NOT try to extend the landing gear by pulling on it.**We will deploy the landing-gear the first time the system is powered, please follow these instructions carefully.

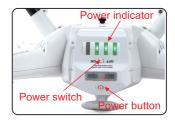


4.1.1 Install the fully charged battery DO NOT turn on the battery until later.

*Please check the charger manual for charging instructions



4.1.2 Turn X4 on its back. The belly and the retractable legs should now be facing up.
MAKE SURE nothing is blocking the legs.



4.1.3 Turn the power switch to "ON" position, and press on the power button about 3-5 second till the Green power indicator solid.



4.1.4 Turn on the power switch (to position ON) of 2.4G Bluetooth Datalink. The green light of bluetooth will flash quickly, waiting for the connection with the phone bluetooth.

4.1.5 Enter phone settings and open the bluetooth function. In the bluetooth search list find and touch "walkera-****", input password 1234 to connect and the connection will be successful if it displays "connected". Exit the settings when finished.

4.1.6 Touch GCS icon at middle of the mibile screen, GCS software will search automatically and display matched bluetooth, then select the matched bluetooth and touch GO icon to enter into main screen. In the main screen, touch icon then touch stick mode to enter stick control and setting screen. (Skid landing comes back automatically)



4.2 Skid landing unassembled(assemle skid landing/code binding)



4.2.1 Prepare two skid landing, skid landing module A/B, 4pcs M2.5X20 screws.



4.2.2 Put the skid landing into the skid landing position.



4.2.3 Install the skid landing module, and screw down the M2.5X20 screw to fix skid landing.



4.2.4 Skid landing installation finished.



4.2.5 Put the aircraft on the horizontal position, slide the power-switch to the ON position, then press on the power button for about 3-5 seconds, until the green power indicator lights solid.



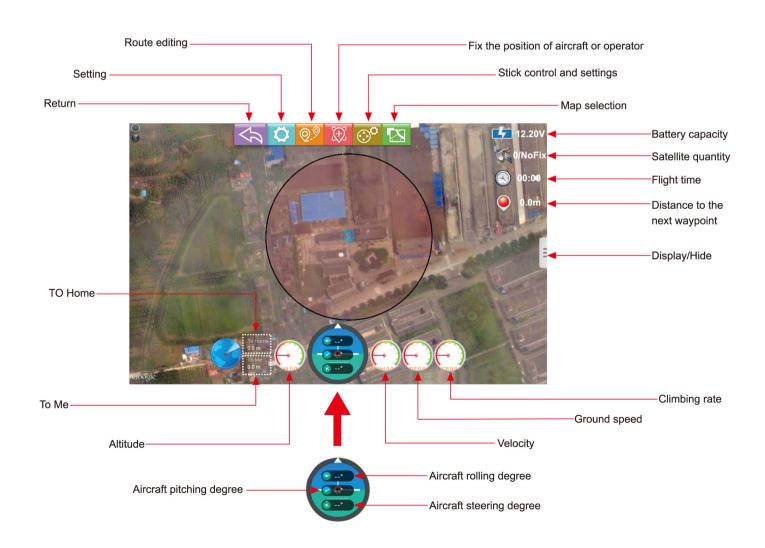
4.2.6 Turn on the power switch (to position ON) of 2.4G Bluetooth Datalink. The green light of bluetooth will flash quickly, waiting for the connection with the phone bluetooth.

4.2.7 Enter phone settings and open the bluetooth function. In the bluetooth search list find and touch "walkera-****", input password 1234 to connect and the connection will be successful if it displays "connected". Exit the settings when finished.

4.2.8 Touch GCS icon at middle of the mibile screen, GCS software will search automatically and display matched bluetooth, then select the matched bluetooth and touch GO icon to enter into main screen. In the main screen, touch control and setting screen.

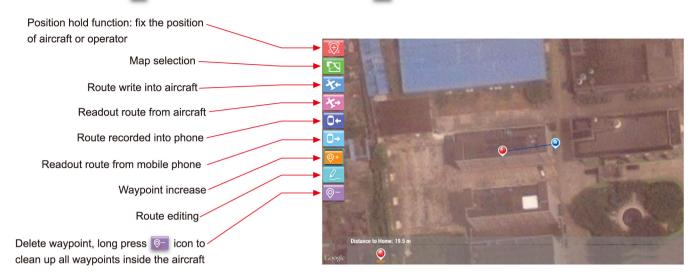


5.0 Main screen instructions

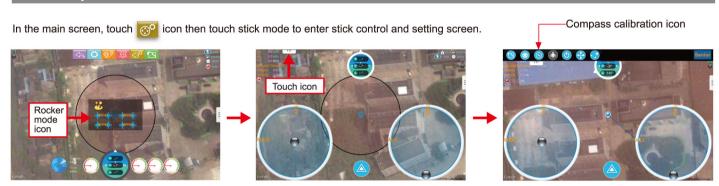


6.0 Route editing illustration

In the main screen, touch 🤯 icon and enter route editing screen. Touch icon 环 to write into the aircraft when finishing route editing.



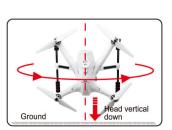
7.0 Compass Calibration



IMPORTANT: Make sure the motors are locked before calibration (Aircraft red LED indicator is NOT flashing). Factory default setting, is for the motors to be locked after the completed ID binding process. (For details on motor lock and unlock process see point 10)



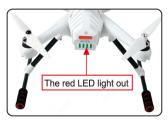
7.1 Touch the icon and enter compass calibration. The red LED of the aircraft will flash rapidly.



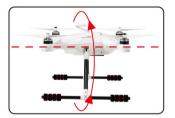
7.5 NOSE DOWN rotation. Rotate the aircraft facing the nose down. rotate smoothly in 90 deg increments. Pausing 1 second for each 90 deg. (0 / 90 / 180 / 270 / 360)



7.2 FORWARD rotation. Rotate tilting the aircraft forward rotate smoothly in 90 deg increments. Pausing 1 second for each 90 deg.(0 / 90 / 180 / 270 / 360)



7.6 Put aircraft to the horizontal position, the red LED light out which means calibration finished. pleasereconnect the aircraft power after calibration.



7.3 CLOCKWISE rotation. Rotate the aircraft around the roll axis rotate smoothly in 90 deg increments. Pausing 1 second for each 90 deg. (0 / 90 / 180 / 270 / 360)



7.4 HORISONTAL rotation. Rotate the aircraft around the YAW axis rotate smoothly in 90 deg increments. Pausing 1 second for each 90 deg. (0 / 90 / 180 / 270 / 360)

IMPORTANT: The first couple of flights, you may expereince the aircraft drifting,

This is normal, please continue to fly the aircraft manually, while the system inprove the calibration, after 5-10 minutes land, lock the motors, this will save the improved settings.

Notice: The slight drifting may continue for a couple of batteries, you will notice significant improvement in the GPShold & stability after 4-5 batteries.

Notice: Always perform the calibration away from eletric fields and metal surfaces.

Trivia: Different brands have different calibration processes, the process is typically refered to as "the Calibration Dance".

8.0 G-3D 3-axis brushless Gimbal installation

IMPORTANT: REMOVE the battery from the Scout X4 while you install the gimbal

The gimbal is a high-performance eletromechanical design and should be handled with great care. AVOID using force when installing.



8.1 Prepare the G-3D gimbal, M3x12 screw, spring.



8.2 Slide the gimbal unto the quik mount rail, the gimbal shouldslide from the front of the aircraft towards the rear, gently move it as far back as possible.



8.3 Install the springloaded M3x12mm "finger screw" at the front of the gimbal, this will secure the gimbal.



8.4 Connect the 9pin white data cable to the "complex data port" on the bottom of the X4, then connect the cable to the back of the G-3D gimbal.

9.0 Installing the iLook+ 1080p camera with 5.8ghz video link



9.1 Screw the short "mushroom" antenna into the camera, use the included wrench to gently secure the antenna, do not use force.



9.2 Release the two M2x4 screws securing the camera mounting bracket.



9.3 Install the camera into gimbal, Fix it with camera fixed frame (ensure the gap close to the lens), then screw the M2x4 screw to the camera fixed frame again.



9.4 Connect the cameras power cable to the power port on the G-3D gimbal controller.



9.5 The iLook+ camera is now successfully installed in your G-3D gimbal.

10.0 Motor Unlock / Lock

10.1 Motor Unlock

After successful in binding the code, push the throttle control ball to the lowest point when under stable mode. Long press stable mode icon when the red LED indicator turn solid red, it means that the motor is unlocked. In this condition, if you turn upward the throttle control ball, the motor will run.

Note: For safety, the motors will automatically lock after 10 seconds. This means, if you do not start flying in 10 seconds, you have to unlock the motors again.

10.2 Motor Lock

After unclock the motor, push the throttle control ball to the lowest point, long press "AUTO Take Off" icon (1), when the Red LED indicator light out means the motor locked, and the motor won't moved if you push up the throttle control ball.



Long press stable mode icon: Motor unlocked



Long press AUTO take off icon: motor locked

11.0 GPS indicator lights

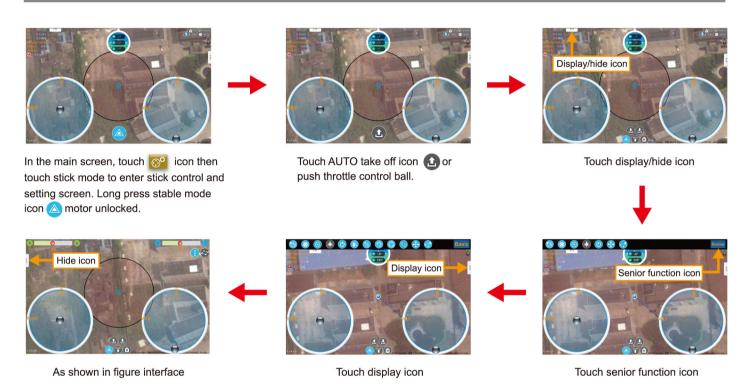
GPS Satellites	<6	6	7	8	9	10	11	12	13
The blue	No	Blinking							
LED status	blinking	once	2 times	3 times	4 times	5 times	6 times	7 times	8 times

IMPORTANT: For SAFE flight in GPS flight mode: the BLUE indicator light should at least "double" blink, (two blinks at a time).

It is highly recommended to wait for "triple blink" 8 statelites before starting the flight.

NEVER attempt to AUTO-START with less than "triple blinks"

12.0 Function and stick control interface description



Function	Icon	Instructions		
Stable (normal) mode		Touch icon Switch to common flight, using the control ball to control the Aircraft. Long press the icon to unlock the motor.		
AUTO Take Off		Place aircraft on level ground Unlock Motors Touch icon The aircraft could take off automatically Notes: You can use this function only when you can receive GPS signal and the GPS signal should be in good condition.		
Auto Landing		Touch icon ────────────────────────────────────		
Altitude hold mode		Touch icon The aircraft could get into Altitude hold mode automatically Notes: (1) You can use this function only when you can receive GPS signal and the GPS signal should be in good condition. (2) If there is no GPS signal or the signal isn't in good condition, it will enter automatically altitude hold mode, instead of holding at one position.		
One key Return To Home	(E)	Touch icon — The aircraft could get back to the origin automatically Notes: You can use this function only when you can receive GPS signal and the GPS signal should be in good condition.		

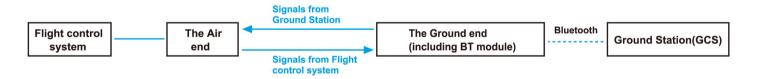
Function	Icon	Instructions		
Map selection		Map selection		
Stick mode selection	③	There are 4 types of stick mode.		
Compass calibration		Compass calibration		
Gravity Sensor		The default setting is off, after turning on, it will be switched to gravity sensor control. Lean forward Right-leaning Left-leaning Right-leaning Backward		
DATA Switch	(1)	Factory defaults are as "open".		
Hyper IOC mode	*	IOC means the aircraft flight direction only related to the position of the first GPS signals, unrelated to head direction of the aircraft. Notes: (1) You can use this function only when you can receive GPS signal and the GPS signal should be in good condition. (2) During the flight, the drone will enter hyper IOC mode when the distance between the flight position of drone and the initial position where the GPS signal has been received is more than 10m. (3) When you take the headless flight, you just need to press and hold back the control ball to make the aircraft fly back to the origin.		
Waypoint record		Touch icon ——— The aircraft could record the flight points automatically. Notes: You can use this function only when you can receive GPS signal and the GPS signal should be in good condition.		
Follow me mode	*1	Touch icon The aircraft could follow the location of mobile automatically Touch the icon under flight condition. In the automatically altitude setting box, according to environment choose "Normal" or "Fast" to set altitude. Notes: You can use this function only when you can receive GPS signal and the GPS signal should be in good condition.		

Function	lcon	Instructions		
Automatic Cruise	©	Touch icon The aircraft could cruise automatically Touch icon , the plane will cruise automatically and cruise according to pre-set route. Under condition of flight, if you want to edit a new route, please long press the Automatic Cruise Icon . Touch icon Write to write into the aircraft when the edition is finished. Delete Delete waypoint Cruise Cruise according to edit route Store Record to mobile phone Write Write into aircraft Notes: You can use this function only when you can receive GPS signal and the GPS signal should be in good condition.		
Backtracking	9	Touch icon — The aircraft could get back to the origin automatically. In cruise automaticly mode, touch the icon, the aircraft will comes back automatically according to the pre-set route. Notes: (1) You can use this function only when you can receive GPS signal and the GPS signal should be in good condition. (2) Must touch the icon before aircraft arrive at the last waypoint to make it return back in same way.		
Circle flight		Touch the icon Touch the icon		
Single Waypoint flight	Q.Q	Touch icon The aircraft will hover when arriving the flight point. Touch the icon In the automatically altitude setting box, you can set altitude according to environment and touch OK icon to start. Notes: You can use this function only when you can receive GPS signal and the GPS signal should be in good condition.		
Fence flight		Touch icon — Get into fence flight automatically After touching the icon, the aircraft could only fly within the set area. The aircraft will return automatically when reaching the edge Notes: You can use this function only when you can receive GPS signal and the GPS signal should be in good condition.		

Function	lcon	Instructions		
Skid landing folded	Â	Touch the icon to make the aircraft skid landing folded		
Skid landing unfolded	S	Touch the icon to make the aircraft skid landing unfolded.		
Return distance		Return distance		
Control the gimbal tilting	O% Controlled variable			
Control the gimbal rolling	(+)	0% Controlled variable		

13.0 2.4G Bluetooth Datalink

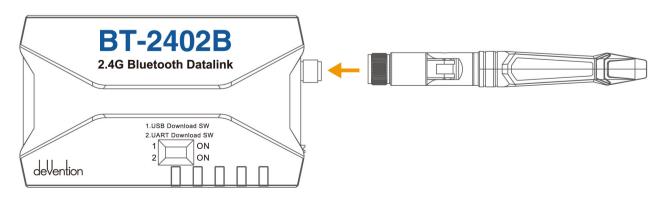
The 2.4G Bluetooth Datalink consists of Air end and Ground end, which provides reliable and stable long distance wireless transmission when Ground Station software be used. The signal flow is as shown below.

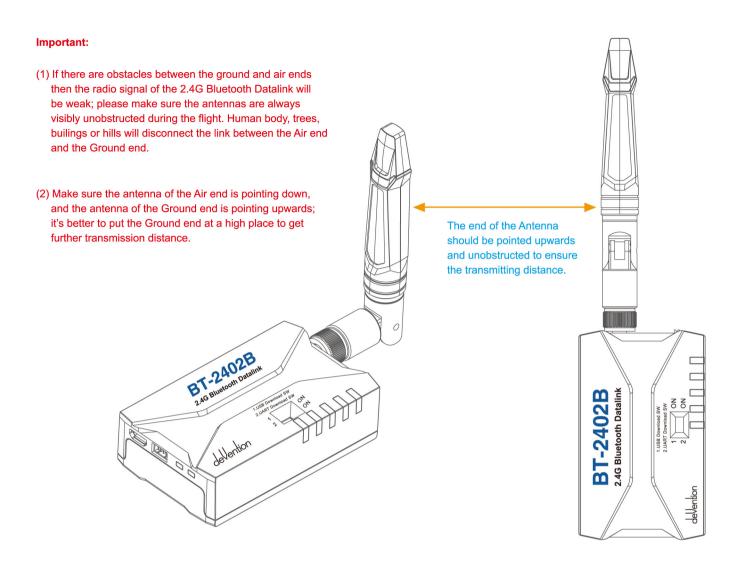


Air end: same usage as BT-2401A(FCC)/BT-2402A(CE), take BT-2402A(CE)as an example.

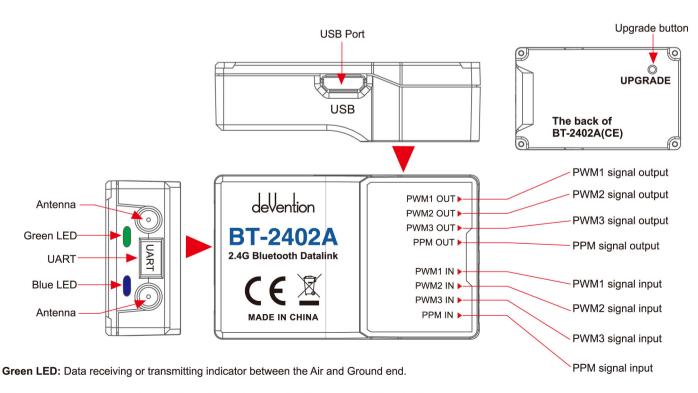
Ground end: same usage as BT-2401B(FCC)/BT-2402B(CE), take BT-2402B(CE) as an example.

13.1 Antenna Installation



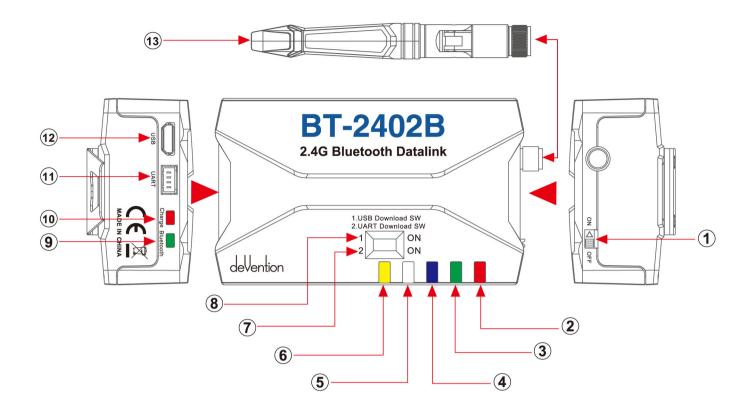


13.2 The cognition of BT-2402A(CE) the Air end



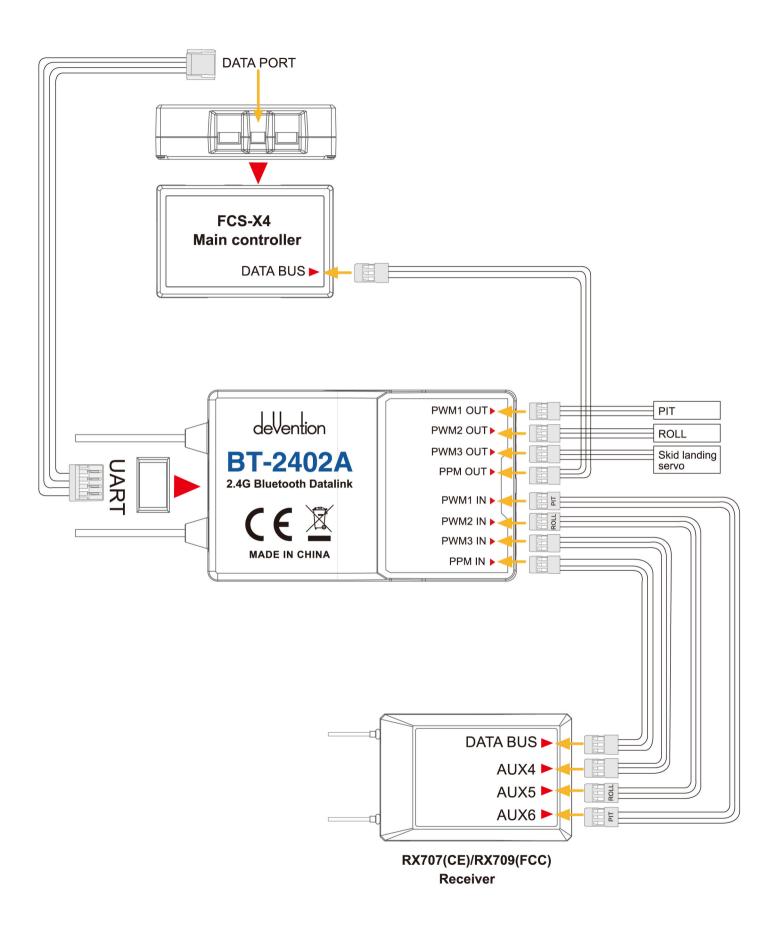
Blue LED: Data receiving or transmitting indicator between the Air end and flight controller.

13.3 BT-2402B(CE) Ground end instruction



1	ON-OFF: Power switch
2	Power LED: Power indicator(RED)
3	COM-TX LED: Indicator of data receiving from ground station to the ground end (Green).
4	COM-RX LED: Indicator of data transmitting from the ground end to the ground station (Blue).
5	RF-RX LED: Indicator of data receiving from the flight controller to the ground end (White).
6	RF-TX LED: Indicator of data transmitting from the ground end to the flight controller (Yellow) .
7	1 USB Download SW
8	2 UART Download SW
9	Bluetooth: Bluetooth indicator (Green)
10	Charge: Charging indicator (Red)
11)	UART
12	USB: USB port
13	Antenna

13.4 Cables connectting illustration

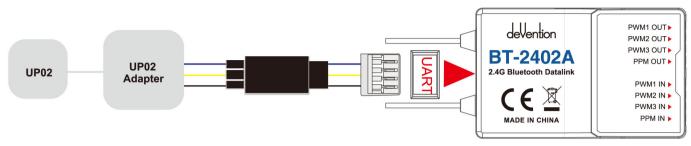


13.5 Program Upgrade

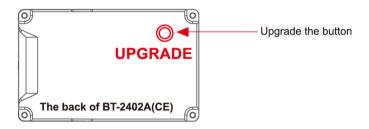
Both the Air end and the Ground end program can be upgraded in Walkera website. Upgrade tool: UP02 and UP02 adaptor.

13.5.1 Air end Upgrading

(1) Please insert the blue, yellow, black color plug to the corresponding upgrading connection socket and insert the other end to the UART port.

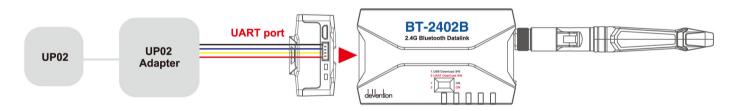


(2) Press button "UPGRADE" to supply power enter upgrading statue.

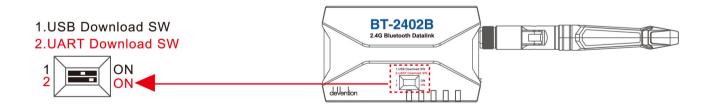


13.5.2 Ground end Upgrading

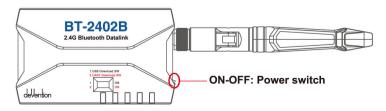
(1) Please insert the red, yellow, blue, black color flat cable to the UART port.



(2) Turn the switch "UART Download SW" ("ON" position)



(3) Turn on the power switch to enter into upgrading status ("on" position)



13.6 LED Indicator descriptions

	LED status	Status instructions		
	Green LED flashes quickly	The Air end and Ground end is receiving/transmitting data		
	Green LED keeps solid	The Air end and Ground end do not receive/transmit data		
The Air end	Blue LED flashes quickly	The Air end and Flight control end is receiving/transmitting data		
	Blue LED keeps solid	The Air end and Flight control end do not receive/transmit data		
	Green and Blue LED flashes slowly	The Air end and Ground end lost signal		
	Power LED keeps solid Red	Normal power voltage		
	Power LED flashes Red	Power voltage is less than 3.3V		
	COM-TX LED flashes Green quickly	The Ground end is receiving Ground Station data		
	COM-TX LED keeps solid Green	The Ground end dose not receive data from Ground Station data		
	COM-RX LED flashes Blue quickly	The Ground end is transmitting data to the Ground Station		
The Ground end	COM-RX LED keeps solid Blue	The Ground end does not transmit data to the Ground Station		
	RF-RX LED flashes White quickly	The Ground end is receiving Flight Control data		
	RF-RX LED keeps solid White	The Ground end does not receive Flight Control data		
	RF-TX LED flashes Yellow quickly	The Ground end is transmitting data to the Flight Control		
	RF-TX LED keeps solid Yellow	The Ground end does not transmit data to the Flight Control		
	RF White and Yellow LED flashes slowly	The Ground end lost contact with the Air end		
	Bluetooth LED flashes Green quickly	Bluebooth unconnnect		
	Bluetooth LED flashes Green slowly	Bluebooth connnected		
	Charge LED keeps solid Red	Under charging		
	Charge LED lights out	Charging finished / normal situation		

14.0 Ground station software setting

14.1 Channel setting

In the main screen, touch oicon and enter into the setting interface.



ELEV, AILE, THRO, RUDD default setting is "NORMAL".

Advanced Use offline maps use map tiles on the local storage for offline map view(under Maps directory) 14.2 Parameter Setting Enable Auto Pan Enable Text To Speech Enable TTS English Enable TTS Chinese speak messages for important events_chinese Enable FollowMe Mode **7** Configuration UI Style mai user interface display style **UI** Interaction user control interface interaction switch Curve Setting Wifi Camera Parameter Setting: Parameter Configuration: show curve setting interface or not Gsensor Reverse reverse the Gsensor's orientation FollowMe Height Set One Key Takeoff Waypoint Default Altitude default height = 15 Flight Path Size

(1) Gsensor Reverse

If the gravity sensor be activated and the aircraft acts different from the corresponding tablet pc or phone's inputting (please refer to page 7 for Gravity Sensor explanation), please press " $\sqrt{}$ " to reverse it.

(2) FollowMe Height Set

Default height=10m

You can change the height with new settings(5-200m).

(3) One Key Takeoff

Default height=10m

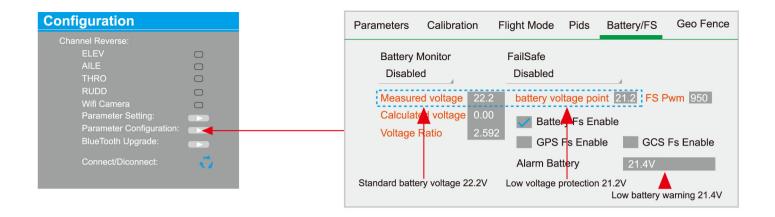
You can change the height with new settings(5-15m).

(4) Waypoint Default Altiude

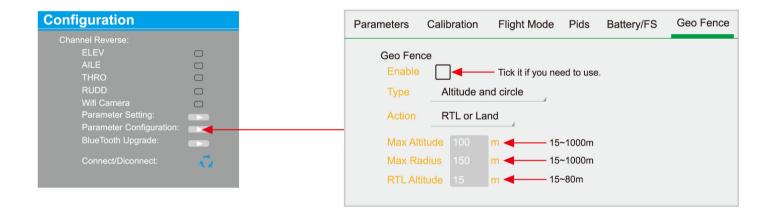
Default height=15m

You can change the height with new settings(5-400m).

14.3 Battery voltage point



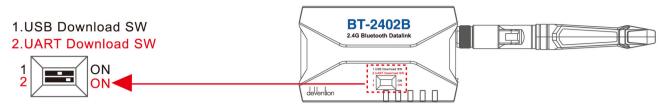
14.4 Geo Fence



14.5 Bluetooth Upgrading

14.5.1 BT-2401B(FCC)/BT-2402B(CE) Ground end upgrading

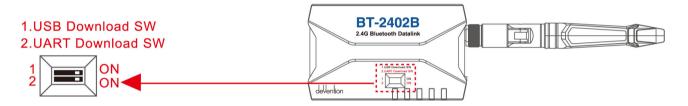
(1) Turn on the switch "2. UART Download SW" (position "ON")



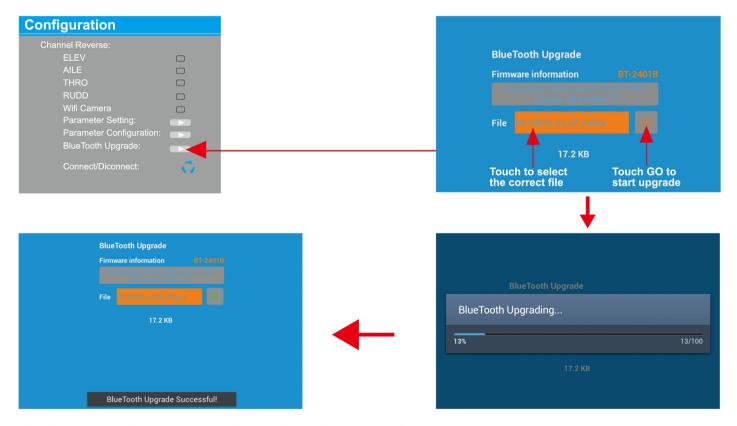
- (2) Connect the Ground end BT-2401B(FCC)/BT-2402B(CE) to Ground Station software GCS and entering into the upgrade interface.
- (3) Choose the correct Ground end file to upgrade

14.5.2 BT-2401A(FCC)/BT-2402A(CE) Air end upgrading

(1) Turn on the switches of "1. USB Download SW" and "2. UART Download SW" (To "ON")



- (2) Connect the ground end BT-2401B(FCC)/BT-2402B(CE) to Ground station software GCS and enter into the upgrade interface
- (3) Connect the Air end BT-2401A(FCC)/BT-2402A(CE) to the Ground end BT-2401B(FCC)/BT-2402B(CE).
- (4) Choose the correct air end file to upgrade



Tips: Please reconnect and upgrade again if the upgrading can't be finished and succeed in one minute.

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