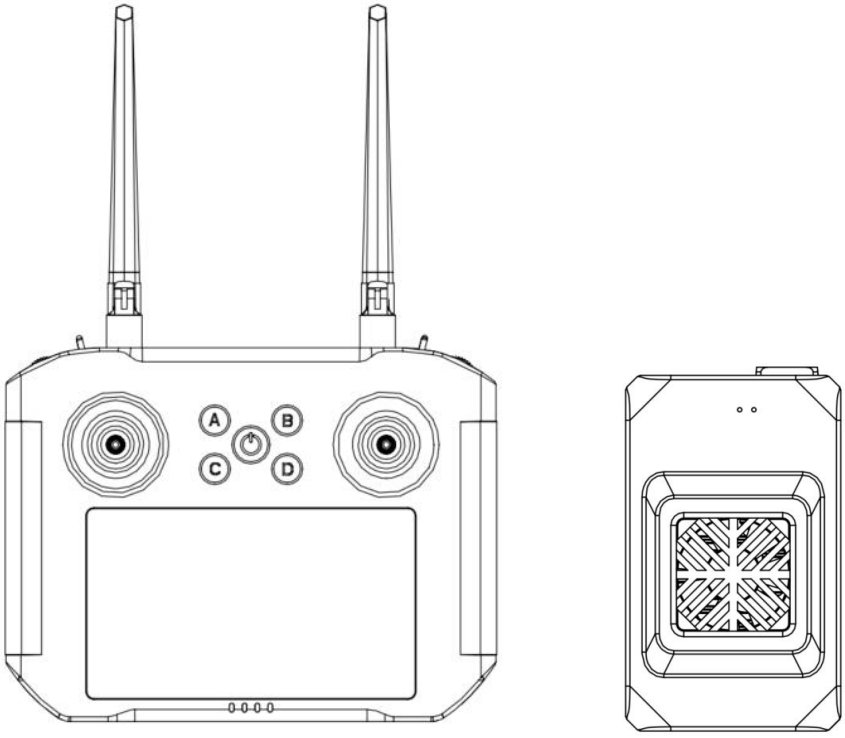
Taisync ViuRC5 User Manual

www.taisync.com

Contents

1 Package Contents

Remote Controller & Air Unit



Accessories

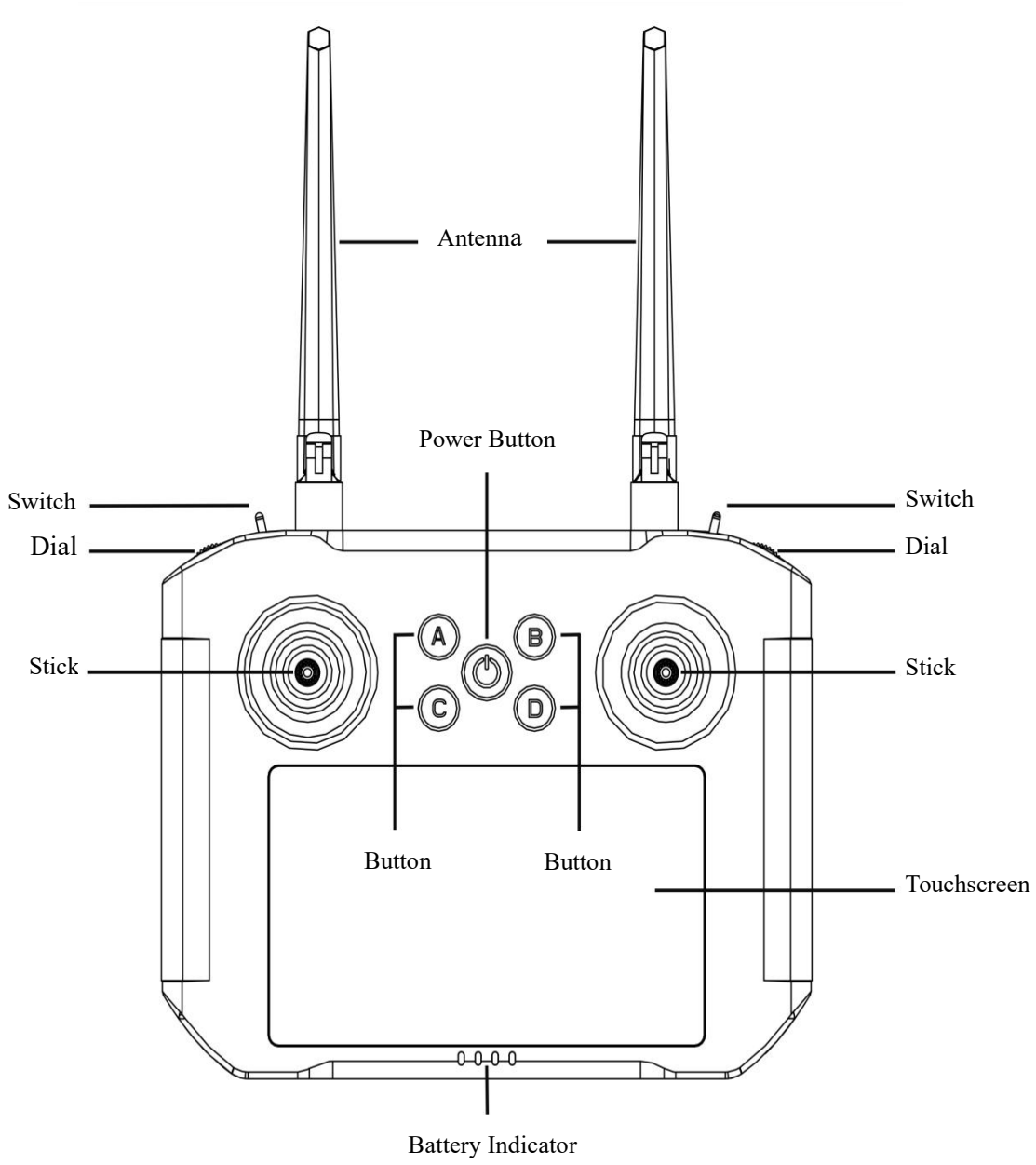
No.	Item	Quantity
1	Charger	1
2	USB cable	1
3	Air unit adaption cable	2
4	Air unit antenna	2
5	Ethernet cable	1
6	Power cable	1
7	Air unit IP camera	1

2 Product Description

2.1 Parameters

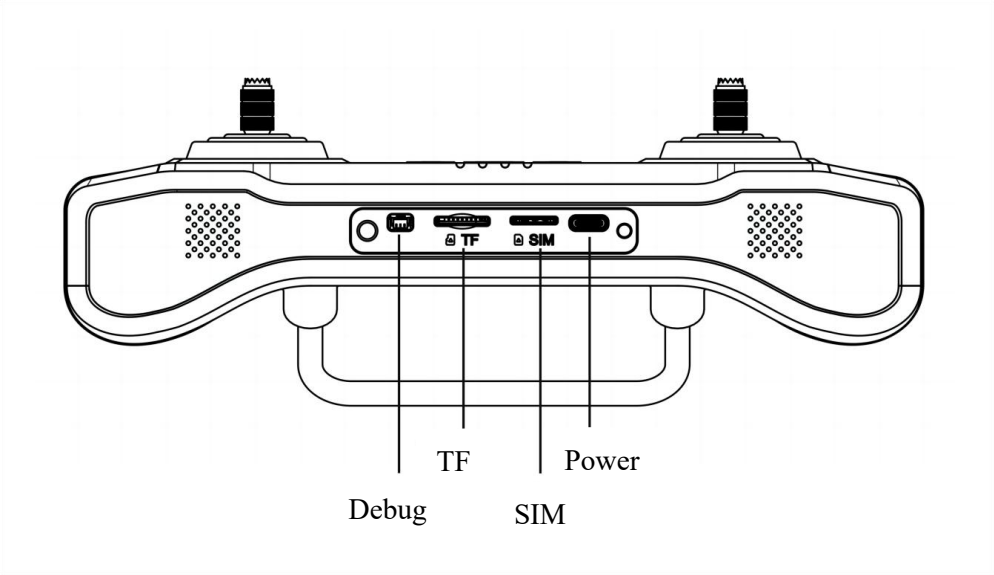
General information	
Working frequency	2.4GHz/5GHz
Transmitting power	26dBm@2.4GHz, 24dBm@5GHz
Max. range	15km
Arg. range	3km
RC channels	14
Operational temperature	-10℃~ +55℃
Air unit	
Dimension	83*50*22.5mm
Weight	41g
Voltage input	6S~16S（22.2V-59.2V）
Power consumption	8W
Interface	ETH*2, TTL*2, S.BUS*1
Remote controller	
Display	5.5’’ LCD touch panel
Operating system	Android 9.0, 2GB RAM
Capacity	16GB
Dimension	210×178×75mm
Weight	793g
Battery	7800mAh 7.4V
Power charge interface	Type-C
Charging time	2h
Flying time	6h

2.2 RC Controls

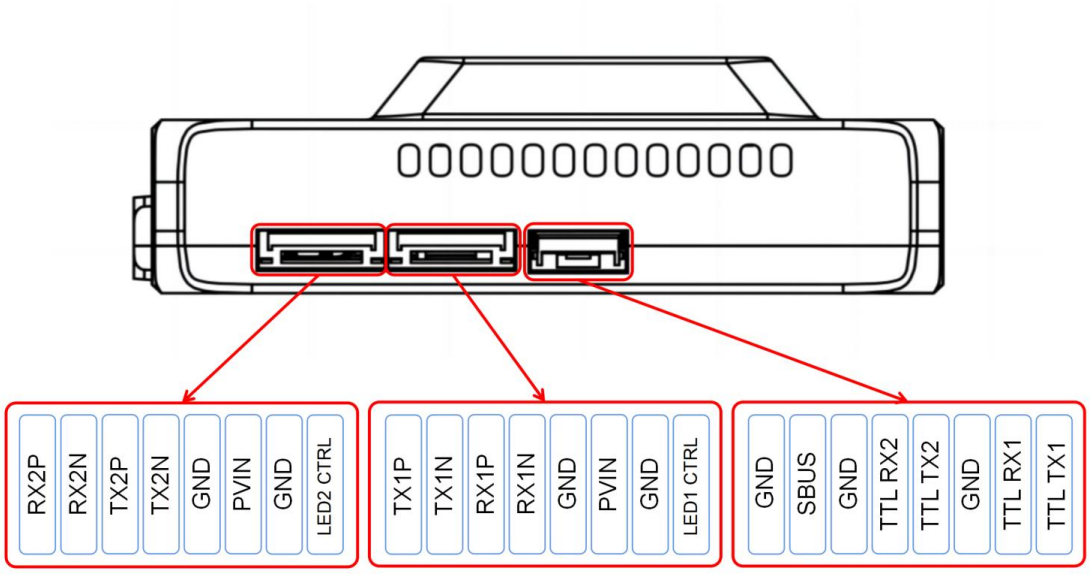


Channel no.	Name	Channel assignment	Note
1	S1	Right stick	
2	S2	Right stick	
3	S3	Left stick	
4	S4	Left stick	
5	T1	Left upper 3-point switch	
6	T2	Left lower 3-point switch	
7	T3	Right upper 3-point switch	
8	T4	Right lower 3-point switch	
9	W1	Left dial	
10	W2	Left dial	
11	A	Button A	Self-locking by default
12	B	Button B	Self-locking by default
13	C	Button C	Non-self-locking by default
14	D	Button D	Non-self-locking by default

2.3 Remote Controller Interfaces

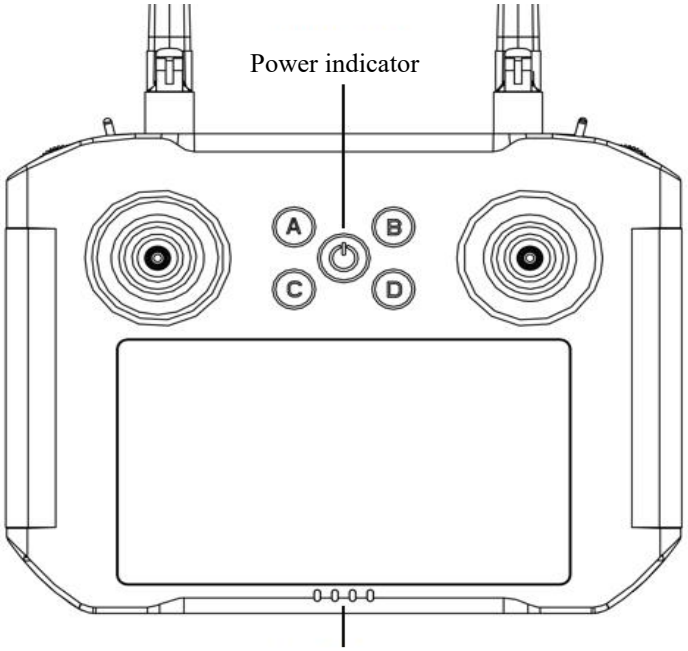


2.4 Air Unit Interfaces



2.5 Status Indicators

2.5.1 RC status light indicators



（1）Power indicator

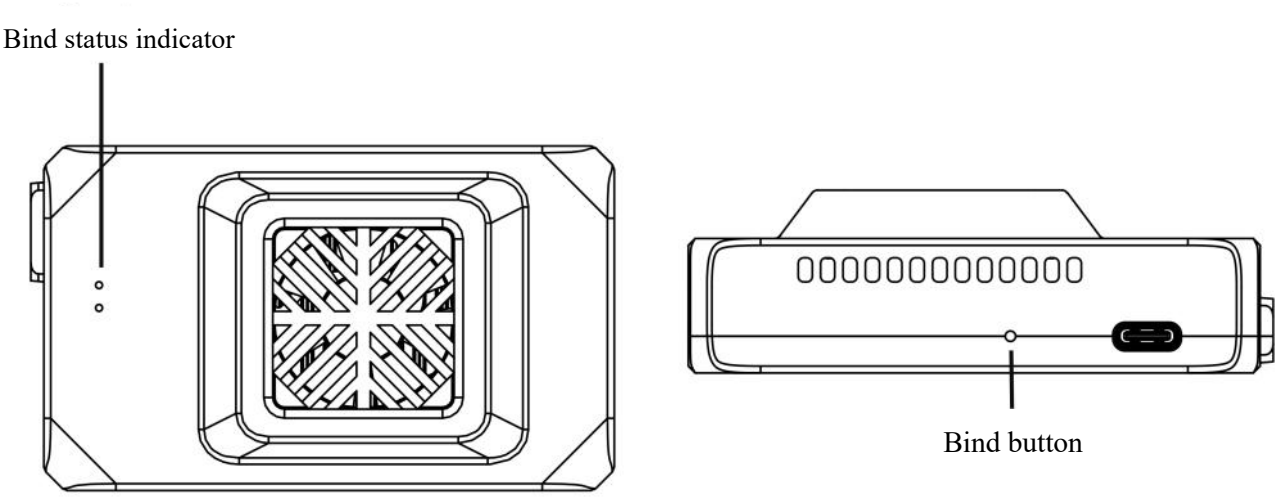
It will be solid on in red after RC is powered on.

（2）Battery level indicator

Battery level indication				
●	○	○	○	0%—25%
●	●	○	○	25%—50%
●	●	●	○	50%—75%
●	●	●	●	75%—100%

●On ○Off

2.5.2 Air unit status indicator& button



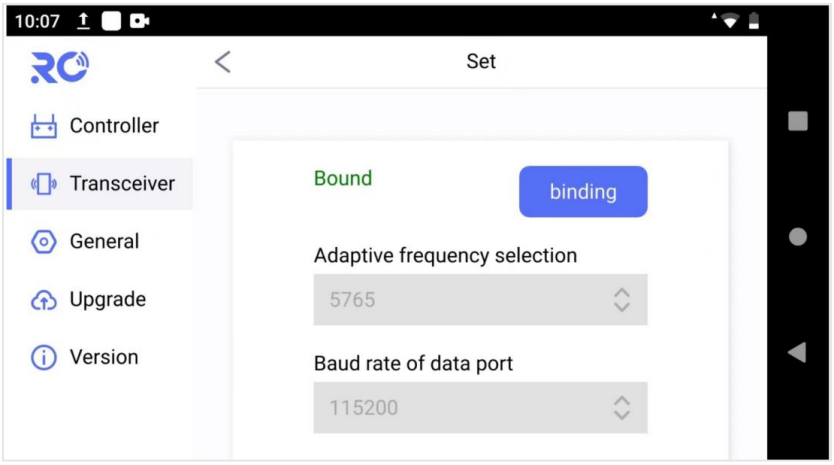
The 2 LED lights of air unit are used to indicate the bind status only, when air unit is in binding, they will be flashing in yellow/green respectively.

Note: Unit is bound already before factory delivery, user do not need to do bind again after unfolding the box.

If user would like to do bind for particular case, please follow below steps:

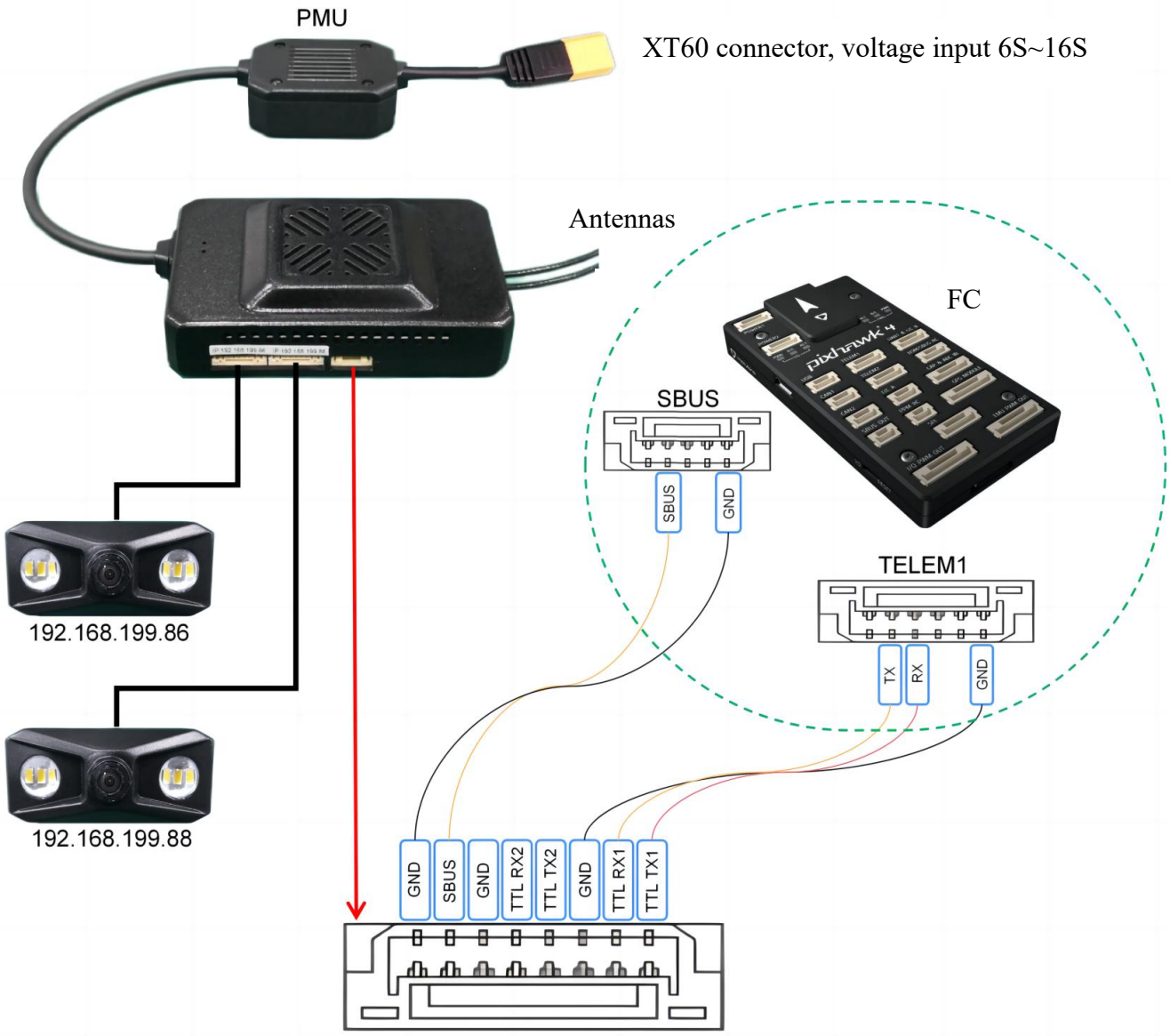
（1） Power on air unit, power on remote controller, antennas must be installed before power on;

（2） Press-and-hold the bind button of air unit till the indication lights are flashing to get the air unit into bind process, meanwhile, click on “binding” via Module->Set of RC tool app to trigger the bind process of ground unit(remote controller), it will be shown as “bound” after completion.



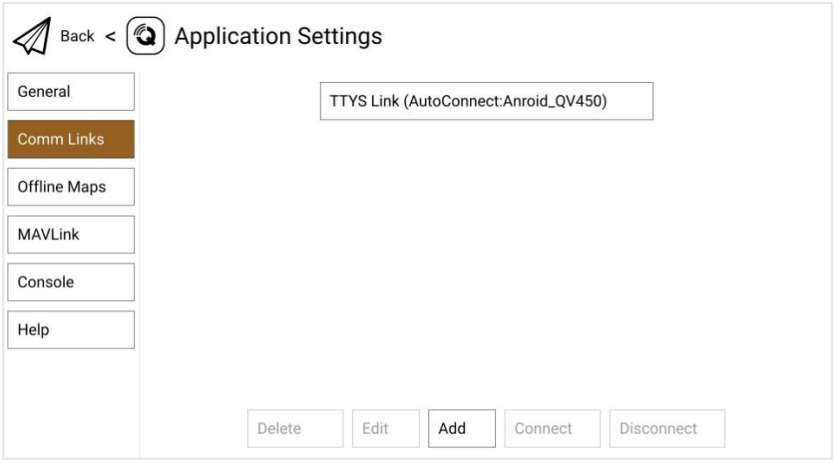
3 Connections

Here take the Pixhawk 4 as an example:



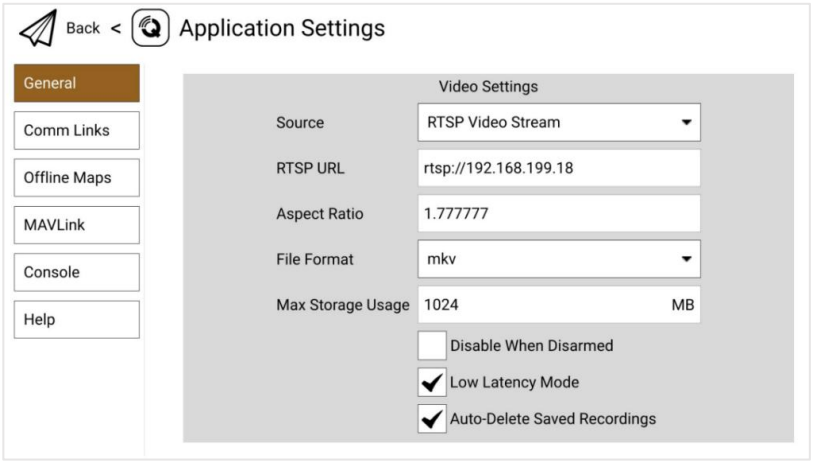
（1） Telemetry connection:

Telemetry connection settings have been hard-coded in the pre-installed QGC, user do not need to set anymore in the remote controller, but make sure baud rate of flight controller is 115200, and the used telemetry port of air unit is TTL1.



（2） Video connection:

Video connection settings have been made already in pre-installed QGC before factory delivery as below, user do not need to set anymore else, but make sure the properly cable connection between camera and air unit.



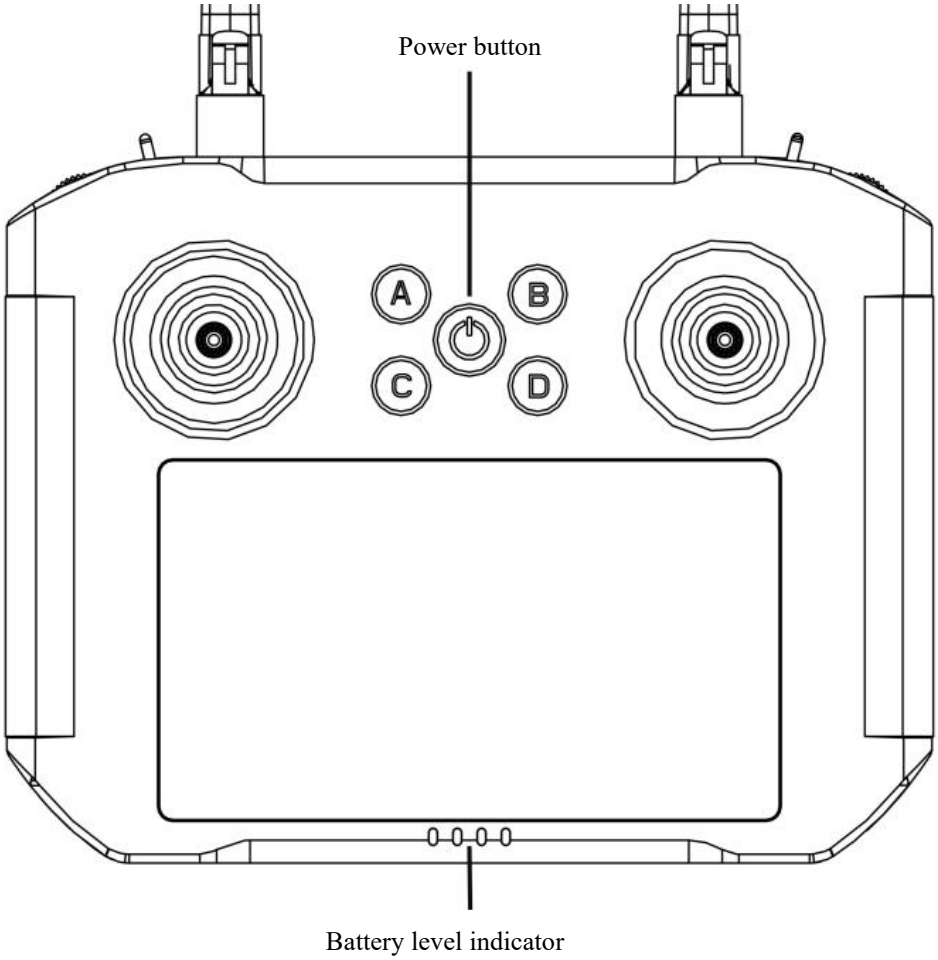
4 Before Use

4.1 Remote Controller Operation

4.1.1 RC power on/off

（1）Power on

Press the power button to start the power system, then press-and-hold the power button till it beeps.



（2）Power off

Press-and-hold the power button till the “Power off” popped up on screen, tap on it to power off the remote controller.

Press-and-hold the button combination of Power and C for 15 seconds, remote controller will be shut down forcibly.

（3）Sleep

Press the power button to get the screen into sleep when the remote controller is powered on, and invoke by it also.

4.1.2 RC charging

Please use the factory delivered power adapter and cable to charge the remote controller.

（1）Connect the power cable to the type-c port of remote controller;

（2）The power indicator and battery level indicator will be flashing during charging;

（3）All the 4 lights of battery level indicator will be solid on when charging is completed.

4.2 Antenna Installation

4.2.1 RC antennas

（1）Keep the antennas vertical to the ground;

（2）Keep the antennas in parallel, do not cross or overlap with each other.

4.2.2 Air unit antennas

（1）The two RF cables used between air unit's RF ports and antennas should not be crossed with each other, antenna, RF cable and SMA connector should not be directly contacted to metal, carbon fiber parts;

（2）RF cables should keep distance from devices like electric motor or electric tilt which may cause EMI;

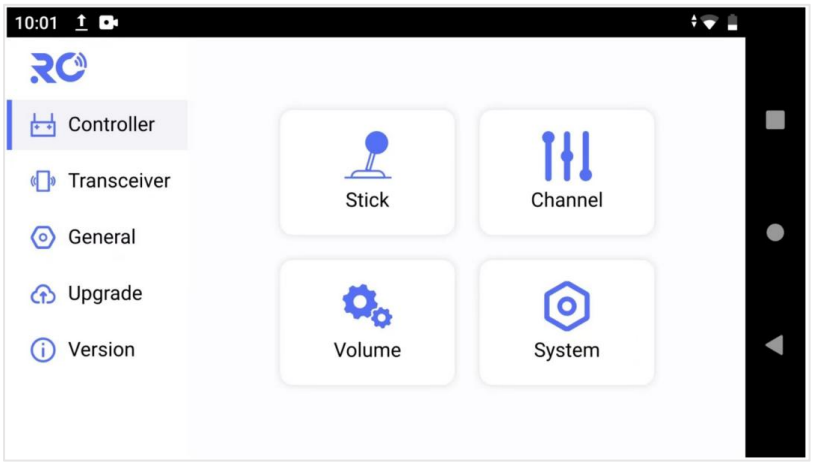
（3）Do not install the two antennas at the same position, at least 50cm distance between each other;

（4）Fasten the SMA connectors to air unit's RF ports and antennas;

（5）Suggested antenna installation position is shown as below:

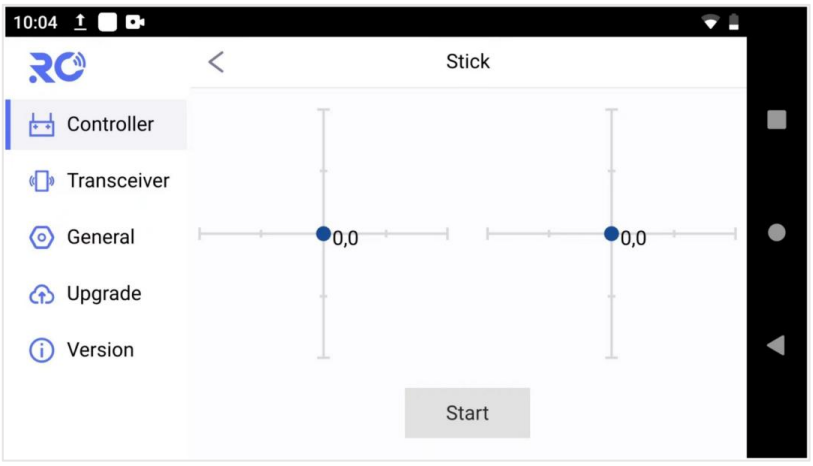
5 Device Management

5.1 RC Settings



5.1.1 Stick calibration

Stick correction can be performed periodically to ensure the accuracy of stick channel outputs.

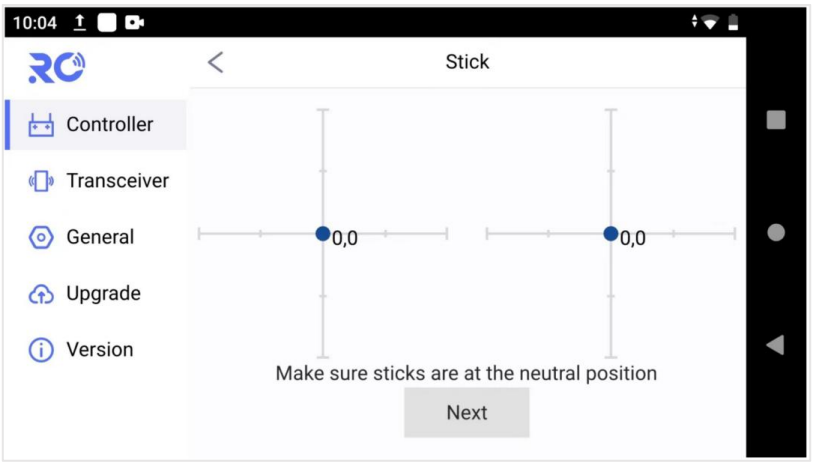


Stick calibration method

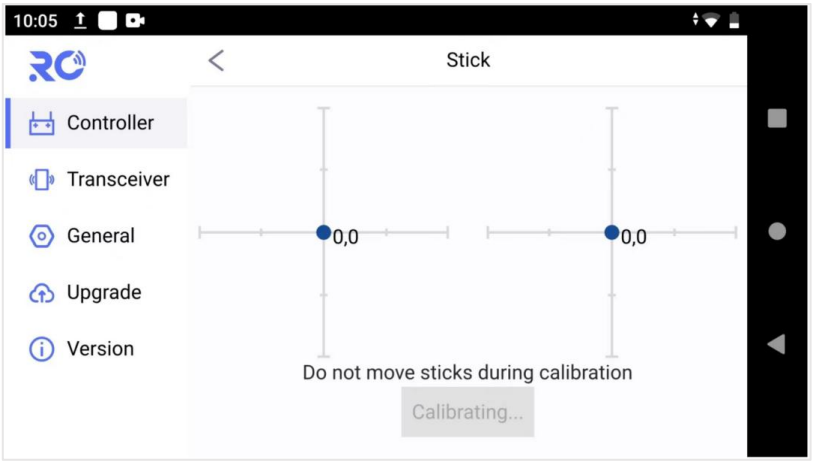
（1）Before start, please make sure both sticks stand still without position offset caused by external

force.

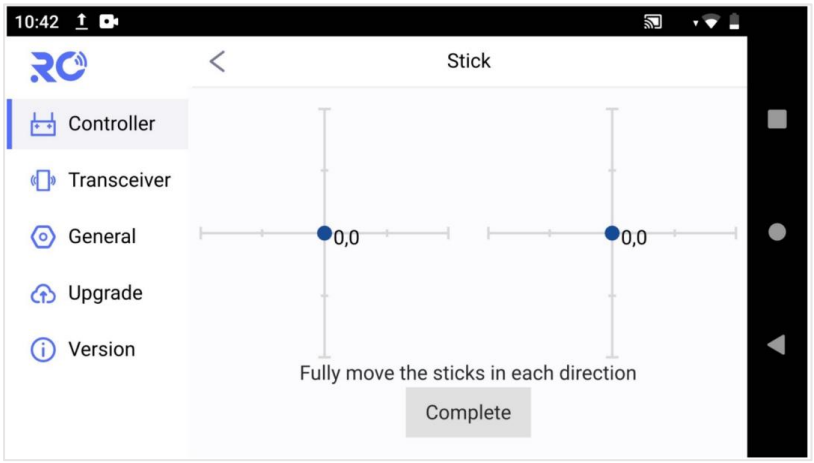
（2）Select “Stick ” and access the setup screen shown below by touching “Start”.



（3）If the sticks are at the neutral position already, but the blue dots are not at the central, it means the stick neutral position has an offset.Now do not move the stick, touch on “Next” to do neutral position calibration.

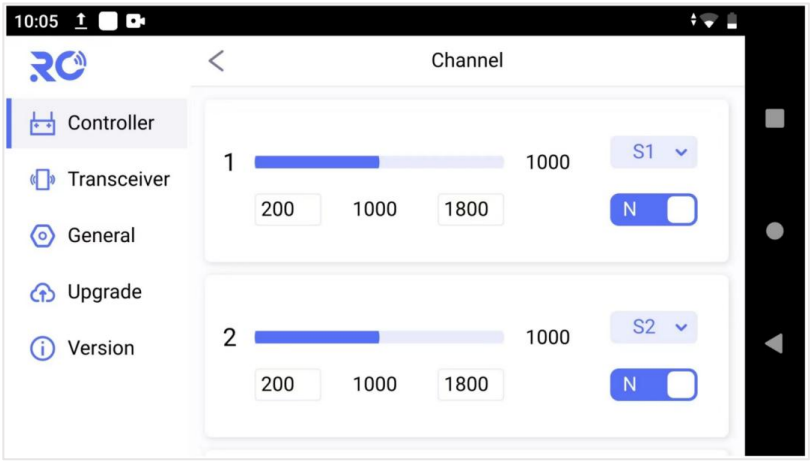


（4）Go on with end point calibration. According to the prompt, move stick fully in each direction, afterwards, touch on “Complete” to finish the correction operation.



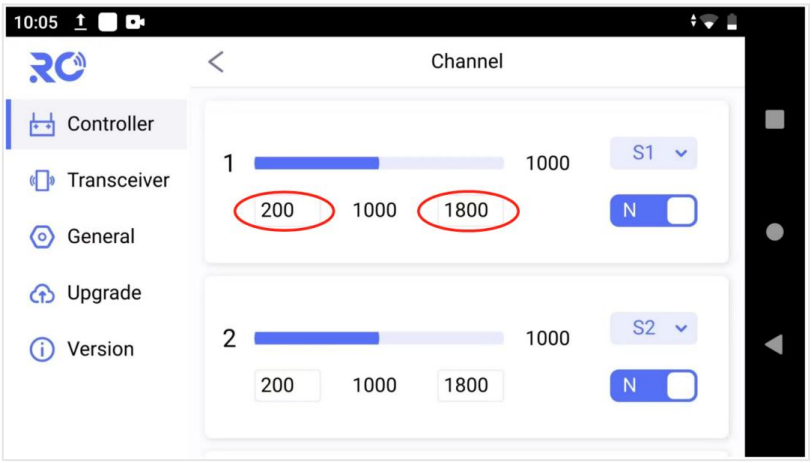
5.1.2 Channel settings

Servo travel end point, operation direction reversal and channel mapping can be set by user via channel settings.



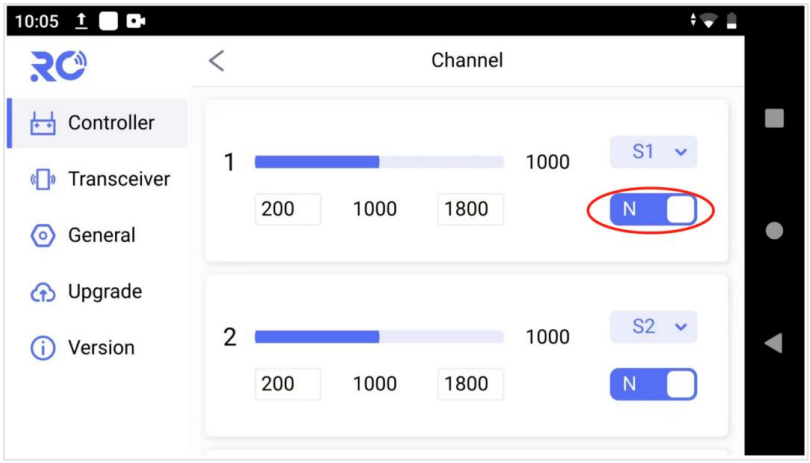
Servo travel end point

Default servo travel end point ranges 200~1800. User can also change the end point manually. Select the channel, and input the value.



Servo reverse

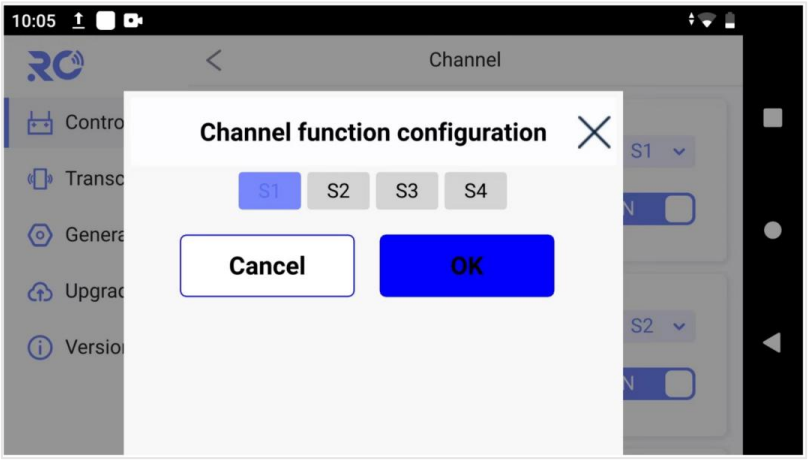
Select the channel, touch on the direction icon to make the change. “N” means normal, “R” means reverse.



Channel mapping

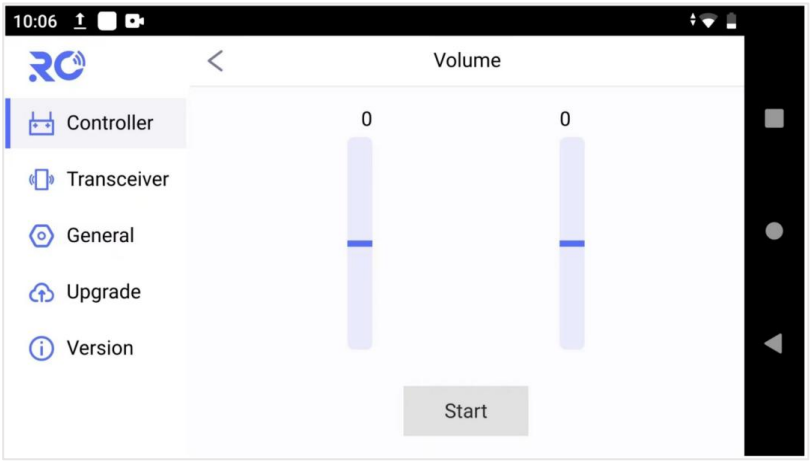
ViuRC5 has 14 channels in total, and allow user to define the mapping relations between logical communication channel and physical channel(button, switch, stick, etc.).

Select the channel and touch on the channel name to bring up the configuration window.



5.1.3 Volume calibration

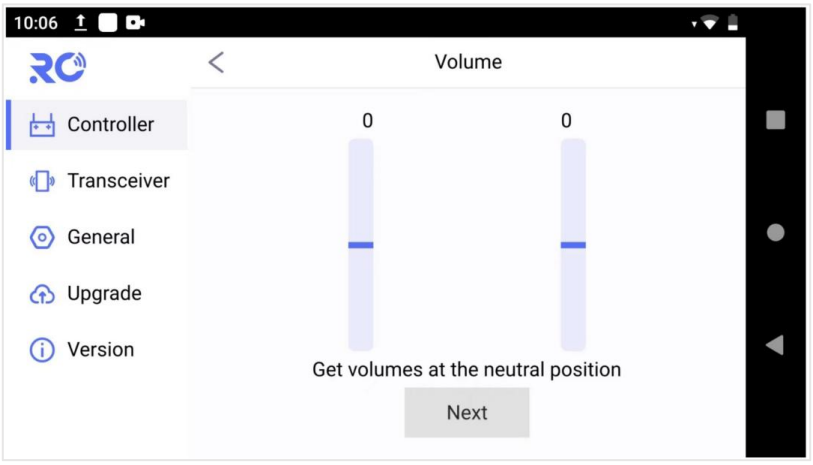
Volume correction can be performed periodically to ensure the output accuracy of volume channel. Neutral position and end point can be calibrated.



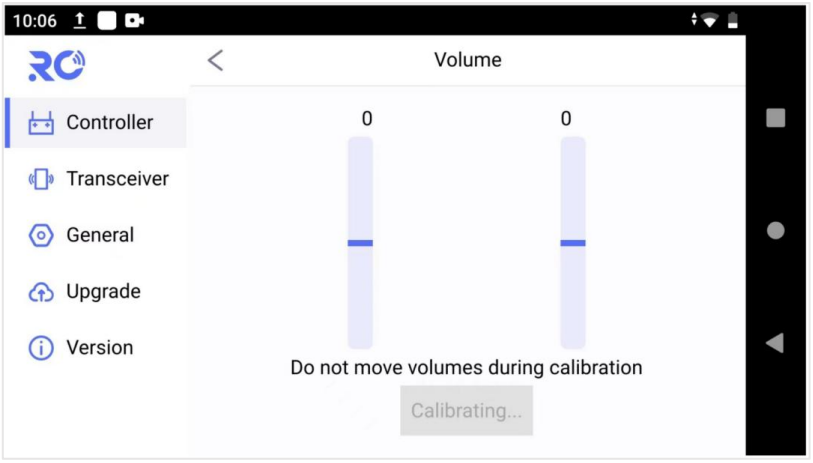
Volume calibration method

（1）Before start, please make sure both sticks stand still without position offset caused by external force.

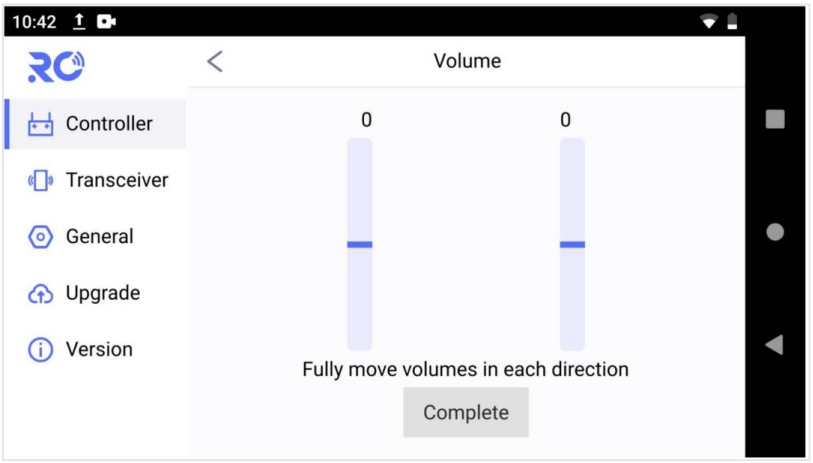
（2）Select “Stick ” and access the setup screen shown below by touching “Start”.



（3）If the volumes stand still already, but the output value is not 0, it means the volume neutral position has an offset.Now do not move the volume, touch on “Next” to do neutral position calibration.



（4）Go on with end point calibration. According to the prompt, move volume fully in each direction, afterwards, touch on “Complete” to finish the correction operation.

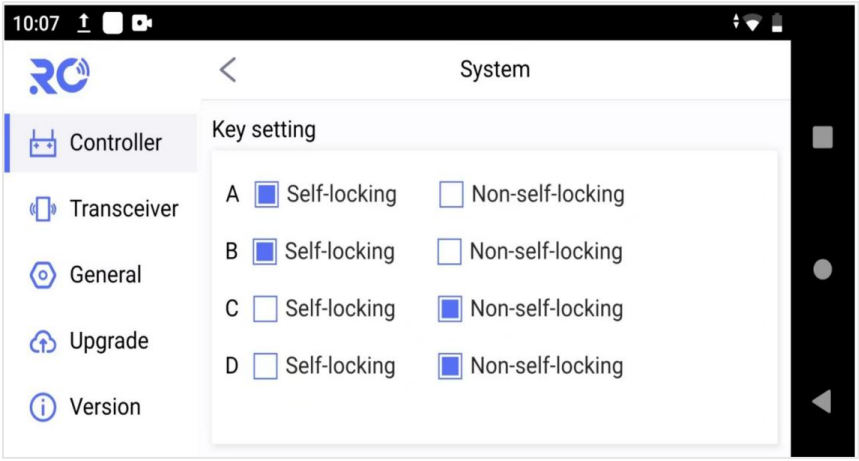


5.1.4 System settings

Button mode setting, stick mode setting and restore factory settings can be made at system page.

Button setting

There are options of self-locking and non-self-locking for the buttons of A, B, C and D. Self-locking for button A and button B, non-self-locking for button C and button D by default, user can change it manually.



Note:

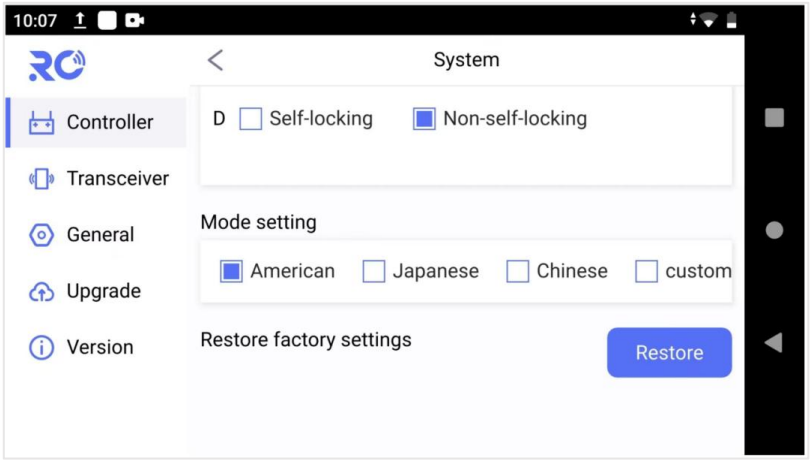
Self-locking: when press on self-locking button, the output of this channel will always be 1800, only

after user press again, the output will be back to 200.

Non-self-locking: when press-and-hold the button, the output of this channel will be 1800, as soon as user release the button, the output goes back to 200.

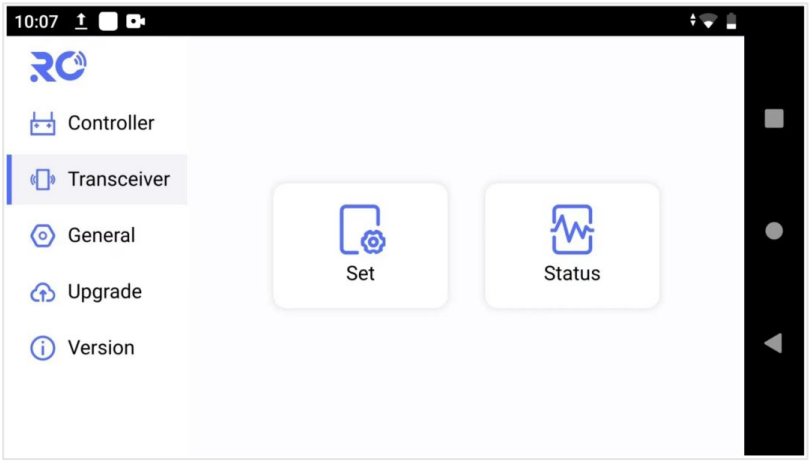
Stick setting

There are options of American, Japanese, Chinese and custom for stick mode.



5.2 Transceiver

There is radio transmitter and receiver integrated in the remote control system. User can check the radio link status and do parameter settings.



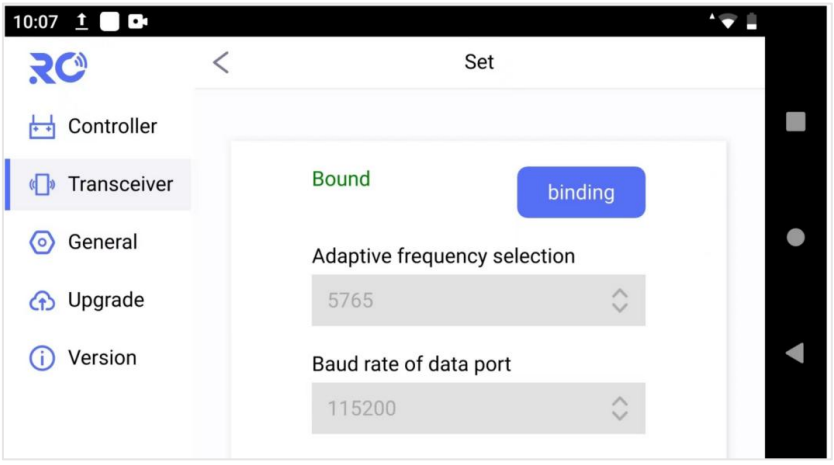
Parameter settings

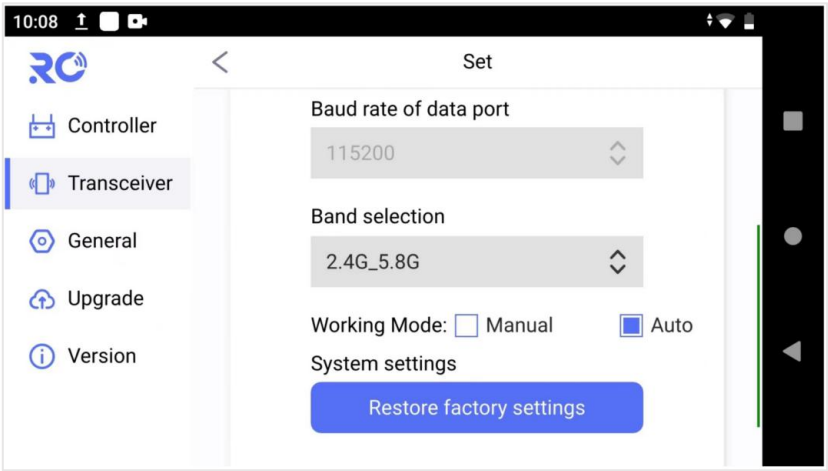
At Set page, user can do binding operation, working frequency mode change, and restore factory settings. When working mode is Auto, system will work at the least interfered frequency channel dynamically, when it is Manual, user can manually select the specific frequency to use.

Note:

（1）Baud rate of serial telemetry is hard-coded as 115200 in pre-installed QGC, so baud rate of the radio link should keep aligned if pre-installed QGC is used.

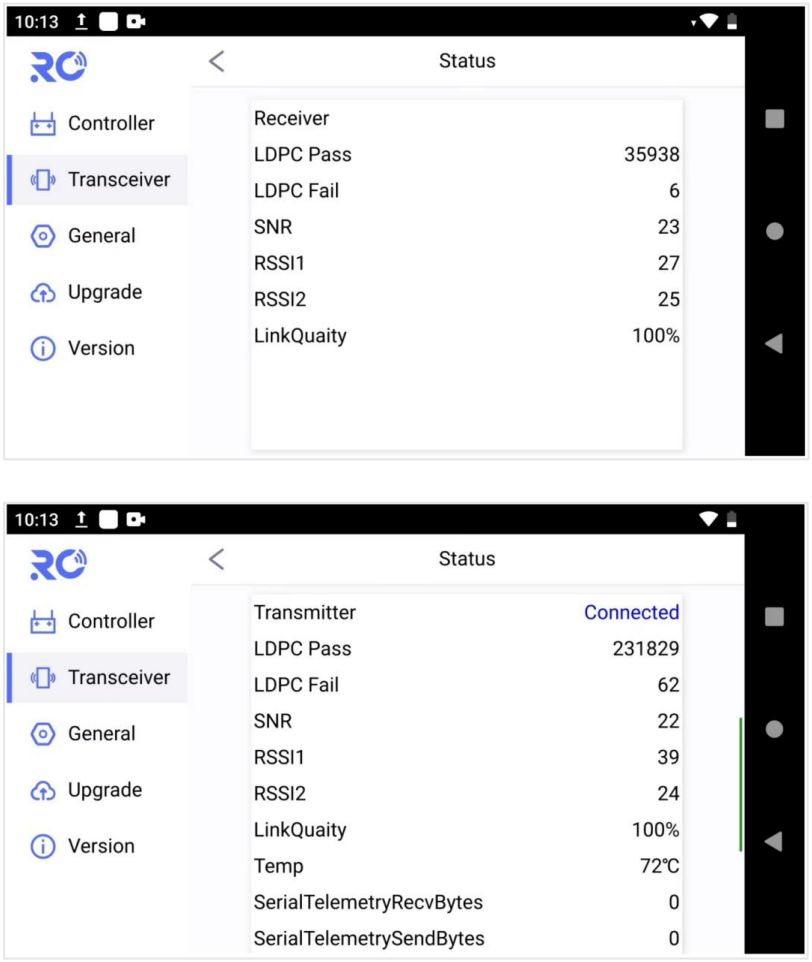
（2）All the parameters only can be changed when radio link between transmitter and receiver is established.



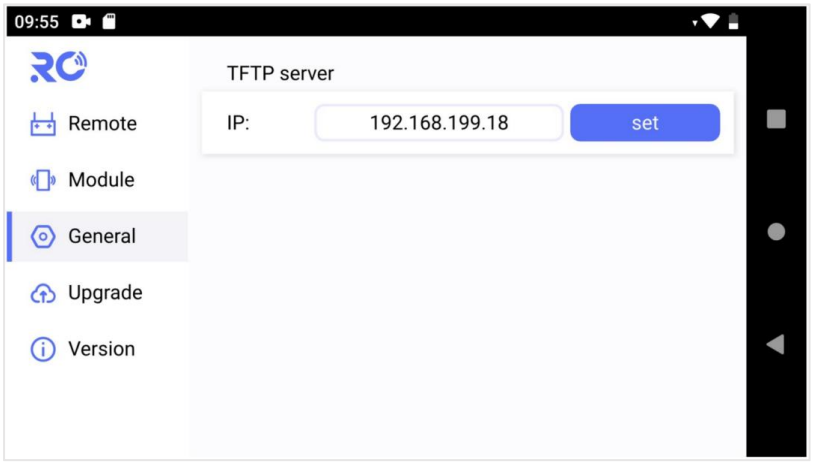


At Status page, user can check the real-time status of radio link. Key parameters like LDPC pass/fail, RSSI, SNR, Serial telemetry receiving/sending bytes, Ethernet receiving/sending rate are listed for user

reference.

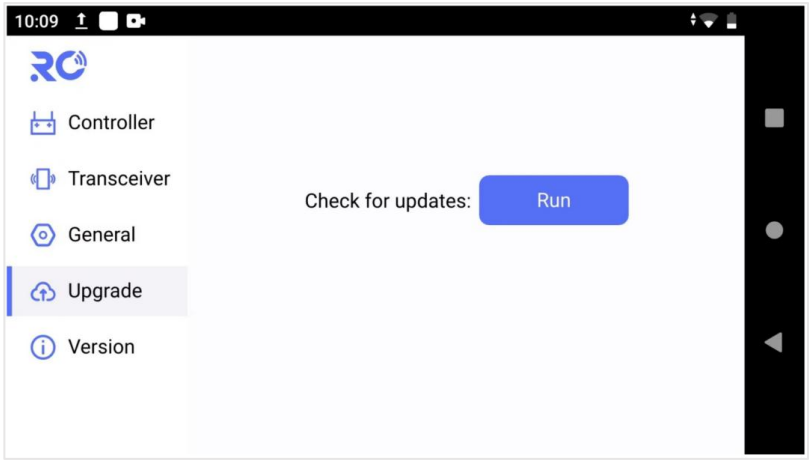


The TFTP server is used for air unit remote firmware upgrade, IP address of air unit(192.168.199.18) is set here as the TFTP server IP address. If air unit IP address is changed, the server IP address must be modified accordingly.

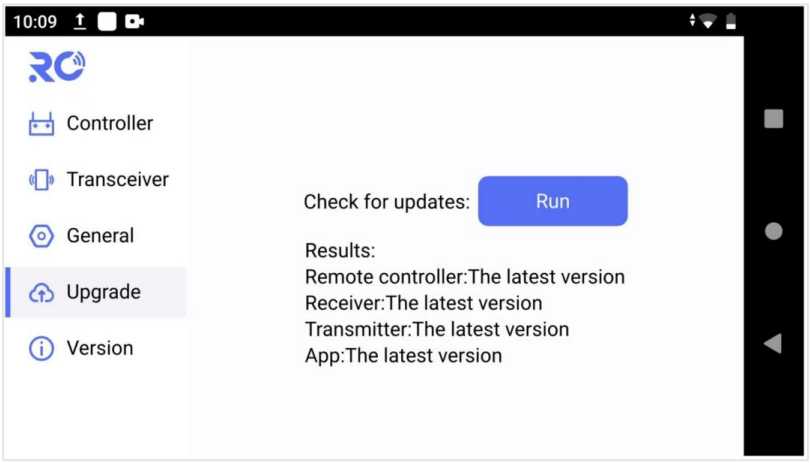


5.4 Upgrade

Check for firmware updates of remote controller, transceiver, and app tool.

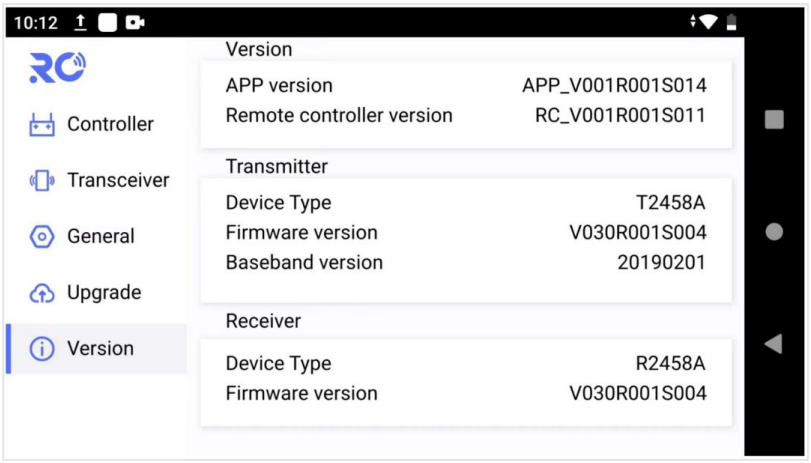


Touch on “Run” to do the firmware version check, results will be listed. If it’s not the latest, upgrade can be done online over the Internet access.



5.5 Version

Check for the detailed hardware device type and software version.



6 Notice

(1) Check battery level is enough for the whole flight before take off;

(2) Make sure antennas are properly installed to avoid drone body blockage and do not power on device without antenna installation;

(3) Check the firmware version is the latest already;

(4) Do not operate in severe radio interference or blockage environment.

7 FAQ

(1) Telemetry connection failure?

A: Check baud rate of FC, radio link and QGC are the same or not, check telemetry cable connection between air unit and FC, check FC telemetry signal is TTL or not.

(2) Is it possible to install other app in RC?

A: it can. And user can get both telemetry and video in pre-installed QGC.

(3) How to do the bind operation?

A: power on air unit and remote controller, press-and-hold the physical bind button of air unit, and touch on the software “binding” button of RC tool of controller.

(4) How to switch the camera video and how to switch on the lights?

A: Press button A to switch the camera video image, and press button B to control the lights.

(5) Video not available in QGC?

A: Check camera is correctly connected to air unit’s Ethernet port or not(for example, camera of 192.168.199.86 is connected to Ethernet port of 192.168.199.88 by mistake), check the QGC video parameter settings