VD32 REMOTE CONTROLLER USER MANUAL

V1.2

OCT 2020

Thank you for purchasing SIYI Technology's product.

VD32 is a professional, intelligent and universal radio transmitting system integrated with 2.4GHz datalink and video-link, applied with advanced SHTT digital frequency hopping technology. VD32 supports maximum 4-kilometer control range and 16 independent digital output channels, perfectly compatible with major commercial flight controllers on market. VD32 also supports configuration through the built-in touchscreen, easy and convenient.

To maintain a safe and orderly public space and to ensure you a good using experience of AK28 transmitter, please read this manual carefully. If you have any issue using the product, please consult the manual or check online pages of AK28 on SIYI official website (http://www.siyi.biz/). You can also send an email to SIYI official A/S center (support@siyi.biz).

CONTENT

1 READ TIPS

1.1 Icon Definition

Please pay more attention to content indicated with the following marks:

DANGER Dangerous manipulation that probably leads to human injuries.

WARNING Warnings on manipulation that possibly leads to human injuries.

CAUTION Cautions on what manipulation may lead to property loss.

Prohibited **Mandatory** **Mark**

1.2 Flight Safety

VD32 transmitting system is designed for professional application in specific industries, users who approaches to the device should have at least the basic ability to manipulate it. Any irregular or irresponsible manipulations of the device may cause damages or lead to property loss and even human injuries. Non-adult users must follow their trainer's guidance or the supervision of an adult. Disassembling or

modification on VD32 system is prohibited without permission from its manufacturer, SIYI Technology.

To maintain a safe and orderly public space and to ensure you a good using experience of SIYI's products, please read the prohibited and mandatory terms carefully:

Do not use VD32 system to control your aircraft/vehicle at places with intensive crowd (a square, a park), or at places with many obstructions (a street, a parking lot), or in fields with strong magnetic or interference (an electricity plant, a radar station, railways), or in any other fields where an irregular flight/operation may cause property loss or human injuries.

Do not hold or cover transmitter antenna or obstruct its transmission by any means in a flight or an operation.

Never point your transmitter antenna's upper ends straightly to your aircraft/vehicle while it is working, they are the weakest part for transmission.

Do not start your aircraft/vehicle when you are tired, drunk, in sickness or any circumstances you are not feeling good.

Do not take off your aircraft when it is rainy, windy or at night.

Do not power off the transmitter while your aircraft's/vehicle's engines and motors are still working.

Please always try to control your aircraft/vehicle within sight range.

Do not forget to check battery level of the transmitter and the receiver before starting your aircraft/vehicle.

Always power off your aircraft/vehicle first, VD32 transmitter the second.

Before changing any settings for the transmitter, make sure your aircraft's/vehicle's engines are powered off and their motor wires are off connection, in case of a sudden switch on.

When you start your aircraft/vehicle for the first time, make sure that the fail-safe settings in your VD32 transmitter is activated.

Always switch on the transmitter first and hold the throttle joystick at its bottom position, then power on your aircraft/vehicle.

1.3 Precautions on Charging VD32

VD32 transmitter comes with a chargeable 8000mAh LiPo 1S battery. You can charge the transmitter with a 5V/2A Micro-USB charger adapter from market.

Do not use any USB chargers over 5V output to charge the transmitter.

For the best charging experience, please power off your transmitter before charging. The charging current should not exceed 2A.

Stop charging immediately if you found the charger damaged, broken or overheat.

Stop charging immediately if there was a peculiar smell, smokes or leaks. In such cases you shall sent the transmitter back to your dealer for after-sales service.

Do not charge the transmitter when temperature is high or battery temperature is over 60℃.

DANGER

Keep VD32 away from any places that babies or kids may reach easily while it is under charging, better there is supervision from an adult in case of emergency.

1.4 Precautions on Using SD Card

Do not disassemble, bend, press, abandon or damage SD card by any means.

Stop using the SD card if you find it soaked by water, oil or any other chemical liquid.

CAUTION

A SD card is also an electronic product, keep it away from static electricity.

Keep the Micro-SD card slot clean in case of blocking by sand or dirt.

Keep the SD card in slot while you are downloading or uploading data; taking out it mistakenly, hitting it or shattering it may cause damage or data loss.

Keep the SD card away from places that a baby or a kid may reach in case that it was swallowed mistakenly by the baby/kid.

1.5 Precautions on Storage/Carrying/Recycling

CAUTION

Always place your VD32 transmitter at places where babies or kids do not reach.

DANGER

VD32 transmitter should be placed as below:

Not too hot (above 60℃) or too cold (under -20℃);

Not under direct sunshine or too dusty or too wet;

Not on an unstable holder which lacks of solid supports or may cause vibration;

Not nearby steam or other heat sources.

2 PRODUCT INTRODUCTION

2.1 Product Features

Advanced Spread-spectrum Technology

VD32 transmitting system is applied with SIYI Technology's lately upgraded bidirectional 2.4GHz spread-spectrum technology. The maximum control range can be 4km (unobstructed, free of interference). VD30 transmitter and its receiver are linked by a unique matching code, and the enhanced anti-interference ability supports multiple transmitters working in stability synchronously.

Extraordinary Handling & Accurate Manipulating Experience

VD32 transmitter fits user's palm perfectly, fashionably streamlined and compact industrial design.

16-Channel Fast-response Mode

VD32 transmitter is equipped with various types of buttons, dials, and switches. 16 channels support all kinds of models, including fixed-wings, helicopters, gliders,

quadcopters, and multi-rotors, and major farming drones on market.

*5ms fast-response mode

Built-in High Capacity Li-Po Battery, 9H Super Long Working Time

VD32 transmitter comes with an 8000mAh Li-Po 1S built-in rechargeable battery, reliable and easy to maintain. You can charge the transmitter through Micro-USB port, and it can work continuously for 9 hours after a full charging. You'll never have to worry about long-time business flight in outdoors.

4-Kilometer Control Range

VD32's control range can reach 4 kilometers*, which covers the business flight range for most agricultural drone pilots. A perfect mate for BVR (Beyond Visual Range) flights.

In the built-in screen of VD32 transmitter, it displays real-time telemetry of the sky unit voltage, aircraft power, transmission signal strength, information of the GPS module and other multi-sensors.

*Tested in an unobstructed and free of interference place.

Voice Broadcast with Vibration Alert

The voice broadcast function with vibration alert help users be more concentrating on flight.

High Brightness Colorful LCD Touch Screen, Brand New GUI System

VD32 transmitter's high brightness colorful screen is clearly visible under direct sunlight. Few complicated keys and buttons, but a built-in LCD touchscreen, with a turntable menu and a brand-new GUI system. These revolutionary new features made by both software and hardware provide a more user-friendly experience.

Creative 5-dimensional Sub-trim Buttons

The Sub-trim button design on traditional transmitters have been overturned on VD32, now you are able to do quick adjustment between sub-trim buttons and joysticks in a flight. The sub-trim buttons are made of elegant aluminum alloy, CNC Molding, along with a unity industrial design, extraordinary manipulating experience.

Fulfils the Requirement of Complicated Models and Robots

- In default, VD32 transmitter can save up to 64 sets of model data, the amount can be extended to limitless if necessary.
- Powerful and programmable, mixing control, various and customized, linear and curve mixing.
- Adjustable rate, editable throttle curve, and pitch curve, easy to be complied.
- Data copy function provides convenience to users for sharing their transmitter settings easily with friends.
- Under trainer mode, two transmitters can work synchronously, one for trainer, the other for trainee. In trainer mode there are various protection. For instance, the trainer transmitter can control flight from the trainee transmitter.

- Channel mapping function supports customized channel definition;

  Fail-safe function provides more security to flight safety.

Ground Unit Connects with PC and Mobile Devices

VD32 comes with various interfaces for connection with PC and mobile devices. It has one USB-A port, one Micro-USB port, one jack, two Ethernet ports, and Bluetooth.

Various Ports on Sky Unit

VD32 receiver comes with one UART port and one CAN port for telemetry connection with your flight controller.

*CAN is optional

PC Software and Android APP

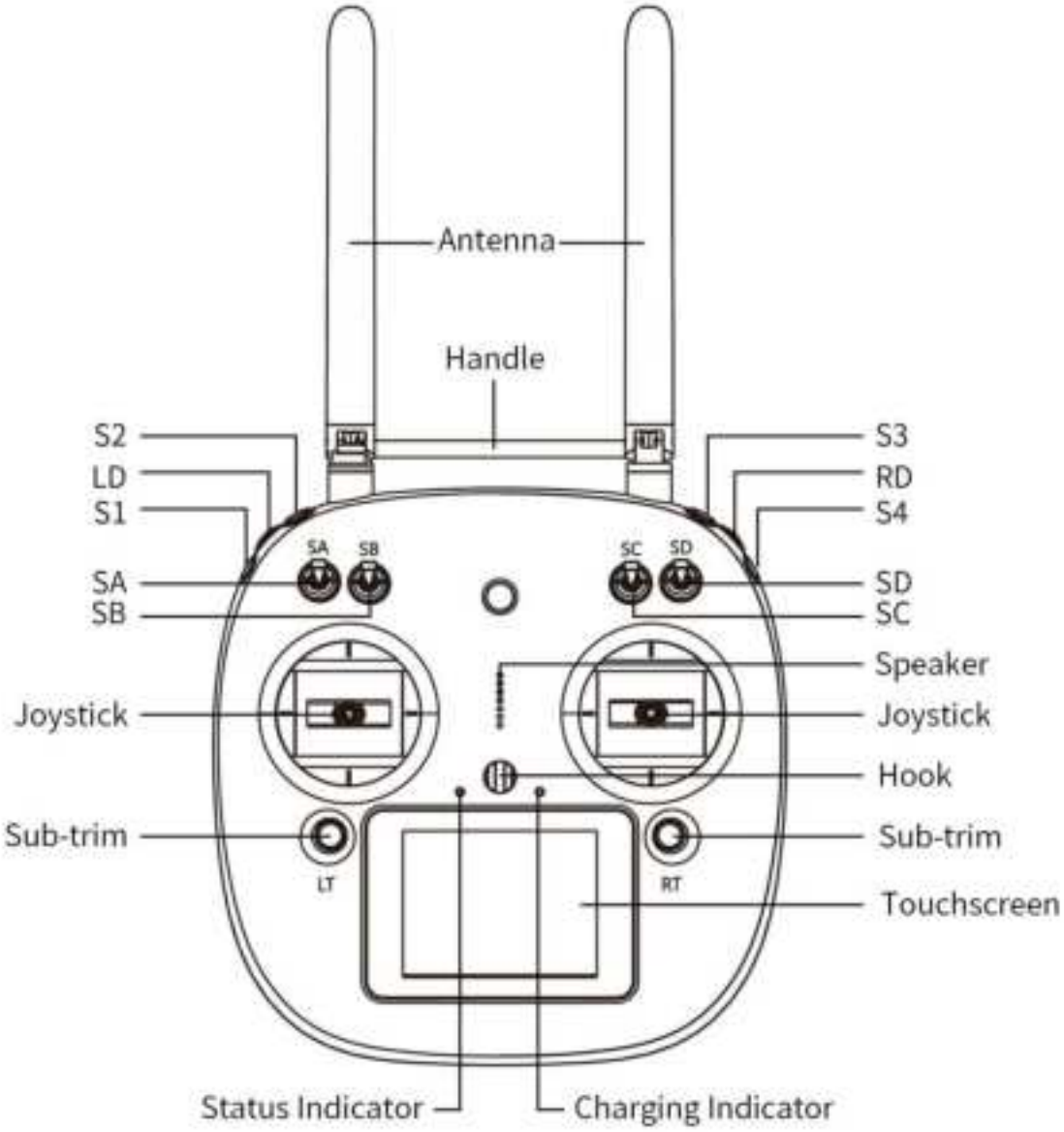
VD32 users now have two ways to adjust parameter for the transmitter. On PC and on the transmitter screen. And it is enjoyable receiving continuous service for updating firmware with improvement and new features.

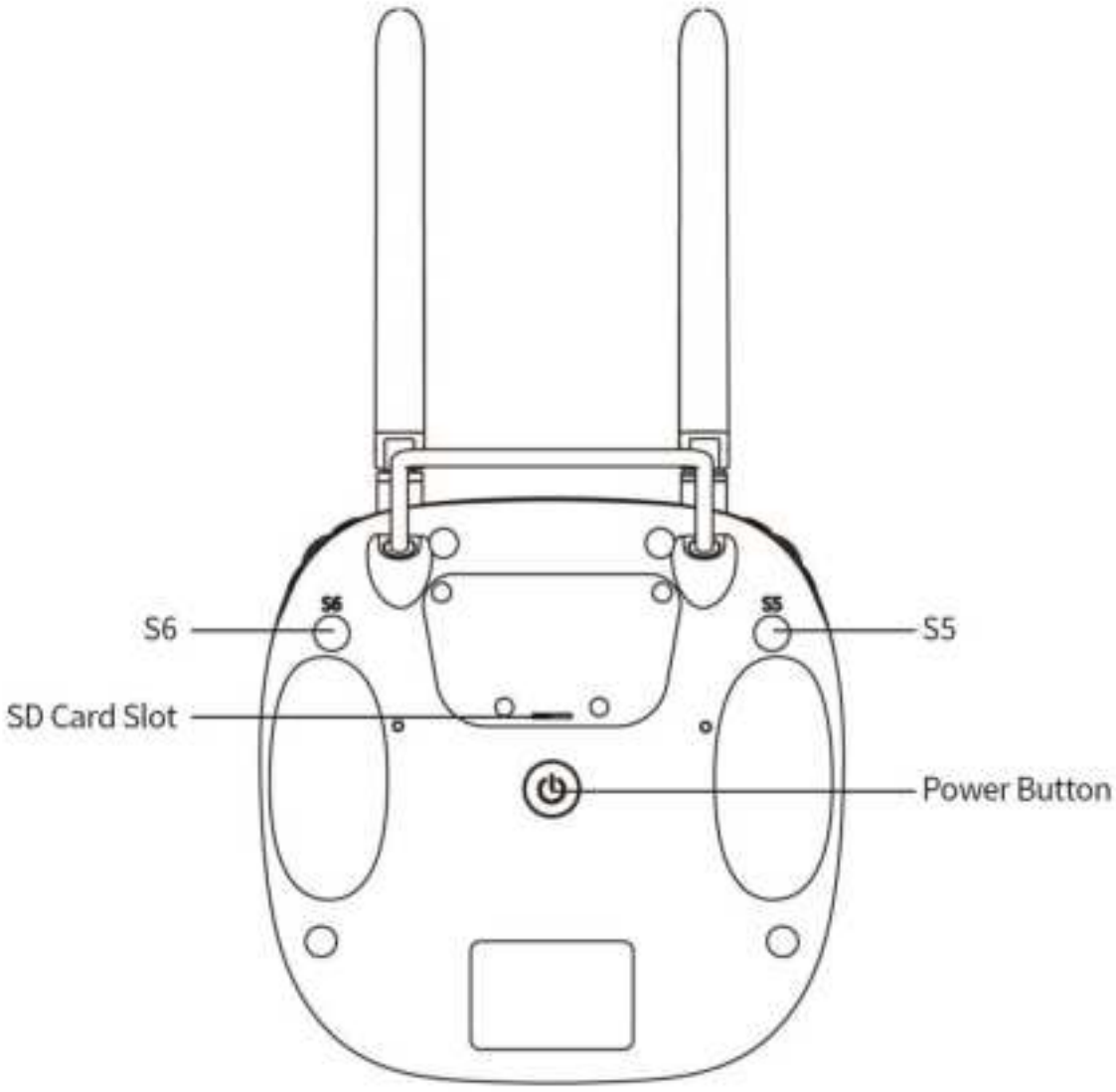
SD Card Data Saving and Extending

VD32 transmitter supports saving model data in a SD card and copying them to a different transmitter.

2.2 Parts

2.2.1 At a Glance





2.2.2 Button/Switch Types and the Default Channel Definitions

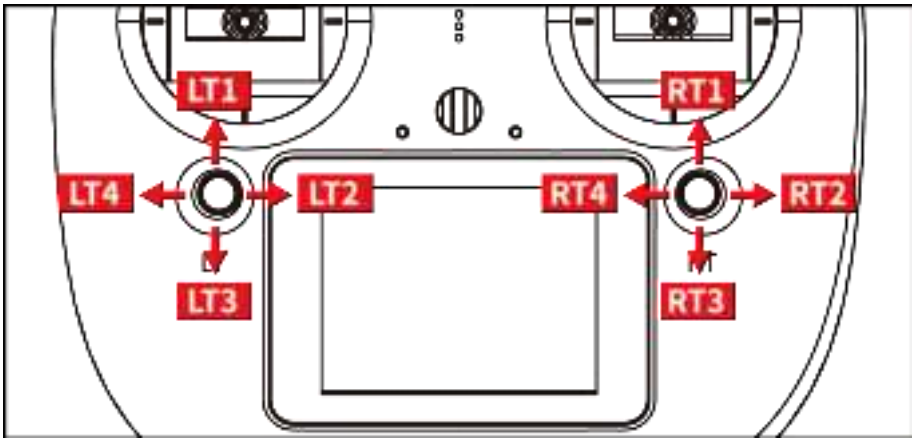
VD32 transmitter has 16 channels in total. Each channel is controlled by an independent switch or button. Please refer to the form below for the default channel definitions from channel 1 to 16.

CH	Joysticks / Buttons / Switches	Default Definition: Mode 2 JIYI FC	Notes
1	Joystick J1	Aileron	
2	Joystick J2	Elevator (Reversed)	
3	Joystick J3	Throttle	CH (-95, 95) *Standard E.S.C CH (-89, 89) * FOC E.S.C
4	Joystick J4	Rudder	
5	3-stage Switch SA	Flight Mode High: Attitude Middle: GPS Low: Execute AB (Reversed)	
6	3-stage Switch SB	Return to Home, Break Point High: Off Middle: Break Spraying Low: Return to Home (Reversed)	
7	3-stage Switch SC	Pump Left: Off Middle: Linkage Right: Manual (Reversed)	
8	3-stage Switch SD	A/B Point High: Off Middle: Record A Low: Record B (Reversed)	

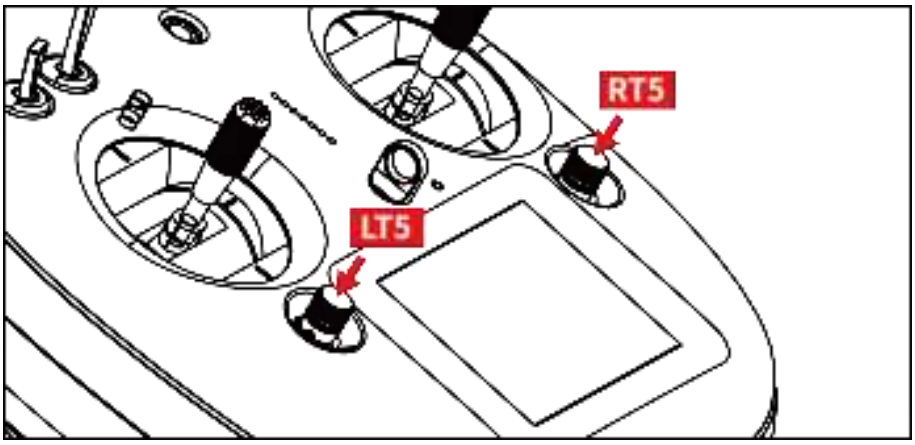
Mark: Self-locking button stays in the position you press them to; Self-resetting button rebound to original position after a press.

Mark: VD32 transmitter supports customized channel definitions as well. Please refer to the chapter “SIYI TX APP” in this manual for detail.

2.2.3 Sub-trim Button



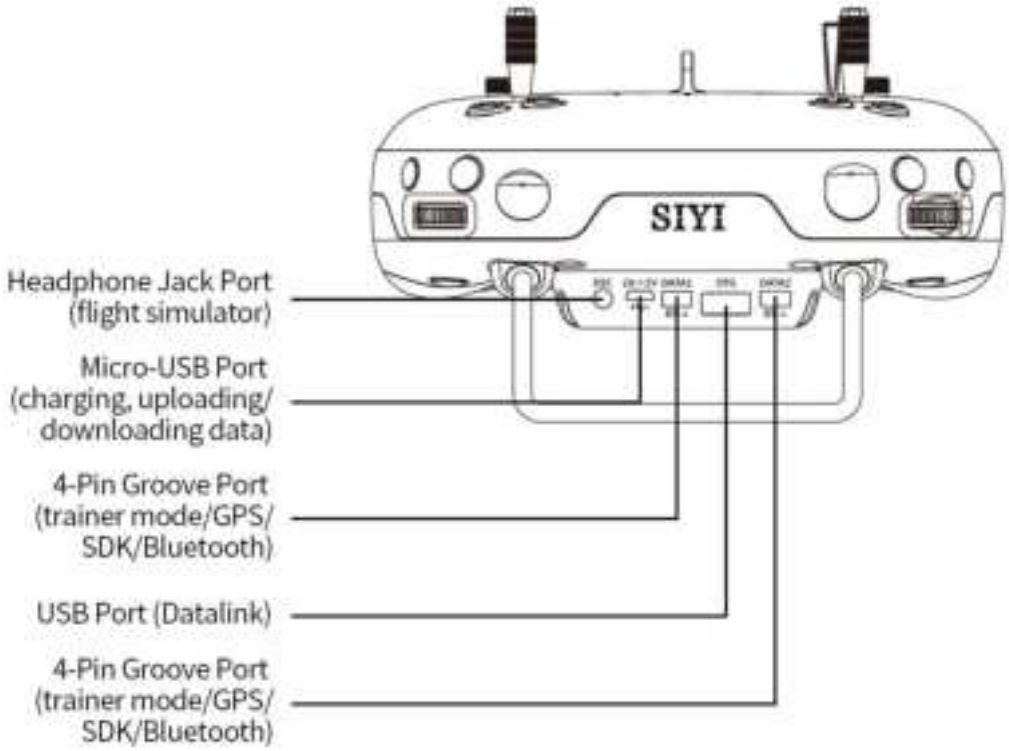
- VD32 transmitter comes with two Sub-Trim buttons, which support continuous trimming to 4 channels.
- Each sub-trim button goes to 2 dimensions (up-down, left-right).
- Pushing on a sub-trim button, it leads to movement from former position at the default stepping value. Continuously pushing speed up the movement. The alerts sound different when the button is at middle.
- Sub-trim position shows as dynamic changes in system menu.



- Sub-trim buttons can also be used to unlock transmitter system menu when the setting lock is turned on. Press and hold the two buttons to unlock transmitter.

Mark: Please refer to “Sub-trim Settings” menu for trim settings.

2.2.4 Ports on VD32



2.3 Technical Specifications

Overall

Channels	16 Channels
Applicable Model	Planes / Helicopters / Gliders / Quadcopters / Multi-rotors / Vehicles / Boats / Robots

Compatible FC	Open Source Flight Controllers: PIX/APM, etc. BOYING PALADIN V2 TOPXGUN T1-A WOOZOOM THEONE-A EFY FINIX200M JIYI K3A/K++
Model Data Memory	64 sets(extensible)
Language Display	Chinese / English
Joystick Resolution	4096 grades
Frequency Band	2.400 MHz - 2.483 MHz
Transmitting Power	100 mW (20 dBm) E.I.R.P
RF Spreading Technology	FHSS
Receiving Sensibility	-101 dBm
Control Range	4 km / 2.5 miles (unobstructed, free of interference) 2 km / 1.2 miles (ground to ground)
PC Software	SIYI Assistant v1.2.0
Battery Type & Power	Chargeable Built-in 3.7V 8000mAh Li-Po 1S battery 29.6 Wh
Battery Life	8 Hours
Working Current	Transmitter: 200 mA Receiver: 80 mA Idle: 60 mA
Charging Port	Micro-USB Port
Screen Type	2.8-Inch High Brightness Colorful LCD Screen Display Resolution: 240x320
Charging Port	Micro-USB Port
Wireless Type & Function	2.4G ISM (radiolink/datalink/videolink) Bluetooth (datalink communication)
Packing Size	245X190X170 mm
Packing Weight	1350 g
Mobile APP & Function	SIYI TX SIYI FPV

Ground Station (Transmitter)

Battery Type & Power	Chargeable Built-in 3.7V 8000mAh Li-Po 1S battery 29.6 Wh
Battery Life	8 Hours
Battery Working Temperature	0 ~ 55 (℃)
Charging Port Type	Micro-USB; 5V/2A
Charging Time	5 Hours
Dimensions	184.5X180X114 mm
Net Weight	780 g

Sky Station (Receiver)

Signal Output	14 channels of SBUS, 5 channels of PWM
Datalink Ports (to FC)	UART, CAN (optional)
Antenna Gain	5 dBi
Working Voltage	15 – 50V
Telemetry Voltage	15 – 50V
Operating Temperature	-10 to 55 (℃)
Dimensions	59 x 59 x 16 mm (without antenna)
Net Weight	50g (without antenna)

FPV Camera & Navigation Lights

Camera Angle	FOV 120°
Power Consumption (Navigation Lights)	8 W
Luminous Flux	120-140 lm/W
LED Type	Translucent
LED Searching Angle	120°

Operating Temperature	-10 to 55 (℃)
Dimensions	106 x 25 x 41 mm
Net Weight	108 g

2.4 Packing List

1 x VD32 Transmitter

1 x VD32 Sky Station

1 x FPV Camera with Dual Navigation Lights

1 x 4-pin Data Cable / Flight Controller Cable

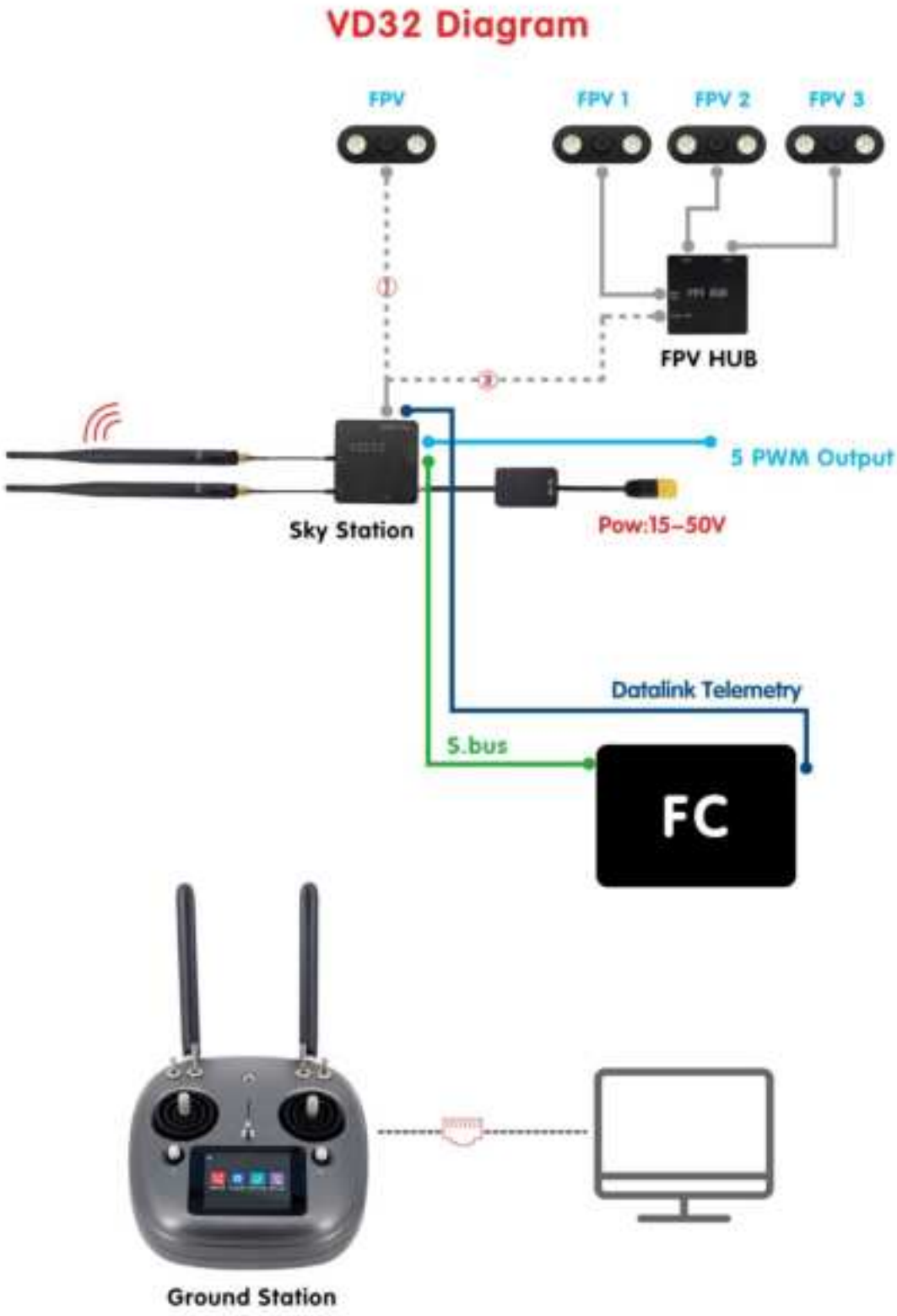
1 x OTG Micro-USB Cable

1 x Anti-vibration Kit

1 x Strap Belt

1 x Storage Case

2.5 VD32 Common Diagram



2.6 Transmitter LED Indicator Definition

Each of the two LED indicators on VD32 transmitter has three colors and different blinking frequencies to indicate the transmitter's different working status.

Status Indicator Definition

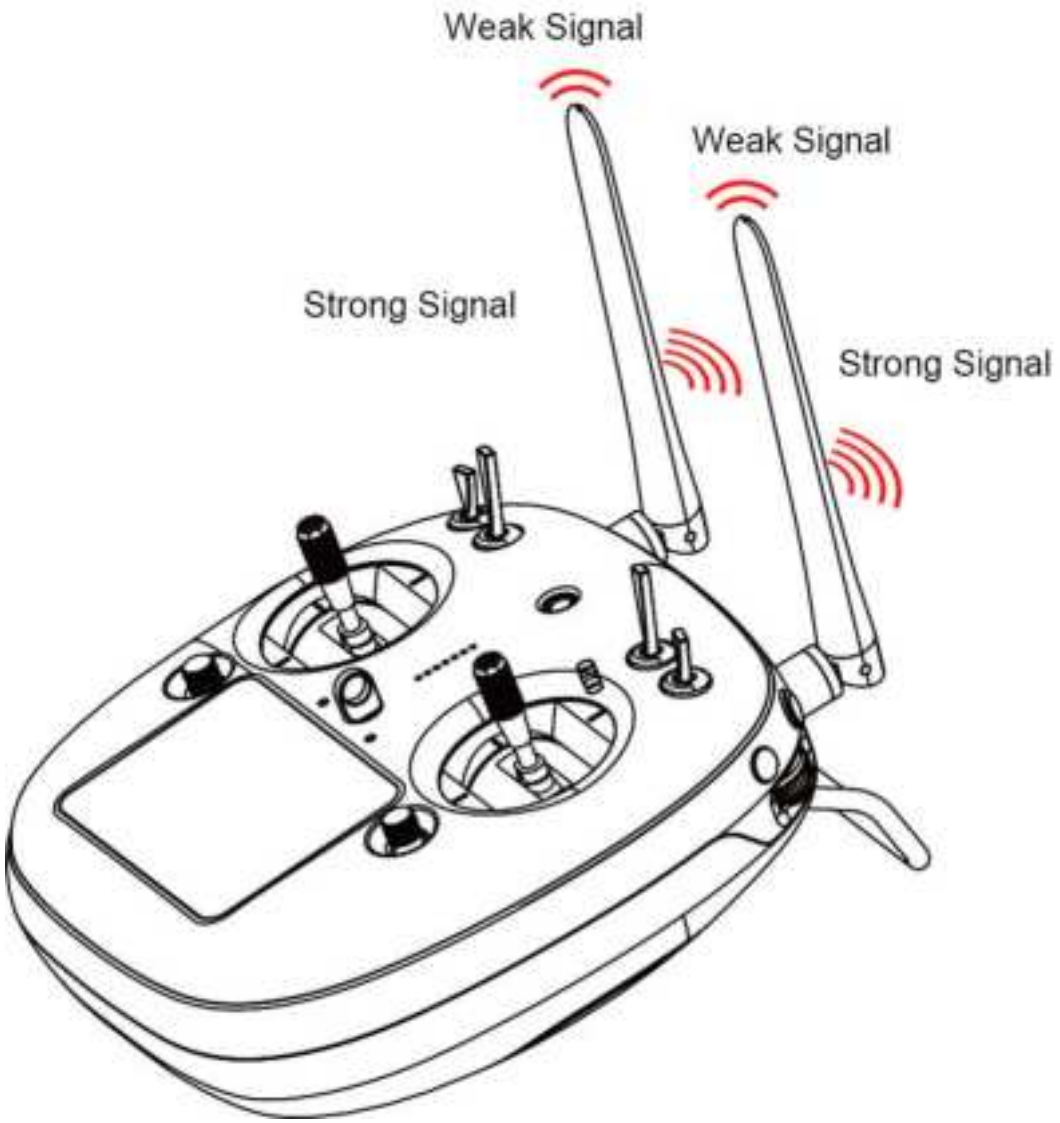
- Solid Green: Transmitter works well.
- Twice Red Blinks: Antenna error.
- Triple Red Blinks: RF initialization failed.
- Four Red Blinks: Joysticks require calibration.
- Continuously Red Blinks: Transmitter firmware does not match.

Link Indicator Definition

- Solid Green: Good communication
- Slow Red Blinks: Transmitter disconnected with receiver.
- Fast Red Blinks: Transmitter is linking/binding with receiver.

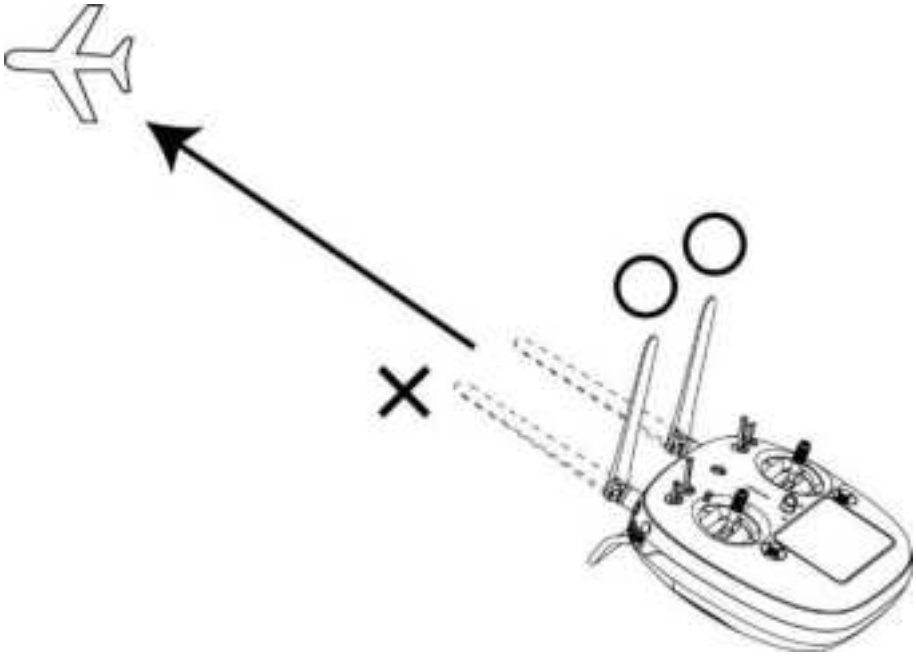
3 GET READY TO USE VD32

3.1 How to Place Transmitter Antenna Right

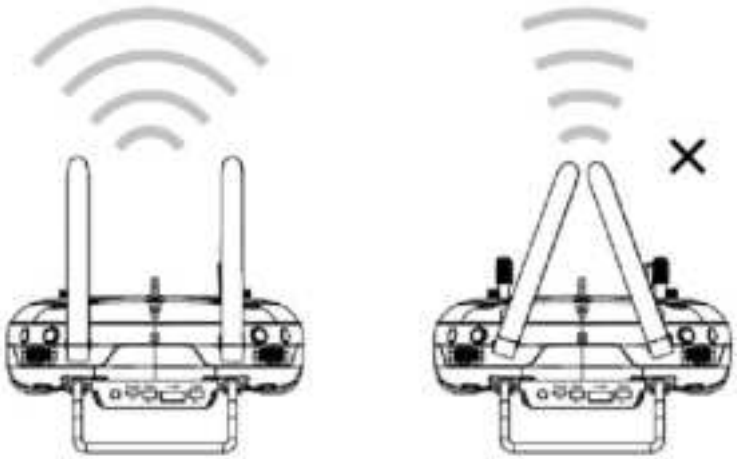


A

Mark: VD32 transmitter has the best signal strength when the antennas are placed horizontally (A, B). Thus, please avoid pointing antennas' upper end straightly to your aircraft and do not fold the antennas (C).

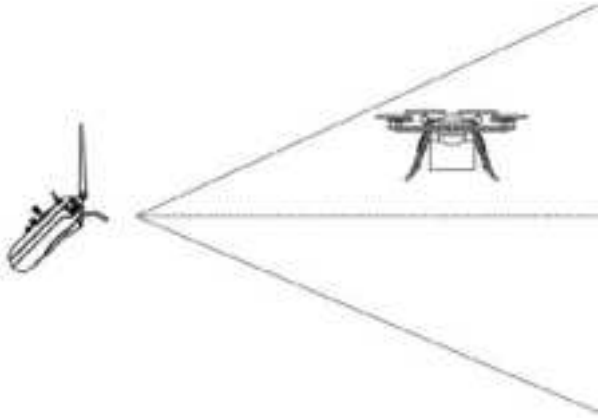


B



C

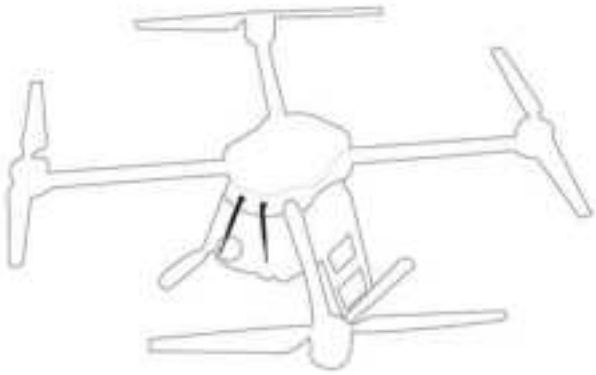
3.1.1 Good Antenna Angle of Transmitter



Aircraft in front of the transmitter

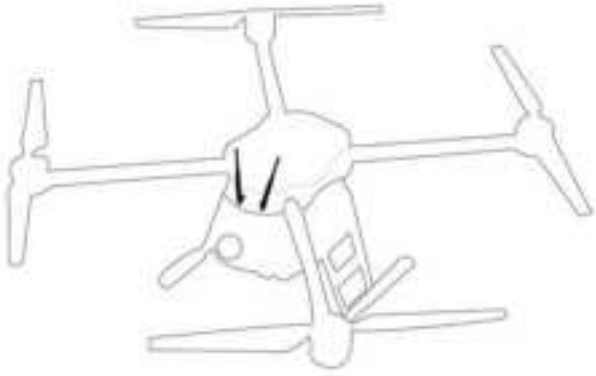
Aircraft up from the transmitter

3.1.2 Good Antenna Angle of Receiver



Flying high

(Altitude higher than 10 meters, antennas should be placed downwards)



Flying low

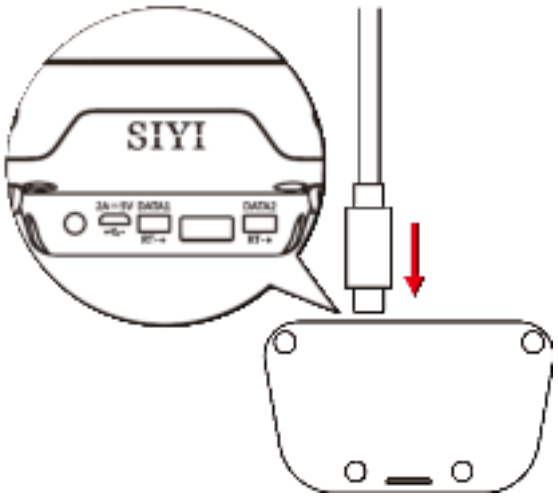
(Altitude lower than 10 meters, antennas should be placed upwards)

WARNING

Do not fold or cover antennas and avoid any obstruction between the transmitter and the aircraft in flight, otherwise there will be an obvious decrease to transmission signal quality.

3.2 How to Charge VD32 Transmitter

Before charging your VD32 transmitter, please read the part “1 READ TIPS - 1.3 Precautions on Charging VD32 Transmitter” carefully.



Please use the original OTG Micro-USB cable coming in VD30 packing list for connecting the Micro-USB port on bottom transmitter to the USB port on the charger adapter. When the charging indicator is solid red, transmitter is under charging. When the charging indicator turns to solid green, charging is finished.

Mark: Please power off the transmitter before charging.

Mark: Please make sure that the charging current is less than 2A or it may cause damage to battery.

Mark: VD32 transmitter is equipped with a built-in 8000mAh LiPo 1S battery. Charging time is about 5 hours using a standard **5V/2A** charger adapter. Charging time may change according to chargers made under different standards, please also pay an attention to the charging indicator when you are charging the transmitter.

Charging Indicator Definition

Power Off Charging

Solid Red: Transmitter is under charging.

Solid Green: Charging is finished.

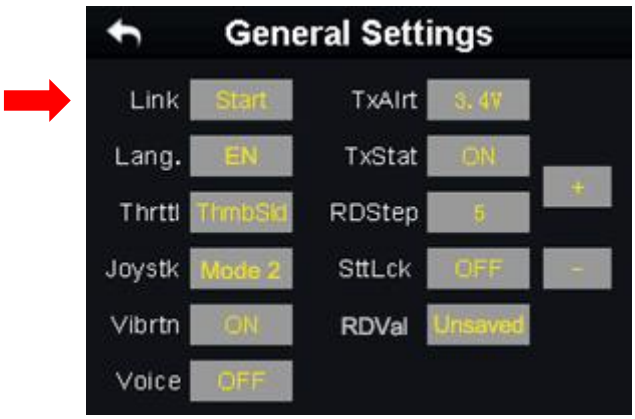
3.3 How to Link/Bind VD30 Transmitter to VD32 Receiver

Each unit of VD32 transmitter is assigned with a unique ID code. Before linking VD32 receiver to VD32 transmitter, the receiver identifies the transmitter ID (***Linking/Binding***) first. After the first linking process between the transmitter and the receiver is done, the transmitter ID will be memorized in the receiver so that you don't have to repeat the process before the next flight/operation (except when your transmitter has to be linked with a different receiver).

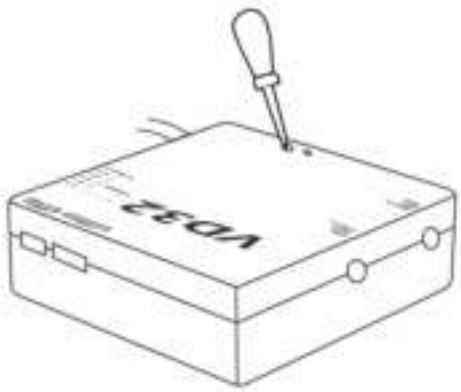
Linking/Binding Steps

1. Please keep your VD32 transmitter one meter away from your VD32 receiver and power on both of them;

2. In VD32 transmitter screen menu, tap on “System Settings – General Settings”;



3. Turn to your VD32 receiver, stick a pin or needle to the linking button inside the linking hole, press and hold the button for 3 seconds till the status indicator blinks red which means the receiver is ready for linking;



4. Tap on “Link - Start” and wait for a second, if the transmitter indicator and the receiver both blink green, linking is finished.

WARNING

Before linking the transmitter to the receiver, please make sure your aircraft motors have no power connected (E.S.C are off connection).

Reboot the receiver when linking steps are finished, and try to manipulate on the transmitter to confirm if it works well.

3.4 Throttle Joystick Type

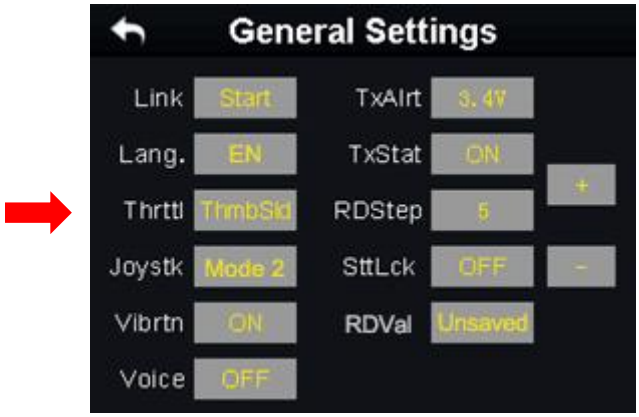
VD32 transmitter supports both “Thumb-slide” and “Self-centering” throttle joysticks. Users decide which type to use according to their preference. Generally, if your VD32 transmitter has been set up as “Thumb-slide” throttle joystick, then the throttle type in “System Settings” should be “Thumb-slide” as well.

Thumb-slide Joystick: While users are powering on the transmitter, it alerts with voice broadcast if the throttle joystick is not in its bottom position, and disables RF transmitting automatically (the transmitter status indicator is off). The transmitter will not enable RF transmitting until throttle joystick was back to the bottom position.

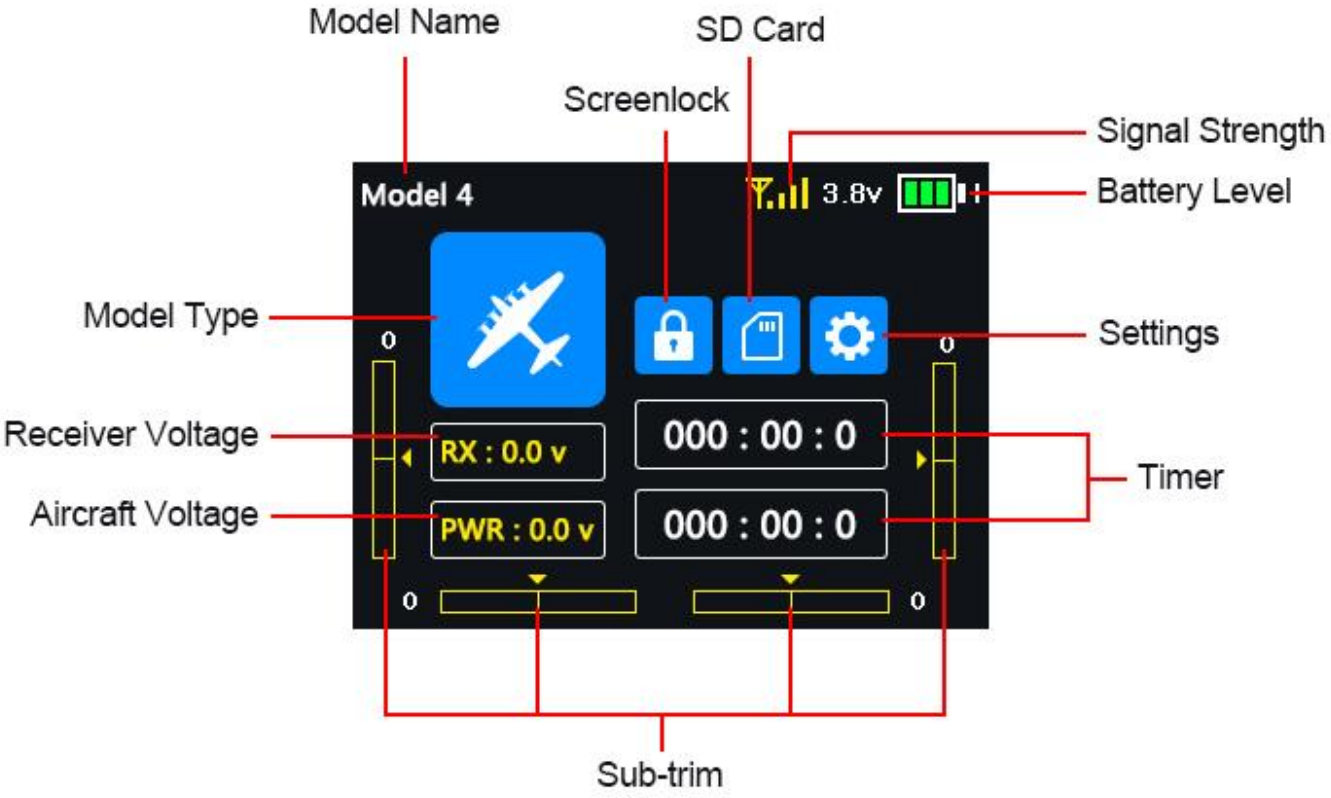
Self-centering Joystick: No alert, the transmitter works normally.

Steps

In “System Settings” menu, tap on “General Settings - Throttle – Thumb-slide / Self-centering” to choose your favorite throttle type.



4 MAIN MENU



Model Name

Displays the name of the selected model.

Model Type

Displays the selected model type.

Battery Level

Real-time display of VD32 transmitter's battery level.

Settings

Approach to the "Transmitter Settings" menu.

Receiver Voltage

Real-time display of the sky station's voltage telemetry.

Aircraft Voltage

Real-time display of the aircraft's voltage telemetry.

Sub-trim

Displays the digital sub-trim value of all 4 channels.

Screen Lock

The main menu is locked, the touchscreen is disabled (the icon disappears when main menu is unlocked).

SD Card

A SD card is inserted in VD32 transmitter (the icon disappears when the SD card is taken out).

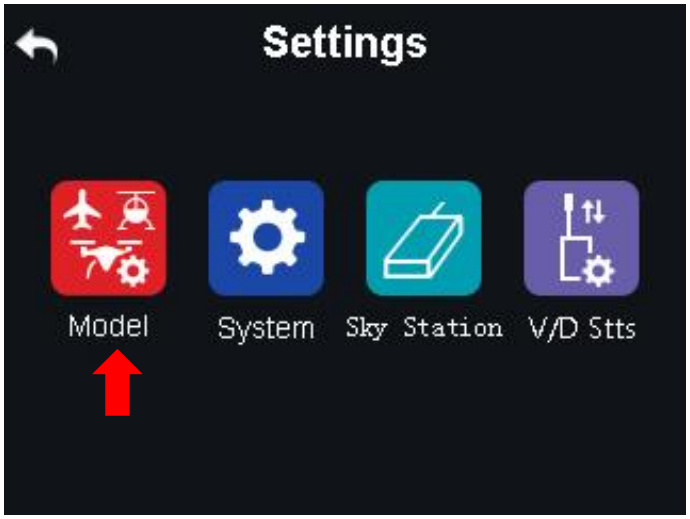
Timer

Displays maximum two timers as to assist users with the flight.

Signal Strength

Real-time displays of the RF transmitting signal quality.

5 MODEL SETTINGS



In VD32 transmitter's "Model Settings" menu, there are a series of useful functions, offering basic and advanced settings for different kinds of model devices.

CH Monitor (Channel Monitor)

Real-time display of all channels' output value.

Model Select

Select / Save model data.

Model Type

Choose the right model type for your device.

End Point

Set the output values of a channel and the maximum / minimum limit.

CH Mapping (Channel Mapping)

Set / Change the defined function of a channel.

CH Reverse (Channel Reverse)

Reverse a channel's output direction.

Sub-trim

Do trim adjustment to your aircraft's flight attitude.

Trim Setting

Adjust the stepping value of the sub-trim function.

Trainer Mode

One on one training through two transmitters.

Fail Safe

Adjust fail safe settings.

Timer

Turn on / off the timer.

LowVol Alert (Low Voltage Alert)

Low power alert of the aircraft battery.

Special Function for Agricultural Drones

Farm. Voice (Farming Voice)

Real-time voice broadcast specialized for agricultural drones.

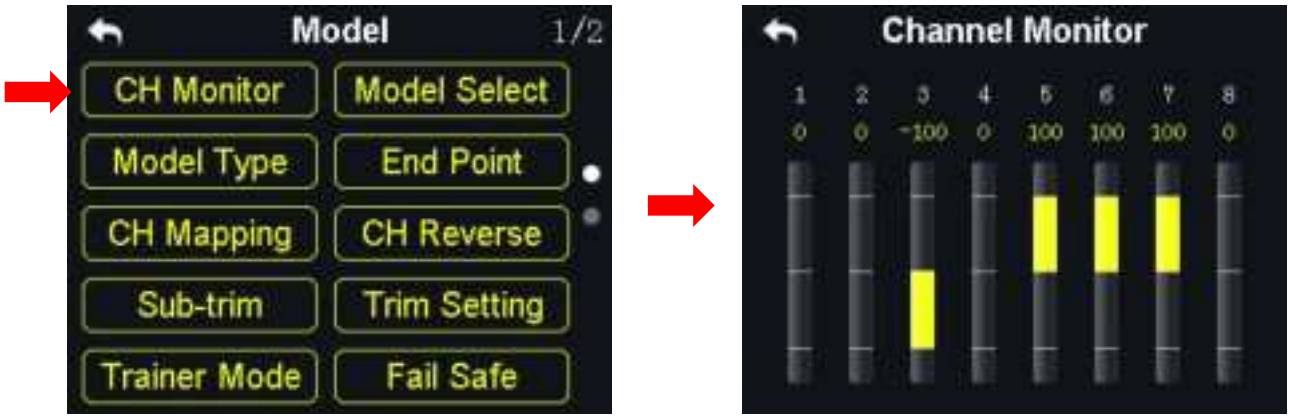
JstkDeadZone (Joystick Dead Zone)

Filter mistaken manipulation caused by touching joysticks unintentionally.

MultiDroCtrl (Multi-Drone Control)

Control the flight of up to three drones at the same time through one transmitter.

5.1 Channel Monitor



In “Channel Monitor”, users can check the real-time changing of output values in all 16 channels.

5.2 Model Select

“Model Select” function supports users to select, rename, copy and reset model data.

5.2.1 Select a Model

In VD32 transmitter's default model list there are up to 64 sets of model data for your choice.

Steps

1. In "Model Settings" menu, tap on "Model Select", in the screen it shows the model select menu;

2. Tap on a model name, then "Select", in the screen it pops up "Confirm your selection", tap on "Yes" to finish selecting.

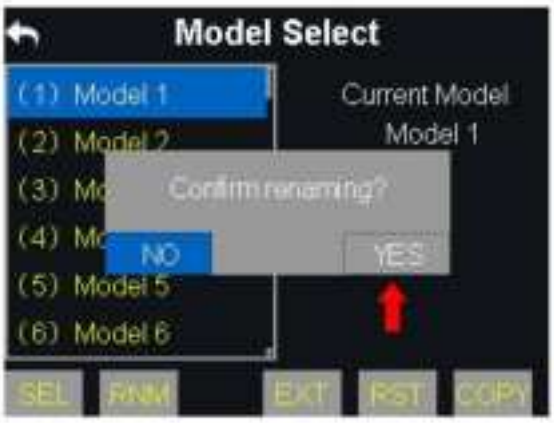
5.2.2 Rename a Model

Users can rename a model data in the default model list as a mark of the difference. Once selected, the model name displays in transmitter main menu as well.

Steps

1. Tap on a model name, then “Rename”, in the screen it pops up “Confirm to rename the model”; then “Yes”, in the screen it shows a virtual keyboard menu;

2. Input a new name for the model by using the virtual keyboard, then tap on “yes” to finish.



About Virtual Keyboard

CAPS

Switch keyboard to input capital letters.

SCAP

Switch keyboard to input lower case letters.

NUM

Switch keyboard to input numbers and punctuations.

Backspace

Delete what is already input.

Cancel

Cancel inputting, the transmitter will not save the input.

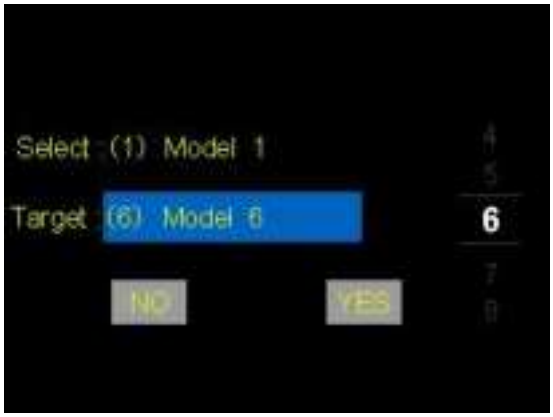
5.2.3 Copy a Model

Users can copy a model data from the transmitter's default model list for backup. By doing so, you will not have to input all the data again for a new model.

Steps

1. Tap on a model name, then "Copy", in the screen it shows the "Copy a Model" menu;

2. Select the target model on the turntable, then tap on “Yes” to finish.

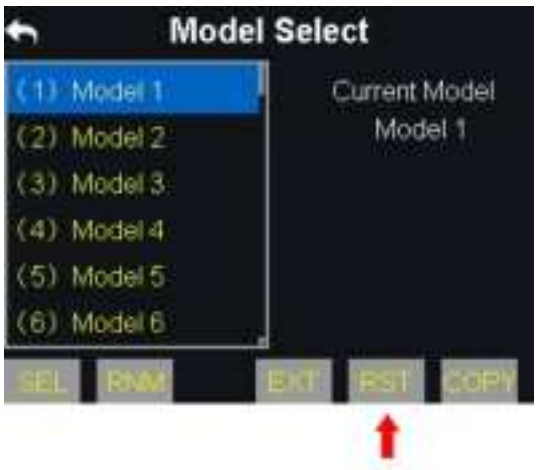


5.2.4 Reset all Models

Users can reset all the data in the model list to the default settings.

Steps

1. In the Model Select menu, tap on “Reset”, in the screen it pops up “Confirm to reset”;



2. Tap on “Yes” to finish.

5.3 Model Type

In VD32 transmitter there are several default model types, Fixed-wings / Gliders, Multi-rotors (racing drones, agricultural drones) and the others (helicopters), each model type with its default settings done in advance. Users can choose a model type according to their requirement and customize the settings.

CAUTION

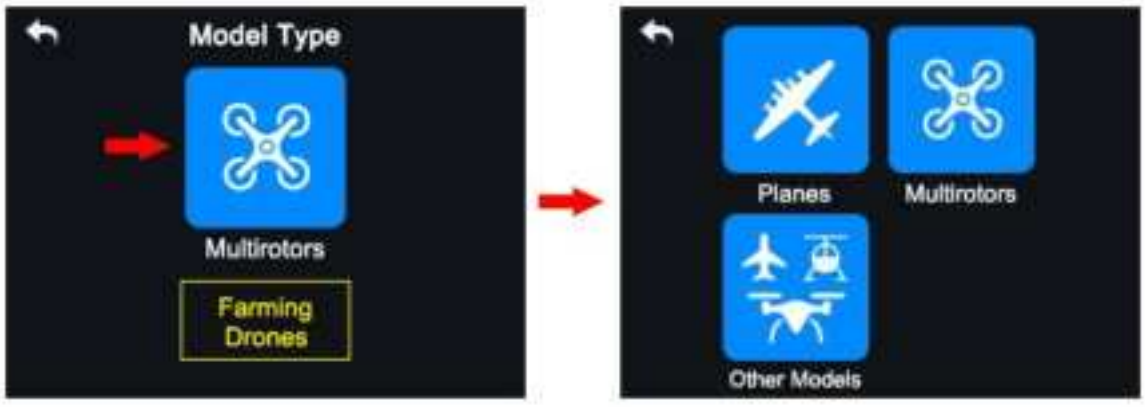
When you switch a model type, all the data in the current model will be reset automatically.

It is better to save the model data before switching to another model type.

5.3.1 How to Select a Model Type

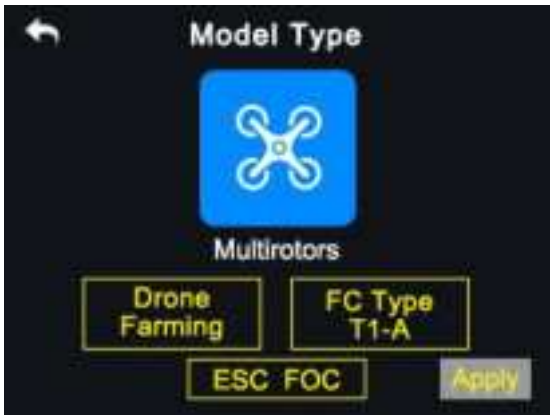
Steps

1. In the “transmitter settings” menu, tap on “Model Settings - Model Type”;
2. In the screen, it displays the current model type; tap on it, in the screen it is switched to the “Model Type” list;



3. Tap on a model type according to your requirement, then “Apply” to finish.

5.3.2 One Move to Do Agricultural Drone Settings



VD32 transmitter supports the function “One Move to Do Agricultural Drone Settings”. Users can select and match the FC (Flight Controller) and ESC (Electronic Speed Controller) type according to what they have bought. Then the joystick/switch/button/dial definition and datalink settings will be done automatically. And you will be ready for flight immediately.

CAUTION

Please make sure your VD32 transmitter and VD32 receiver are linked before doing agricultural drone settings.

When the settings are done, please do not forget to re-calibrate your VD32 transmitter joysticks before unlocking motors and taking a flight.

Steps

1. In “Model Settings” menu, tap on “Model Type”, in the screen it shows “Model

Type" menu;

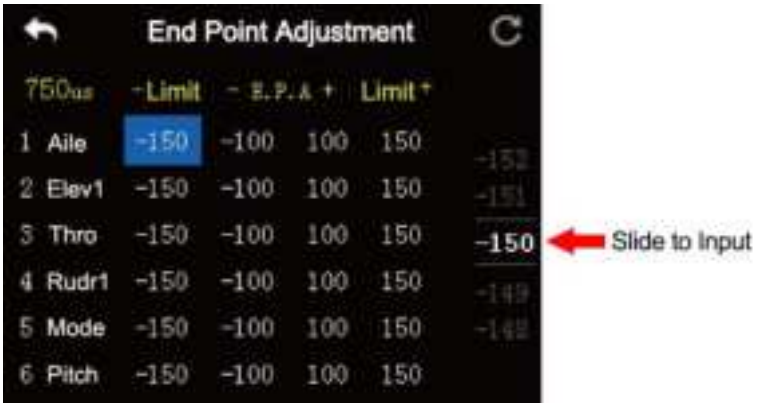
2. Choose "Multi-rotors" as the model type, "Farming Drone" as the drone type. Then Select the right FC and ESC type according to what you have bought. Please select "FOC" for ESC which is free of calibration. And select "Standard" for ESC which requires calibrating output value, then your VD32 transmitter will generate the channel value automatically according to your requirement.
3. Calibrate your VD30 transmitter joysticks in your flight controller's ground control software and finish the Fail-safe settings.
4. Unlock motors and take off your drone.

5.4 End Point

"End Point" function helps users set the output value of a channel and its maximum/minimum limit.

Steps

1. Please refer to the picture below. In “Model Settings” menu, tap on “End Point”, in the screen it shows “End Point” menu (“-E.P.A+” stands for the channel value, “-limit / limit+” stands for the minimum/maximum limit value);



2. When the channel output is normal, tap on the left/right box to input value of the minimum/maximum limit, the range is between -150 and 150.

3. After setting, output value of the channel will not exceed the limit even under “Program Mix*” function in order to protect the servo and some other external device.

Mark: In “End Point” menu, tap on “Reset” at upper right corner screen to reset all channel values.

5.5 Channel Mapping

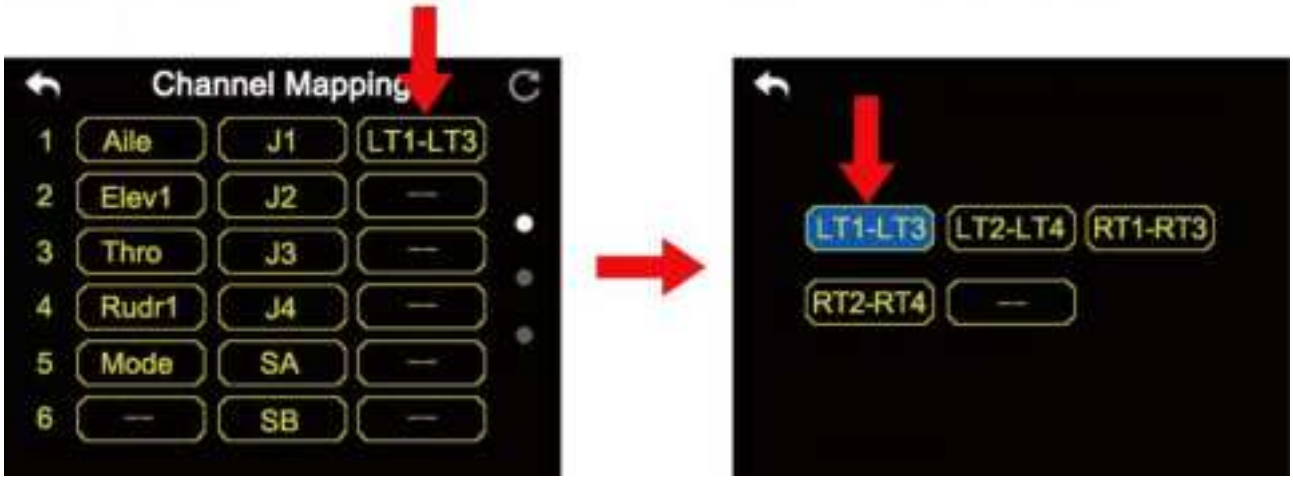
All 16 channels of VD32 transmitter can be mapped freely as you need to the joysticks, switches, buttons, and dials.

Steps

1. Please refer to the picture above. Tap on the last box on right of your target channel to open the list of all joysticks, switches, buttons, and dials.

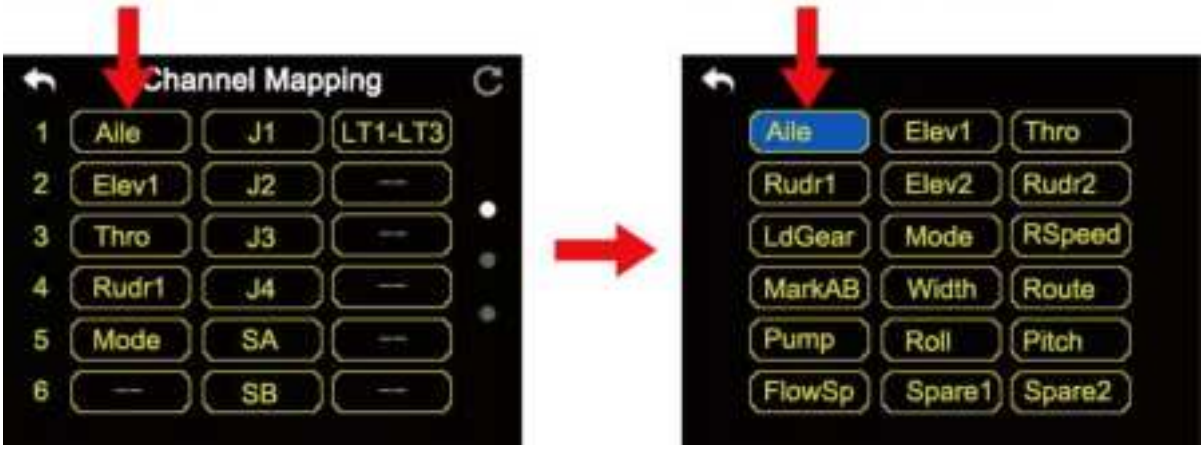
2. In VD32 transmitter system, channel 1-4 is default to be Aileron, Elevator, Throttle, and Rudder.

3. Let's take example of Channel 1 (Aileron). Tap on the "J1" box on right of Channel 1 and select a joystick/switch/button/dial in the list. In the box it will show the selected joystick/switch/button/dial.



Mark

- In "Channel Mapping" menu, if you are to redefine a channel, tap on the channel name, in the screen it shows the definition list of all the transmitter channels; select a definition from the list to finish.



- Tap on “Reset” to rest all channel data.

5.6 Channel Reverse

Users can reverse a channel’s output direction through “Channel Reverse”.

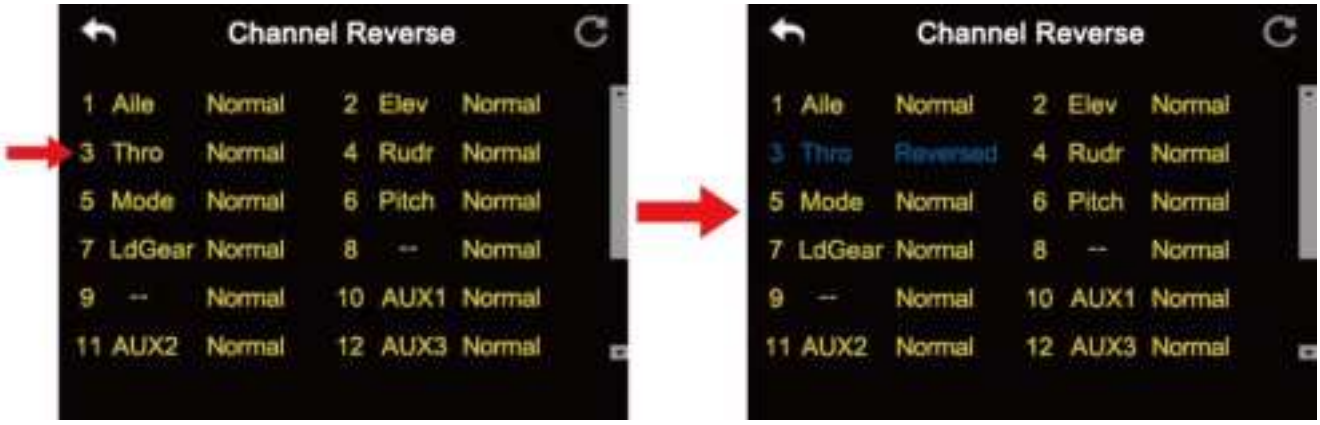
Steps

1. When your VD32 transmitter is linked to a new model, please confirm if all the servos, buttons, and switches have been mapped to right channels as you need.

2. Try to manipulate the joysticks, switches, buttons, and dials on your VD32 transmitter to confirm if the output direction of each channel is normal or reversed.

3. In “Model Settings” menu, tap on “Channel Reverse”, in the screen it shows the channel reverse menu;

4. Please refer to the picture below. Tap on the “Normal/Reversed” box to switch the channel direction and the box will show if the channel is normal or reversed.



Mark: Tap on “Reset” to reset all channels.

5.7 Sub-Trim

Sub-Trim function helps users set the middle position value of a channel’s and do trim adjustment to the aircraft’s flight attitude.

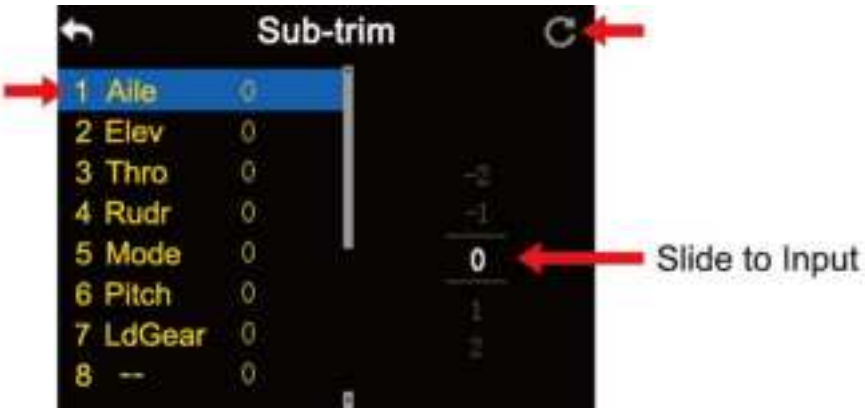
Before doing Sub-Trim settings, please make sure that the target Sub-Trim channel is in its middle position.

⚠CAUTION

It is not a good idea to use Sub-Trim function when you are flying an agricultural drone.

Steps

1. In “Model settings” menu, tap on “Sub-Trim”, in the screen it shows “Sub-Trim menu;
2. Select a channel according to your requirement; use the virtual turntable to select a target middle channel value;
3. Repeat step 2 if you are to adjust any other channels.



Mark: In Sub-Trim menu, tap on “Reset” to reset all channels.

5.8 Trim Setting

Trim Setting function helps users adjust digital sub-trim's stepping value.

The equivalence relationship between Trim Setting value and Trim Stepping value are,

5 Trim Setting Value = 1 Trim Stepping Value

That is, when Trim Setting value changes 5 units, the Trim Stepping value changes 1 unit.

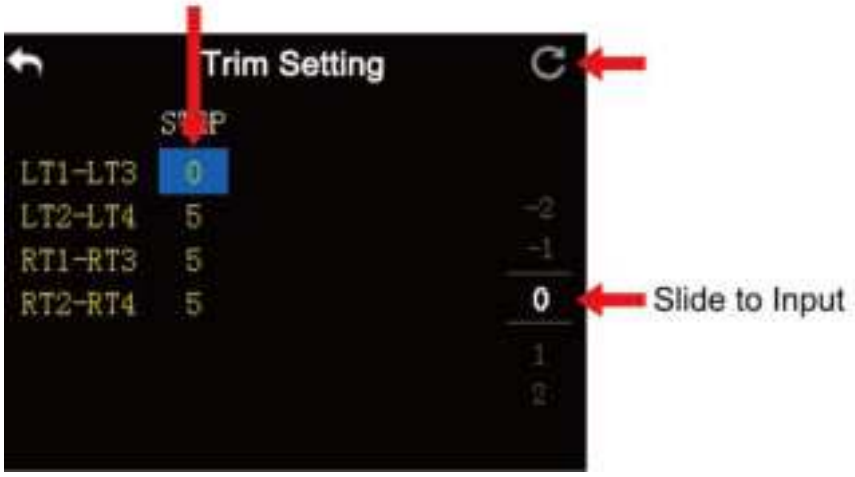
VD32 transmitter's Trim Setting value is default to be 5, the minimum limit of the trim setting value is 0, the maximum limit is 100; the minimum limit of the trim stepping value is 0, the maximum limit is 20.

Steps

1. In "Model Settings" menu, tap on "Trim Setting", in the screen it shows Trim Settings menu;

2. Through Trim Settings function, users are able to adjust all 4 sub-trim channels; tap on a channel according to your requirement to change its trim stepping value;

3. Use the virtual turntable to select a target Trim Stepping value, the adjustable range is from 0 to 100;



4. Tap on “Return” to finish.

Mark: In the trim settings menu, tap on “Reset” to reset all channels.

5.9 Trainer Mode

VD32 transmitter's trainer mode helps experienced users train new talents. In the trainer mode, two transmitters are connected by a trainer cable. The users can decide which channel to use for training.

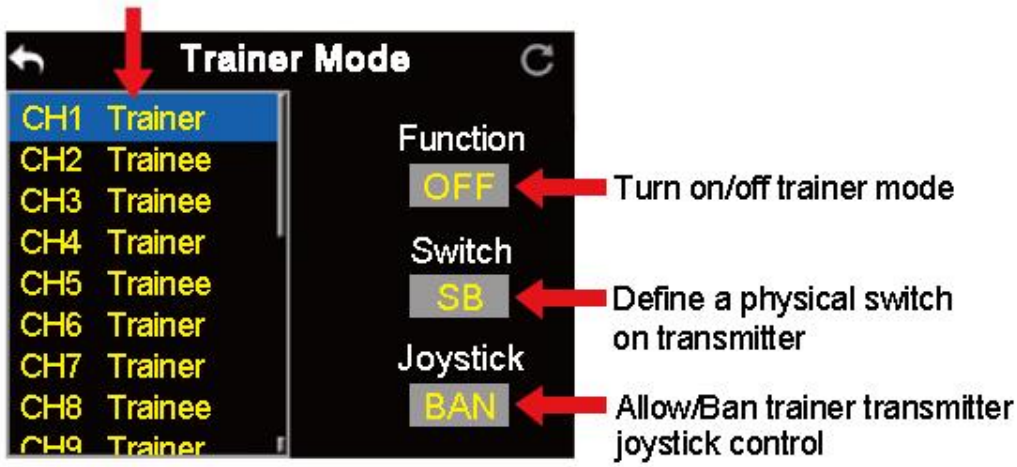
In the trainer mode, VD32 transmitter supports turning on/off the function through a physical switch or button. And users can switch the identity between trainer and student.

Steps

1. Use the trainer cable to connect the DATA1 port of the trainer transmitter with the DATA1 port of the student transmitter;

2. In the model settings menu, tap on "Trainer Mode", in the screen it shows the trainer mode menu;

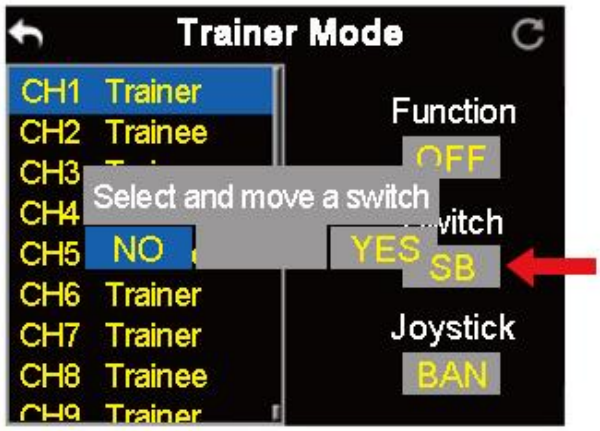
3. In Trainer Mode it shows the list of all 16 channels; tap on "ON/OFF" to turn on/off the function;



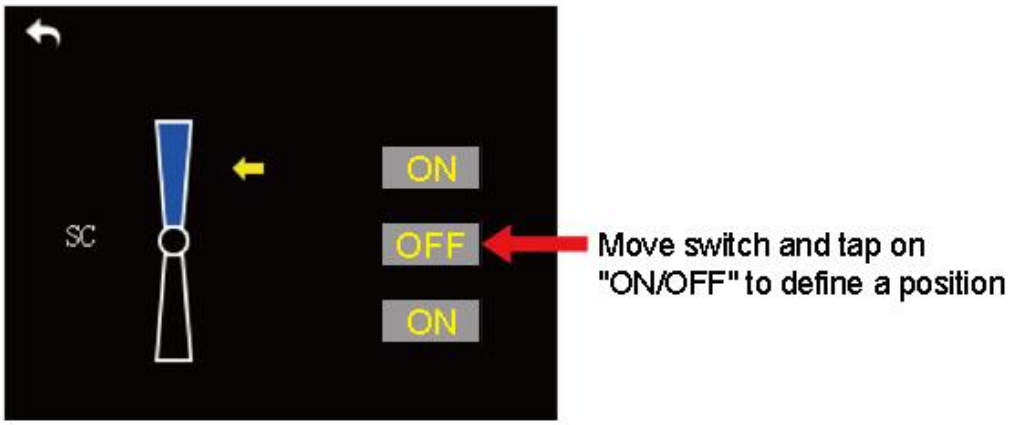
4. The transmitter with the trainer mode turned on is the master transmitter, the other one is the slave transmitter; in the master transmitter the channel is default to be “Trainer”;

5. Each channel in the list has two status, trainer and student; if you change the status to “Student” in the master transmitter, the slave transmitter will get authority to manipulate the channel, otherwise it will have no authority;

6. In the trainer mode menu, you can define a physical switch or button to turn on / off the function; tap on “NULL”, in the screen it pops up “Choose a switch / button”; follow the hint to manipulate a switch / button, in the screen it shows switch status menu; tap on an icon to define a switch / button according to your requirement;



7. When you have defined a switch / button, it will take over the control of turning on / off trainer mode.



5.10 Fail Safe

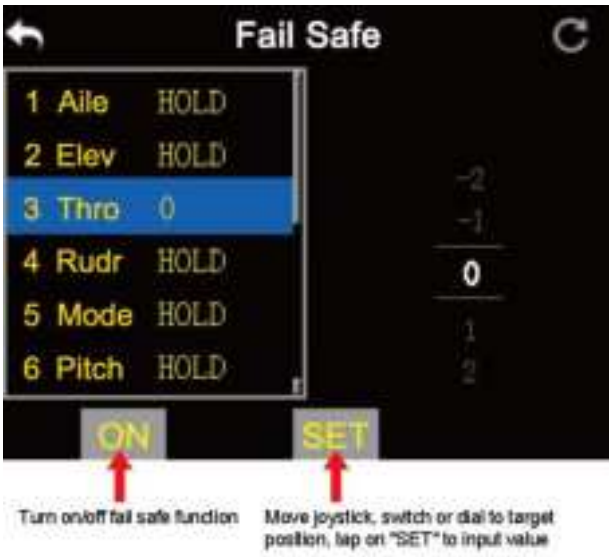
Before linking VD32 transmitter to VD32 receiver, do not forget to do fail-safe settings and turn on the function, thus if your transmitter lost linkage with receiver, fail-safe function will run automatically and immediately to protect your model from a crash.

Steps

1. Make sure the transmitter is linked to receiver.

2. In “Model Settings” menu, tap on “Fail Safe” to enter Fail-Safe menu;

3. Please refer to the picture below. Under fail-safe menu, the function is default to be off and it displays “HOLD” in each channel. Under this circumstance, if your transmitter lost linkage with sky station, the receiver will output the last channel value received from your transmitter.



4. Tap on “OFF” and switch it to “ON” to activate Fail-Safe function.

5. When the function is turned on, tap on a channel according to your requirement and switch “HOLD” to “0”, then use the virtual turntable to input channel value;

6. When the function is activated, you can also input channel value by manipulating a joystick, a switch, a button, or a dial which is mapped with the channel; input a target value, tap on “SET” to finish;

7. The virtual turntable helps users to adjust channel value more accurately when it is very close to the target value.

WARNING

For flight safety, Fail-Safe settings must be done and the function must be turned on before taking-off.

5.11 Timer

In VD32 transmitter main menu there are two timers.

Timing Mode

Up: Counts from 0, the timer alerts when it reaches the time.

Down: Counts from the start time, the timer alerts when it is back to 0.

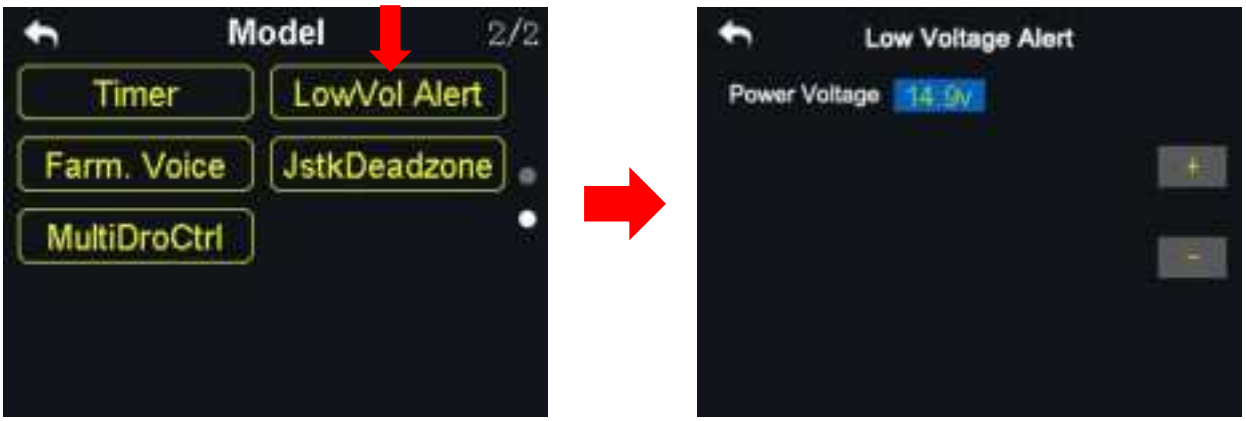
Define a Timer Function Switch

Start: Define a switch / button for “Start”.

Stop: Define a switch / button for “Stop”.

Reset: Define a switch / button for “Reset”.

5.12 Voltage Alert



When the user's aircraft power voltage is lower than the safe level, VD32 transmitter will vibrate and send voice alert.

Steps

1. In "Model Settings" menu, tap on "Voltage Alert", in the screen it shows the voltage alert menu;
2. Tap on power voltage, then "+/-" to input the target voltage value according to your requirement;
3. Tap on "Return" to finish.

5.13 Farming Voice

Farming Voice is a professional function is for agricultural drones. The function is supported by up to 6 switches with 16 positions. They are SA, SB, SC, SD, S2 and S3.

Steps

1. In “Model Settings” menu, tap on “Farming Voice”, in the screen menu it shows the farming voice menu;

2. In the farming voice menu, tap on “ON/OFF” to enable/disable the function;
3. Select a switch and a position; in the screen menu it shows the voice list; select a voice to define the switch;
4. Repeat step 3 if you are to define the other switches.

Voice List

Atti. (Attitude): Attitude Mode

Stab. (Stablize): Stable Mode

Hold (AttiHold): Attitude Hold Mode

GPS: GPS Mode

AB Ln (AB Line): A/B Line Flight Mode

Auto (AutoMode): Auto Flight Mode

Rcd A (Record A): Record A Point

Rcd B (Record B): Record B Point

ExeAB (Execu AB): Execute A/B Line (for Topxgun flight controller only)

Clear (Clear AB): Clear AB Line

SpON (SprayON): Turn on spraying.

SpOFF (SprayOFF): Turn off spraying.

RTH (RtnHome): Drone return to home

RTB (RtnBreak): Drone return to breakpoint

Loit. (Loiter): Loiter Mode

RaON (RadarON): Turn on radar

RaOFF (RadarOFF): Turn off radar

AuSpr (AutoSpr): Auto Spraying

MnSpr (ManulSpr): Manual Spraying

LtON (LightON): Navigation light on

LtOFF (LightOFF): Navigation light off

5.14 Joystick Dead Zone

By setting a certain dead zone range, VD32 transmitter helps user filter out channel values which are input by touching the joysticks unintentionally.

When the range is set, the channel value does not change if the joysticks stay moving in the range; when the joysticks move out of the range, the channel value continues to change.

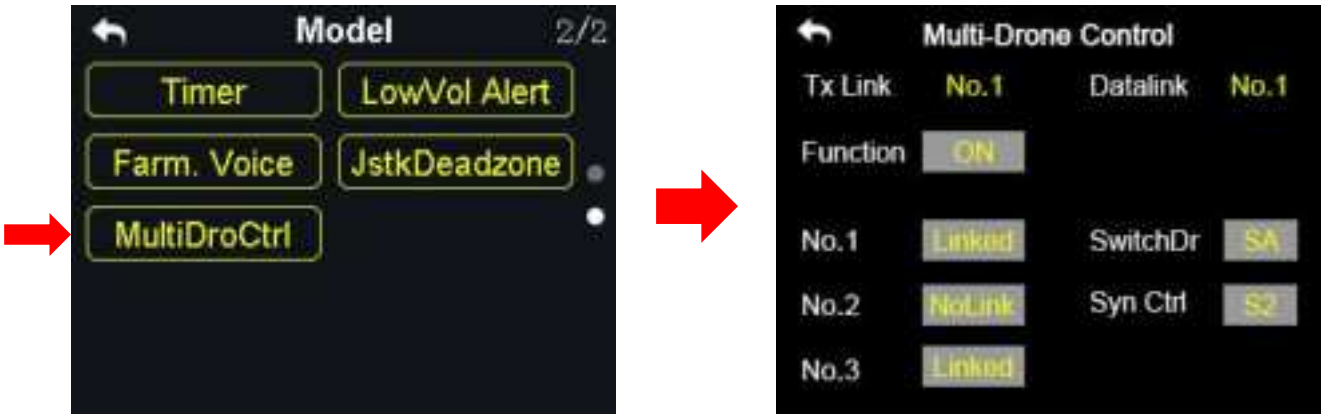
Steps to Set Dead Zone

1. In the model settings menu, tap on “JstkDeadZone”, in the screen it shows the

Joystick Dead Zone menu;

2. Tap on the range, then “+/-” to input a target range according to your requirement;
3. Tap on “Return” to finish.

5.15 Multi-Drone Control



Through one VD32 transmitter users can control up to three drones at the same time.

Switch Drone

The function is to switch the control of linked drones, from drone No.1 to No.3.

When the “Syn-control” function is not activated, VD32 transmitter controls one drone only. At this time, if you switch the control of a linked drone to another, for the uncontrolled drones, the channel value of CH1-4 stays in center (1500), the other channels stay not changing. The datalink goes with the drone in control.

Syn-Control

When the “Syn-control” function is activated, VD32 transmitter can control up to three drones at the same time. Under this circumstance, all drones fly at the same pace. The datalink only goes with one drone, which is the drone in control before activating the “Syn-control” function.

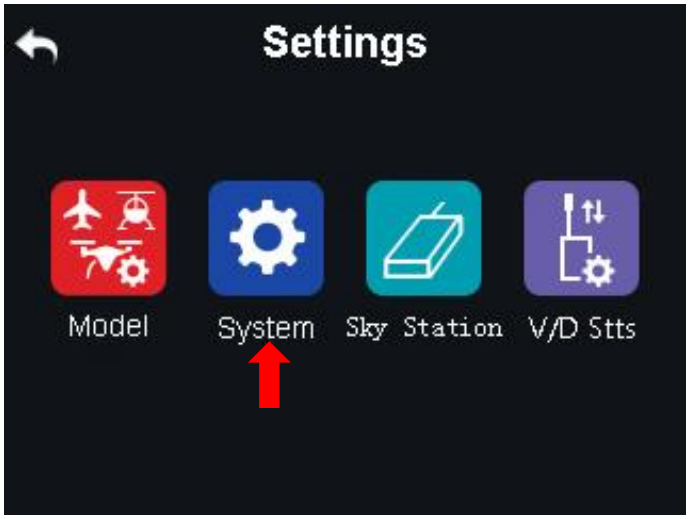
CAUTION

Please keep a safe distance between the drones when the “Syn-Control” function is activated.

Steps

1. In the model settings menu, tap on “MultiDroCtrl”, in the screen it shows the multi-drone control menu;
2. Tap on “SwitchDr”, define a 3-stage switch according to your requirement to switch the control of the drones;
3. Tap on “Syn-Control”, define a 2-stage switch or a button (S3/S4 is better) to switch on/off the function;
4. Hold the “link” button on the sky station of the drone No.1; when the indicator blinks red fast, go to the “MultiDroCtrl” menu, tap on “NoLink” of the drone No.1; When the indicator is on green, linking is finished.
5. Repeat Step 4 for drone No.2 and drone No.3 to finish all the linking process.

6 SYSTEM SETTINGS



Functions

General Stts (General Settings): Set transmitter's basic functions

Lock&Display (Screen Lock & Display): Turn on / off the display of the transmitter touch screen and adjust brightness

H/W Settings (Hardware Settings): Change the hardware definition of several transmitter channels through software settings

ExtPort Stts (Extending Ports Settings): Set the definition of the transmitter's

extending ports

Joystk Cali (Joystick Calibrating): Calibrate the joysticks

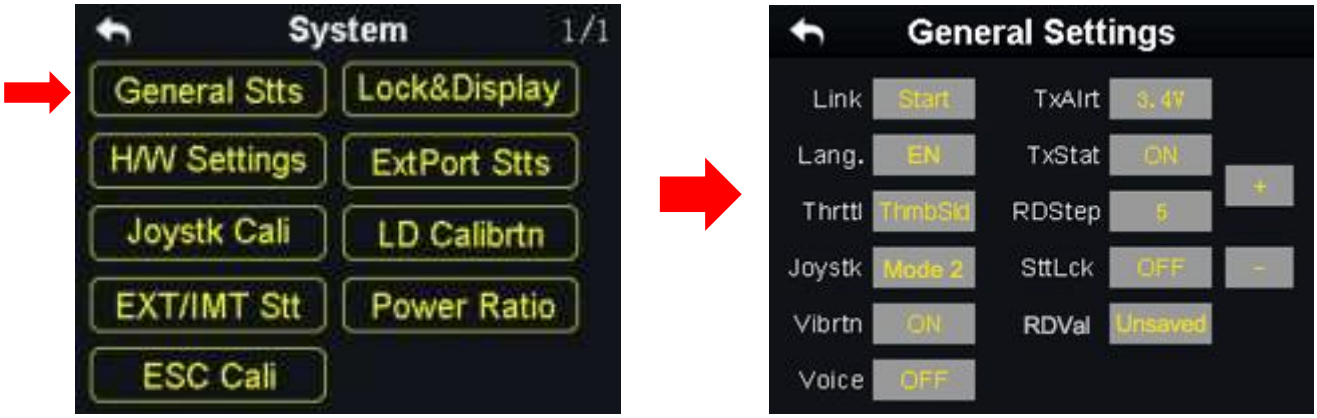
LD Calibrtn (LD Calibrating): Calibrate the left dial (LD)

EXT/IMT Stt (Export/Import Setting Data): Export the transmitter settings or model settings

Power Ratio: Adjust the power ratio

ESC Cali: Calibrate ESC through PWM ports on the sky station

6.1 General Settings



General Settings Menu Introduction

Link (Linking): Start linking VD32 transmitter to receiver.

Lang. (Language): Switch the system language between Chinese/English.

Thrttl (Throttle Type): Switch the throttle joystick type between “Self-centering” and “Thumb-slide”.

Joystk (Joystick Mode): Switch the joystick mode from Mode 1 / Mode 2 / Custom.

Vibrtn (Vibration): Turn on / off the vibration alert function.

Voice (Voice Broadcast): Turn on / off the voice broadcast function.

TxAlrt (Transmitter Low Battery Level Alert): Set a limit for the transmitter battery level lower than which transmitter will alert.

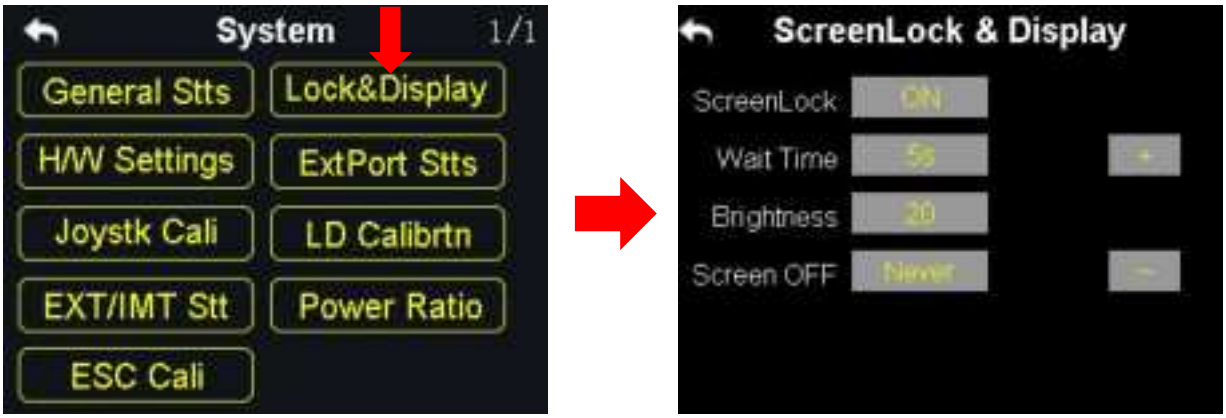
TxStat (Transmitting Status): Turn on / off the radio signal transmitting.

RDStep (RD Stepping Value): Set the stepping value (range: 1-100) of the right dial (RD). Higher it is, more channel value the channel value increases in a single movement.

SttLck (Setting Lock): When the setting lock is “ON”, password is required for entering the transmitter setting menu (the default password is “8888”); when the setting lock is “OFF”, no password is required.

RDVal (RD Value): When it is “Unsaved”, the RD channel returns to the default channel value (1500) the next time you power on the transmitter; when it is “Saved”, the RD channel stays at the channel value before the last powering off.

6.2 Screen Lock & Display



Users can turn on / off the screen lock, set the waiting time, adjust the screen brightness and the screen sleep waiting time of VD32 transmitter.

Screen Lock and Display Introduction

Screen Lock: The touchscreen lock is disabled when the screen lock is enabled.

Screen Lock Waiting Time: Set the waiting time before locking transmitter screen.

Screen Brightness: Adjust the screen brightness (range 1 - 20).

Screen Sleeping Time: Turn on / off the sleeping function (screen display turns off automatically after waiting time) of the transmitter screen and set waiting time. When you set “Never”, the transmitter screen stays on.

Mark: When the screen lock is enabled, press down a sub-trim button (LT5 direction of left sub-trim button, RT5 direction of right sub-trim button) for 3 seconds to unlock the screen.

6.3 H / W Settings

Through the H / W settings users can do advanced settings for the left dial (LD) to switch it between the Position Mode and the Speed Mode and the switch S1 / S4 / S5 / S6 to switch between Self-locking and Self-resetting.

The Difference between the Left Dial (LD)'s Position and Speed Mode

Position Mode: Output of the LD channel value depends on the dial's position. More dial angle it changes, more channel value it outputs.

Speed Mode: Output of the LD channel value depends on the dial's rotating speed. Faster the dial rotates, more channel value it outputs. The speed mode is widely used among aerial photography users to change the camera angle.

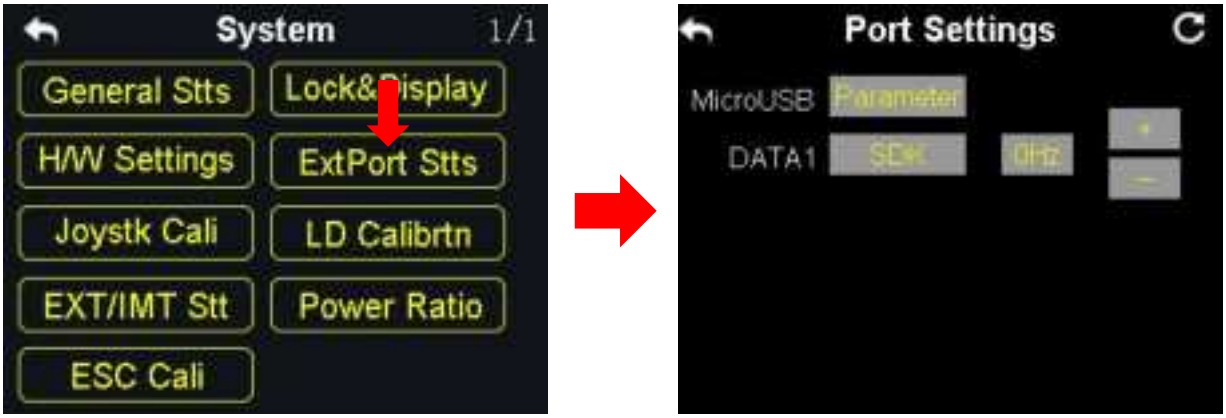
Steps

1. In the system settings menu, tap on “H / W Settings”, in the screen it shows the H / W settings menu;
2. Tap on “Position / Speed” to switch the left dial’s working mode; in speed mode, “+ / -” is to input the stepping value so as to change the LD’s rotating speed.

How to Define the S1 / S4 / S5 / S6 Switch

In the H / W settings menu, select a switch according to your requirement, tap on “Self-locking / Self-resetting” to define the working mode.

6.4 Extending Ports Settings



The extending ports function help users extend transmitter function to external hardware devices and SDK. Currently VD32 transmitter supports a Micro-USB port, a USB port and a 4-Pin Groove Port (DATA1).

The Assigned Function to the Extending Ports

Micro-USB: Charging, parameter adjustment, firmware upgrading and datalink output.

USB: Datalink output.

DATA1: Firmware upgrading of the sky station, trainer mode and SDK.

Steps to

1. In the system settings menu, tap on “Extending Ports Settings”, in the screen it shows the extending ports settings menu;
2. Select DATA1 to assign a function (transmitter / sky station / GPS / SDK);
3. Under “Transmitter”, the DATA1 port supports the trainer mode, output of the trainer transmitter and input of the student transmitter;
4. Under “sky station”, the DATA1 port supports upgrading the sky station firmware;
5. Under “GPS” mode, the DATA1 port supports the GPS module. Agricultural drone pilots use the GPS module with VD32 transmitter to mark flight points;
6. Under “SDK”, the DATA1 port supports output of the joystick channel value. Tap on “+ / -” to increase or decrease output frequency.

SDK Agreement Format

Field	Index	Bytes	Description
STX	0	1	0X55
Data Length	2	1	Data field byte length value: 32
CMD ID	5	1	0x00
DATA	6	32	Joystick channel data Data type: 16-byte unsigned int for channel 1-16
Check Sum	38	1	8 bytes (check sum from 0 byte to 37 byte)

6.5 Joystick Calibrating

The Joystick calibrating function help users calibrate the joysticks' middle position. Regular calibration can maintain the control accuracy of the joysticks.

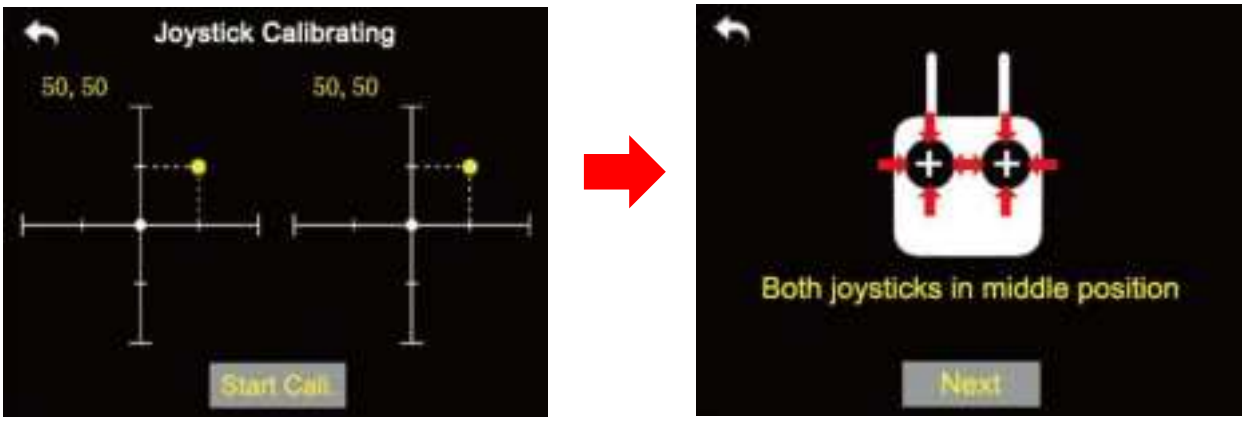
No calibration is required if it was the thumb-slide joysticks. The self-centering joysticks require calibrating when they fail to reach the maximum / minimum positions or when they stay out of the middle position (channel value is not 0).

Steps

1. In the system settings menu, tap on “Joystick Calibrating”, in the screen it shows the calibrating menu of the joystick;

2. The crossing coordinate system displays the real-time position of the joysticks;

3. Tap on “Start”, in the screen it pops up “Confirm if both the joysticks are in the middle position”;



4. Hold the joysticks and make them stay in the middle position (the joystick’s tick mark aligns with the transmitter’s tick mark), then tap on “Next”;

5. The transmitter starts detecting the middle position automatically, do not touch the joysticks while you are waiting;

6. When the detecting is finished, push both joysticks to the maximum position and move them in circle for several times;

7. Tap on “Finish” when it is over.

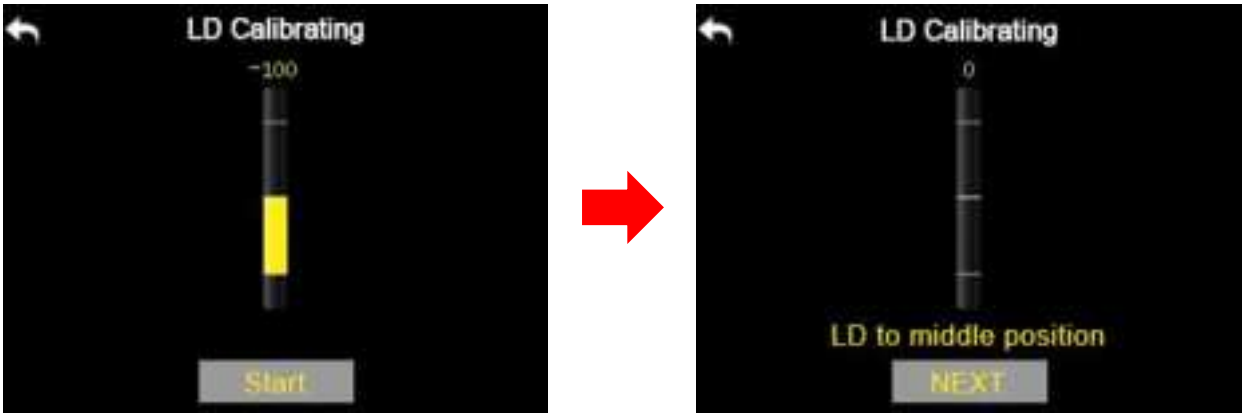
6.6 LD Calibrating

Calibrating the left dial can maintain its output accuracy. The left dial requires calibration when it stays out of the middle position (channel value is not 0) or it fails to reach the maximum / minimum position.

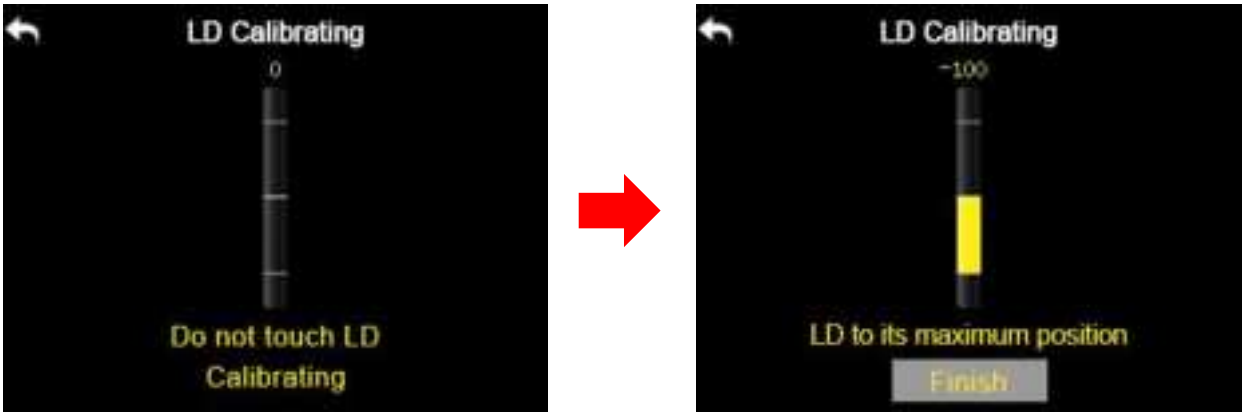
Steps to Calibrate LD

1. In the system settings menu, tap on “LD Calibrating”, in the screen it shows the

LD calibrating menu;

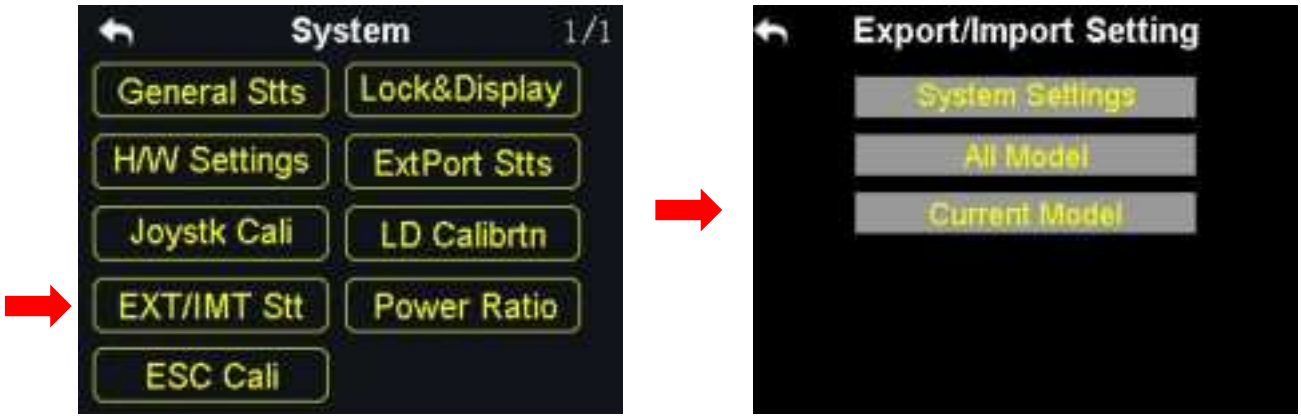


2. Tap on “Start”, in the screen menu it shows “LD to the middle position”;
3. Make sure the left dial is in the middle position, then tap on “Next”; in the screen it shows “Calibrating LD’s middle position, do not move LD”;
4. Please do not touch the left dial until it shows “LD to the maximum and minimum position”; follow the hint and repeat it several times;



5. Tap on “Finish” when it is over.

6.7 Export/Import Setting Data



Through the export setting function users can export the data of system settings and model settings to the SD card so as to share the data to another VD32 transmitter.

Steps to Export Setting Data

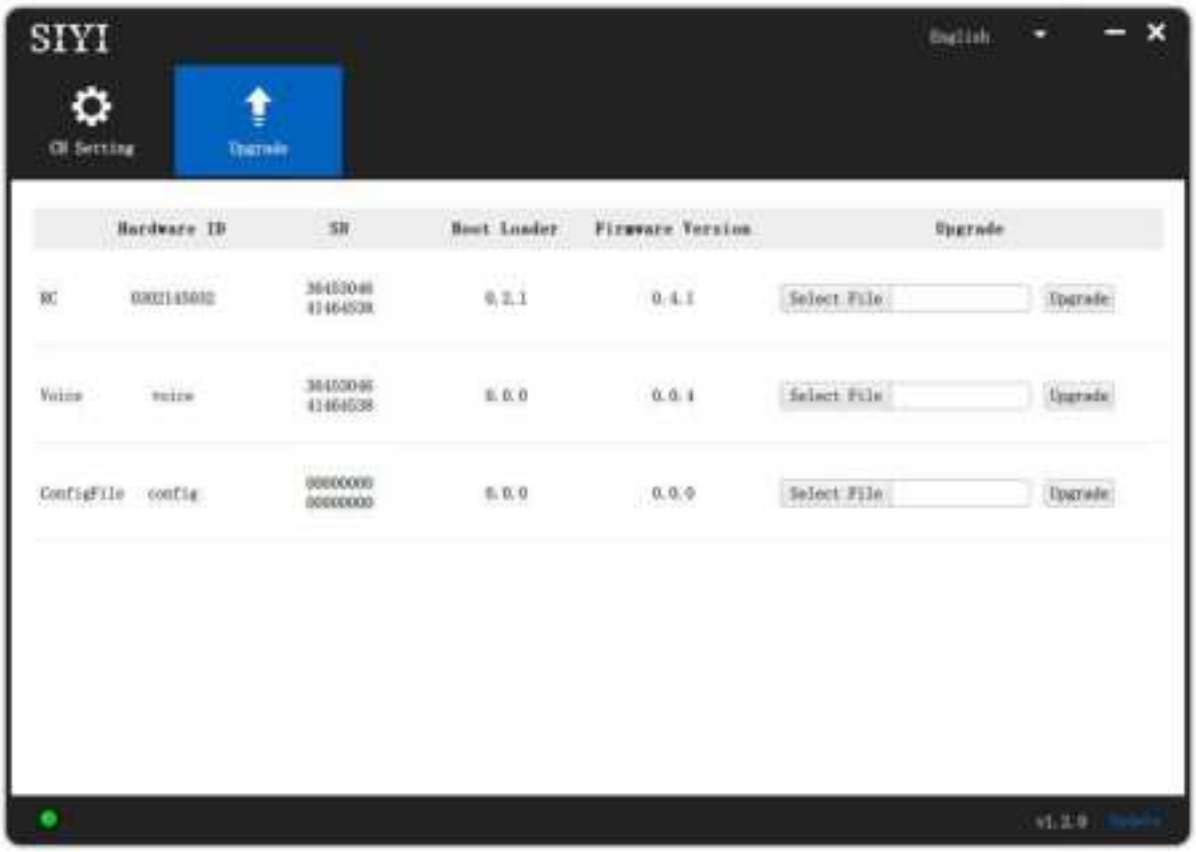
1. Insert the SD card to VD32 transmitter (ignore this step if it was there);
2. In the system settings menu, tap on “EXT/IMT Stt”, in the screen it shows the export/import setting data menu;
3. Tap on “System Settings” to export the transmitter’s system setting data, “All Models” to export all the data of model settings saved in the transmitter; if you are to export the data of the current model’s settings, tap on “Current Model”;
4. In the screen it pops up “Confirm to export” dialog, tap on “Confirm” to finish.

Steps to Import Setting Data

1. Connect VD32 transmitter to the computer via USB cable, and open the “SIYI Assistant” software;

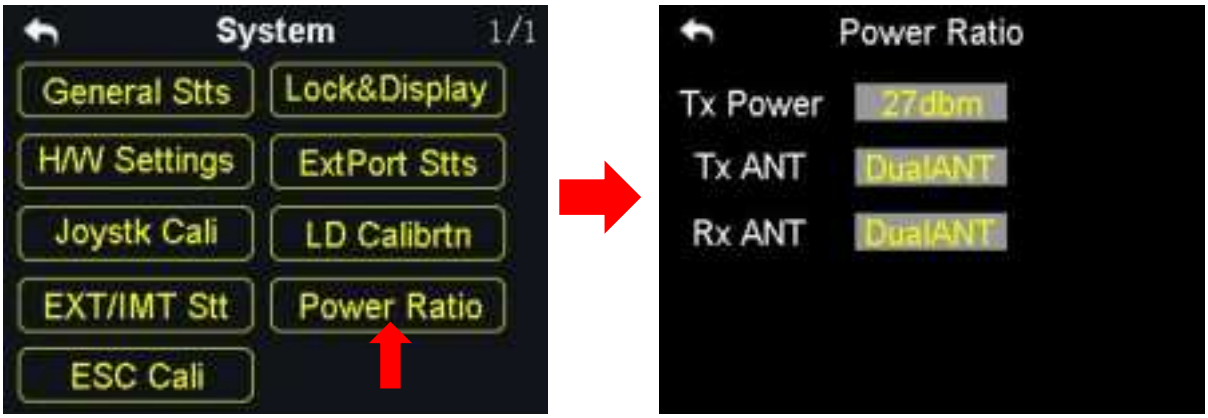
2. Import the setting data saved in the SD card to the computer through a SD card reader, the files are in format “.CFG”. The data of the system settings is named as “SYS.CFG”, the data of all model settings is named as “ALL.CFG”; the data of the current model settings is named as “MODEL+X(model number).CFG”;

3. In the “SIYI Assistant” software, tap on “Upgrade”; in “Setting Files”, tap on “Select File” to load setting files;



4. Tap on “Upgrade” to finish.

6.8 Power Ratio



6.8.1 RF Power

Power ratio function helps users adjust RF transmitting power output according to their requirement. Optional output power is 10dBm or 27 dBm.

Steps

1. Power on the transmitter and sky station, make sure that they are linked with each other;
2. In the system settings menu, tap on “Power Ratio”, in the screen it shows the power ratio menu;
3. Tap on “RF Power” to choose “10dBm” or “27dBm” for power output;
4. Tap on “Return” to finish setting.

6.8.2 Transmitter/Sky Station Antenna

Both the transmitter and the sky station have two antennas. Users can decide which antenna to use, the antenna 1, the antenna 2 or both according to their requirement.

Steps to Choose the Antenna(s)

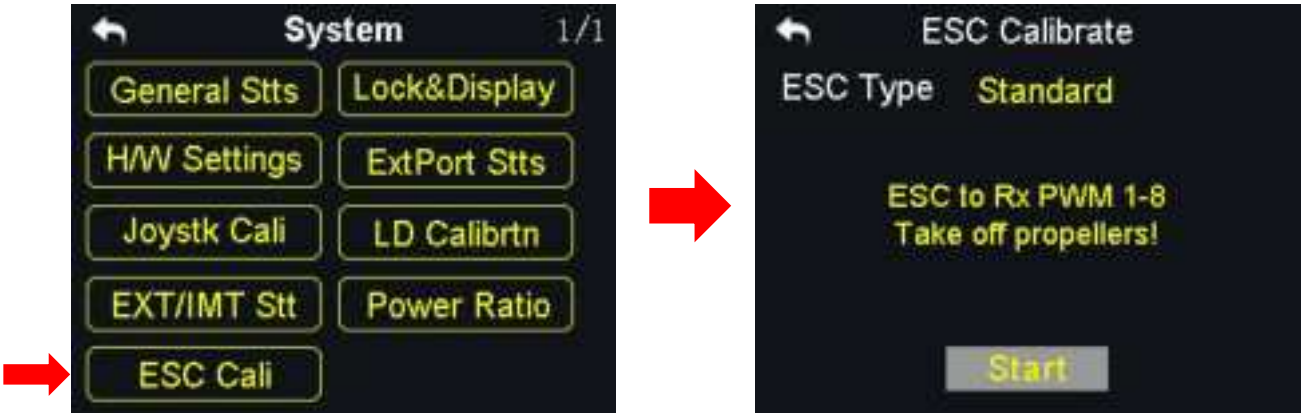
1. Power on the transmitter and the sky station, make sure that they are linked with each other;
2. In the system settings menu, tap on “Power Ratio”, in the screen it shows the power ratio menu;
3. Tap on “Tx/Rx ANT” to choose “ANT1/2” or “DualATN” for transmitter/sky station antenna;
4. Tap on “Return” to finish.

CAUTION

Please make sure that the distance between your transmitter and sky station does not exceed

2 meters.

6.9 ESC Cali



VD32 transmitter simplified the ESC calibration a lot. Users just connect their ESC to VD32 receiver's PWM port 1 to 8, then follow the tips in the screen menu or the steps below to finish calibration.

Steps to Calibrate the ESC

1. In the system settings menu, tap on "ESC Cali", in the screen it shows the ESC calibration menu;

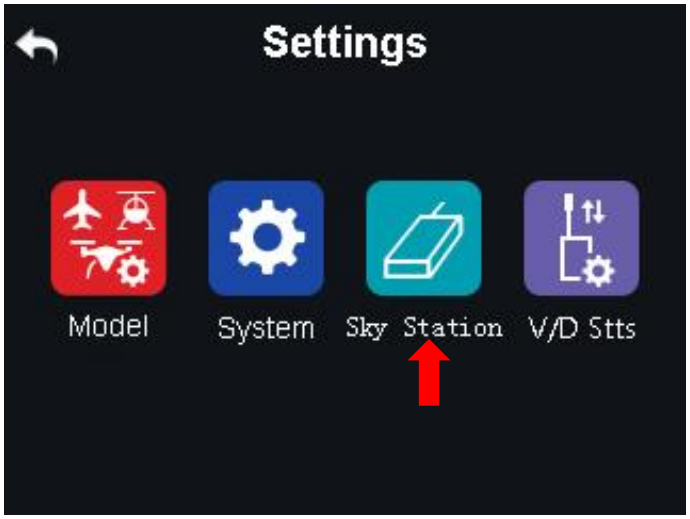
2. According to the tips in the screen, connect your ESC signal wires to the sky station's PWM port 1-8, then tap on "Start";

3. In this circumstances, the channel value of transmitter throttle stick reaches to the maximum position automatically (do not push any joysticks); Supply power to the aircraft, and wait for the confirming sound from aircraft motors; Then tap

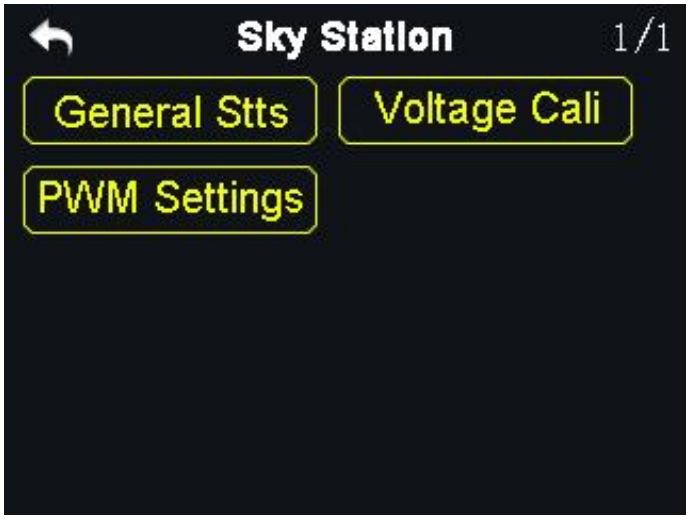
on “Next”, the channel value of the transmitter throttle stick reaches to the minimum position automatically, and wait for the confirming sound again;

4. The ESC calibrating is finished, you can cut off the power supply.

7 Sky Station Settings



Functions

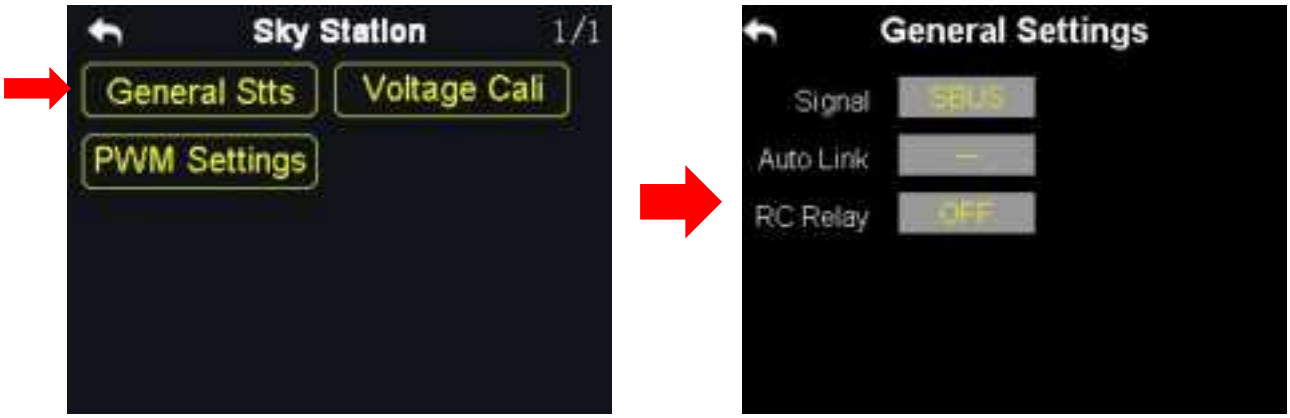


General Stts (General Settings): Set the basic functions of the sky station.

Voltage Cali (Voltage Calibrating): Calibrate the voltage telemetry.

PWM Settings: Change the channel definition under the PWM mode.

7.1 General Settings



7.1.1 Signal Mode

Set signal mode for the three different output mode of the sky station, SBUS, PPM and PWM.

Steps

1. In the general settings menu, select “Signal Mode” and tap on “SBUS / PPM / PWM” to switch different signal modes;
2. The sky station status indicator blinks yellow once when it is switched to the SBUS mode, yellow twice to the PPM mode, yellow 3 times to the PWM mode;
3. When it is done, the status indicator of the sky station blinks green in all modes, and the blinking speed indicates the signal strength. Faster it blinks, weaker the signal strength is.

7.1.2 Automatic Linking

When the sky station is powered on, turn on the automatic linking function. If it receives no signal from the transmitter in 20 seconds, the sky station starts linking

to the transmitter automatically.

The automatic linking function is to simplify procedure. It is necessary to turn on the function before installing the sky station into the aircraft body, in case that they may have no approach to the linking button of the sky station.

CAUTION

Do not turn on the automatic linking function when you are using more than one sky stations at the same time.

7.1.3 Voltage Telemetry

When the voltage telemetry function is turned on, in the PWR (power) column of VD32 transmitter main menu, users can check the real-time display of the aircraft voltage telemetry.

7.1.4 RC Relay

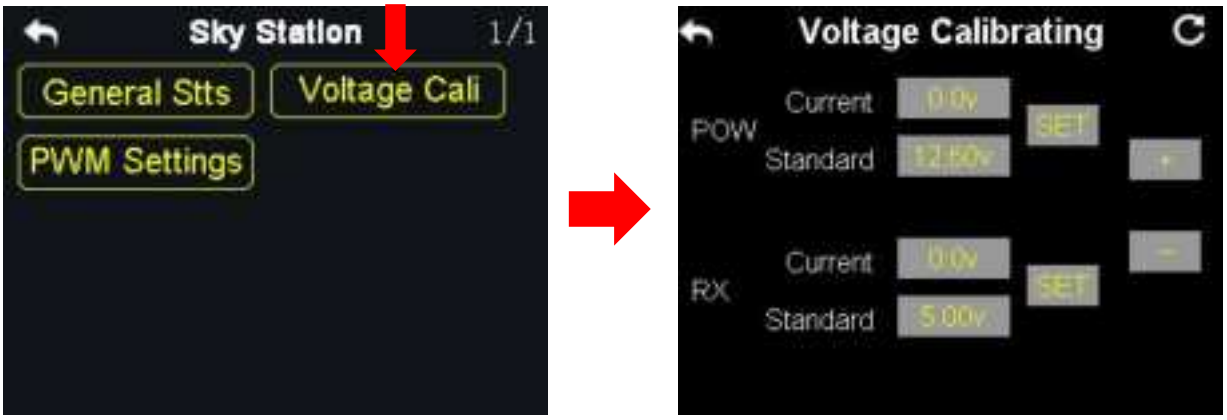
The function helps users with long distance flight relay. It supports two transmitters at most.

How to Use the RC Relay Function

1. Prepare two VD32 transmitters, mark them with 1 and 2;

2. Please link the transmitter 1 to the sky station first, then turn on “Remote Control Relay” in the “General Settings Relay” menu; the transmitter 1 is the slave transmitter;
3. Then link the transmitter 2 to the sky station; the transmitter is always the master transmitter even if you restart the sky station or transmitter.

7.2 Voltage Calibrating



Before using the sky station, it is necessary to calibrate the telemetry voltage of both the sky station and the aircraft.

Here are some preparing work before calibration:

1. Power on the sky station and the transmitter;
2. Link the sky station to the transmitter.

Steps to Calibrate the Telemetry Voltage of the Sky Station (RX)

1. Power on the sky station through any of the PWM port, the voltage range is from 3.6V to 10V, measuring by a multi-meter;
2. Let’s take an example of 6.0V; select “Standard Voltage” in the RX menu, tap on

"+/-" to set the standard voltage to 6.0V;

3. Tap on "SET", in the screen it pops up "Calibrating Succeed", the calibration is finished.

Steps to Calibrate the Telemetry Voltage of the Aircraft Power (POW)

1. Power on the sky station through the POW port, the voltage range is from 3.3V to 50V, measuring with a multi-meter;
2. Let's take an example of 25V; select "Standard Voltage" in the POW menu, tap on "+/-" to set standard voltage to 25V;
3. Tap on "SET", in the screen it pops up "Calibrating Succeed", the calibration is finished.

7.3 PWM Settings

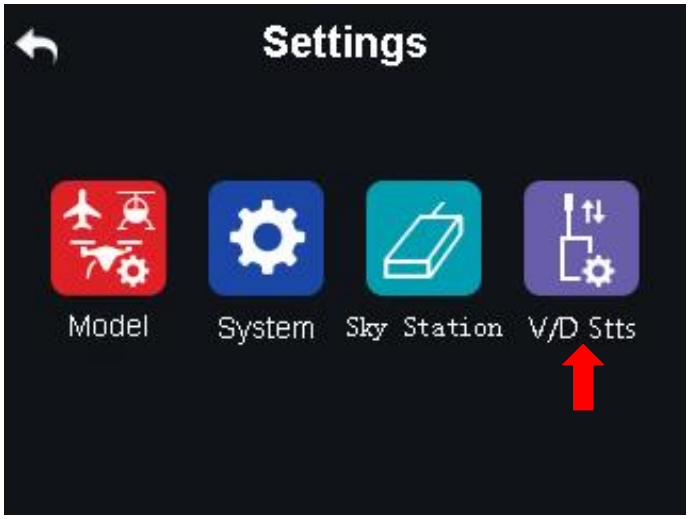
In VD32 transmitter and the PWM mode, users can redefine the output channel of the sky station (channel 1-9 in default), so that if the channel 9 is already working in SBUS or PPM mode, the PWM ports 1 to 8 can still output to the channels 1 to

16 of the transmitter.

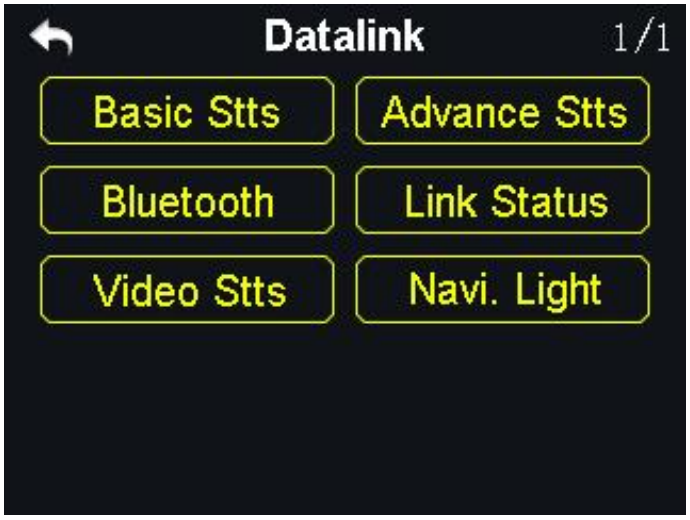
Steps

1. Power on the transmitter and the sky station, make sure that they are linked with each other;
2. The PWM port 1 of the transmitter is mapped to the PWM port 1 of the sky station, the PWM port 2 of the transmitter is mapped to the PWM port 2 of the sky station…and so on;
3. In the “PWM Settings” menu, tap on a PWM port and select a channel through the virtual turntable in the screen according to your requirement;
4. Tap on “SET” to finish.

8 Video Transmission / Datalink Settings



Functions



Basic Stts (Basic Settings): Set basic functions of the datalink module.

Advance Stts (Advanced Settings): Set the auto link function and the baud rate.

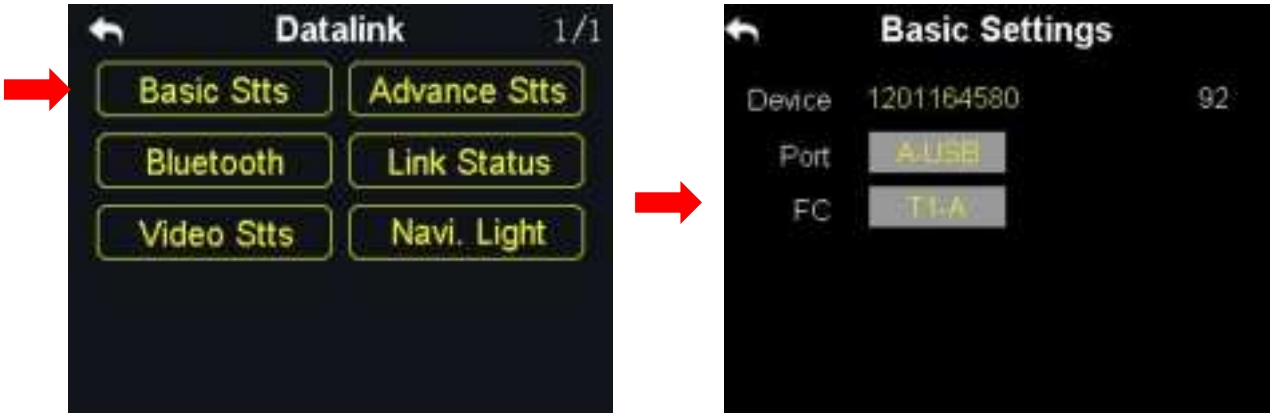
Bluetooth: Choose the Bluetooth module for your flight controller.

Link Status: Check the link status of the transmitter in real-time.

Video Stts (Video Transmission Settings): Set basic functions of the video transmission module.

Navi. Light (Navigation Light): Set the basic functions of the navigation light.

8.1 Basic Settings



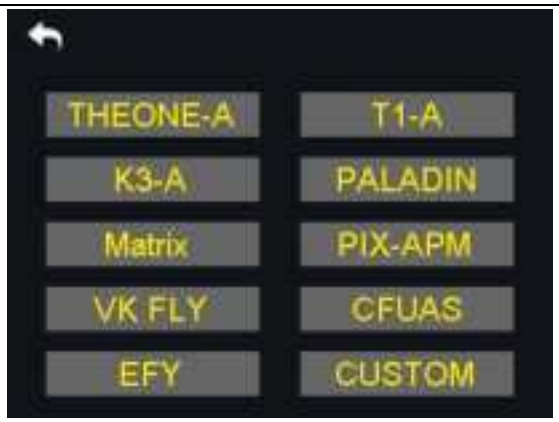
Functions

Device: Displays the serial number of the datalink module.

Port: Select a way of the transmitter output to a smartphone or a tablet. Available ports: A-USB output, Micro-USB output and Bluetooth output.

Flight Controller: Select a flight controller.

VD32 transmitter supports all major flight controllers in market such as TOPXGUN (T1-A), WOOZOOM (THEONE-A), EFY (FINIX200M), BOYING (PALADIN), CHIAO (MATRIX), JIYI (K3-A), CFUAS (C1-A) and other flight controllers under open source Mavlink agreement such as PIX and APM.



CAUTION

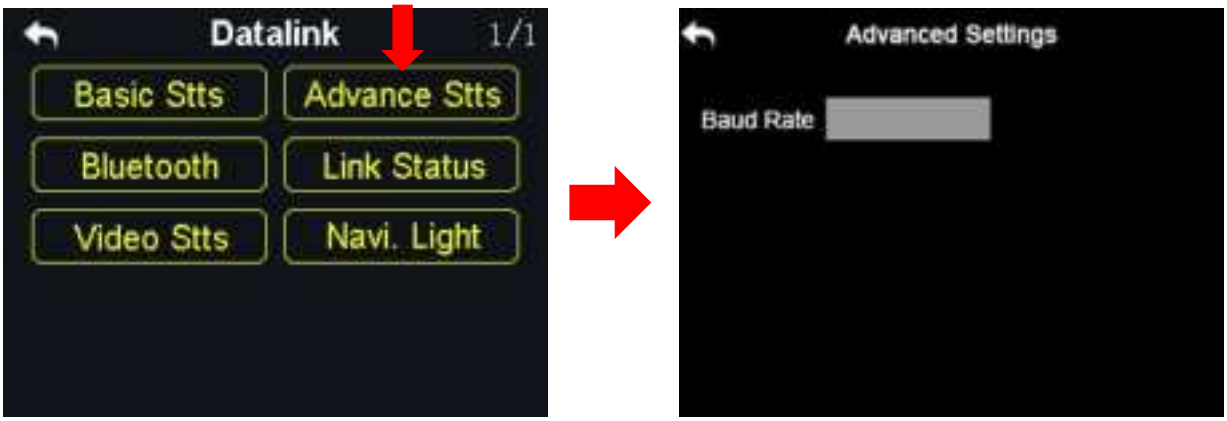
Before connecting the Micro-USB port of the transmitter to a smartphone or a tablet to communicate with the flight controller, you need to switch the port to Datalink.

Steps

In the “System Settings” menu, tap on “Port Settings”; tap on “Micro-USB” to switch the port to “Datalink”.

Mark: When you switch the Micro-USB port to “Datalink”, the transmitter can no longer communicate with PC through the port. If you are to communicate it with a computer for firmware upgrading, please switch it to “Parameter”.

8.2 Advanced Settings

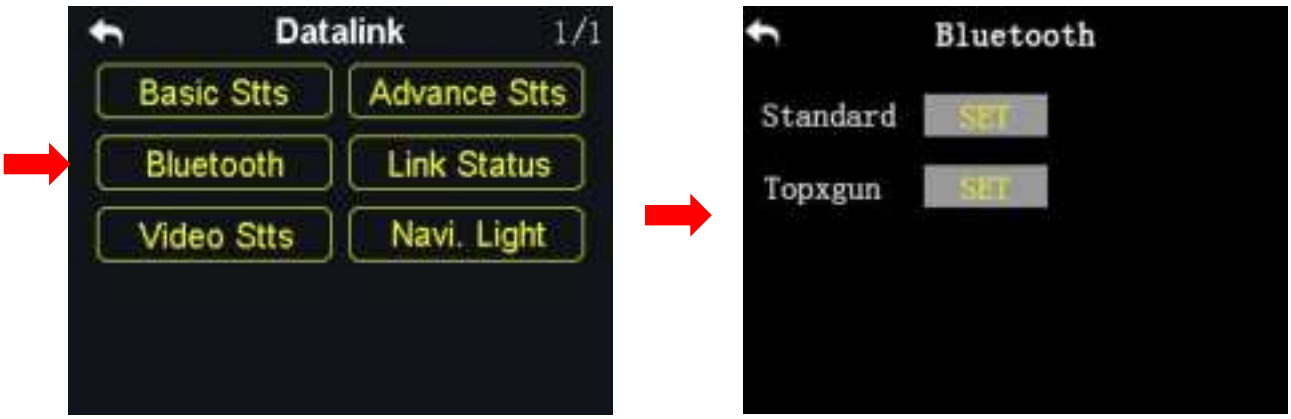


If your flight controller type was not in the list, you can set a baud rate to match your flight controller.

Steps

Make sure that the sky station is linked with the transmitter; in the “Advanced Settings” menu, tap on “Baud Rate” and input the baud rate.

8.3 Bluetooth



Please select the right external Bluetooth device according to your requiring flight controller.

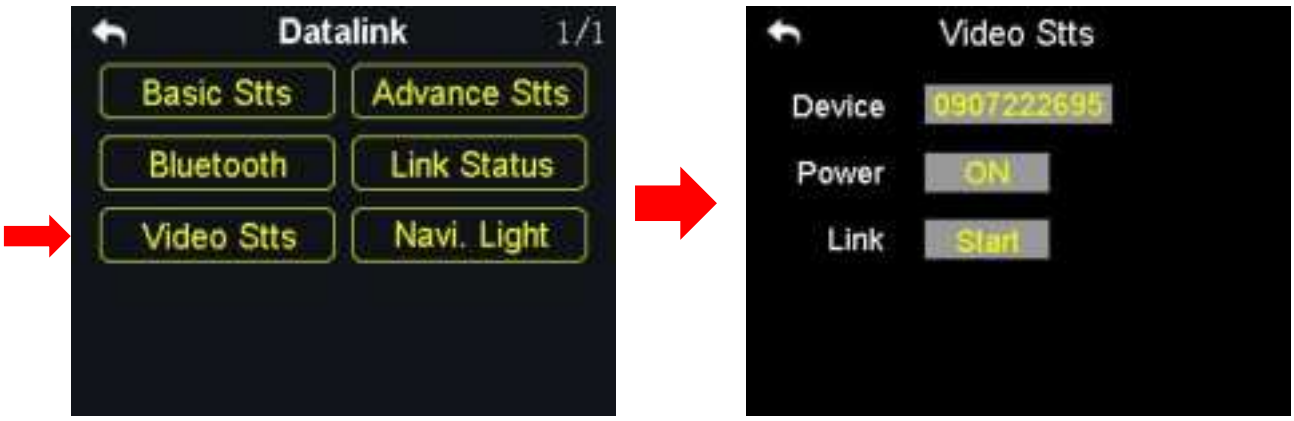
Standard: For any flight controllers except the Topxgun T1-A.

Topxgun: For the Topxgun T1-A flight controller.

8.4 Link Status

The link status function helps users check the detail signal and link status of VD32 transmitter in real-time.

8.5 Video Transmission Settings



Users can check the serial number of the video transmission module and power on/off the function.

Function

Device: Displays the video transmission module's serial number.

Power: Power on/off the video transmission module.

Link: Link the transmitter with the video transmission module.

8.6 Navigation Light

Users can power on/off the navigation light on the drone.

9 Firmware and Voice Upgrading

VD32 transmitter supports firmware and voice broadcast upgrading.

Please download the “SIYI Assistant” software and connect the transmitter with the computer.

Steps to Upgrade Firmware and Voice Broadcast

1. Please visit SIYI Technology’s official website (http://www.siyi.biz);
2. In the product description page of VD32 transmitter, tap on “Downloads”;
3. Select the “SIYI Assistant” software, driver, the latest firmware and voice broadcast files, tap on “Download”;

4. Unzip the files, install the “SIYI Assistant” and the driver to the computer;

5. When it is finished, use an USB cable, connect its one end to the Micro-USB port on VD32 transmitter, another end to the computer;

6. Run the “SIYI Assistant”, check transmitter’s current firmware version; if it was not the latest version, tap on “Upgrade” to firmware upgrading menu;

7. Load the latest firmware, tap on “Upgrade” to upgrade firmware;

8. If you need to upgrade the voice broadcast files, please repeat the steps 6-7.

10 After-sale Service

10.1 To-be-repair Procedure

If you meet any difficulties using SIYI Technology's product, please consult our after-sale service center or technical support staff on SIYI's official website.

If it was a product defect or damage confirmed which requires a return, replace or repair, then please proceed with after-sale service procedure steps on official website.

SIYI Technology After-sale Service Guide

1. Please visit SIYI Technology official website: http://www.siyi.biz;
2. In "Service and Support" menu, tap on "To-be-repair Procedure";
3. Find after-sale service center or technical support staff information and consult them with your product issue;
4. If the issue stays unsolved after confirming with SIYI Tech, then please refer to our after-service for filling in a "To-be-repair" form (personal repair form for individuals, distributor repair form for distributors);
5. Send the bill with product to SIYI Technology for final check or repair;
6. If the product is confirmed damaged or defected by SIYI Technology, it goes in repair procedure. Product will be returned to you after repairing.

10.2 After-sale Policy

SIYI Technology guarantees that, subject to the following conditions, Return & Refund Service, Replacement Service and Warranty Repair Service can be requested. Please contact SIYI or your authorized SIYI dealer for more details. You will be required to fill out a repair form, which should be sent to us along with the to-be-repaired unit.

10.1.1 7-Day Return & Refund

You can request Return & Refund Service:

Within seven (7) days of receiving a product if the product has no manufacturing defect, has not been activated and is still in new or like-new condition.

Within seven (7) days of receiving a product if the product has a manufacturing defect.

Return & Refund Service will not be provided where:

It is requested beyond seven (7) calendar days of receiving a product.

A product sent to SIYI for Return & Refund Service does not include all original accessories, attachments or packaging, or any item is not in new or like-new condition, i.e. with cracks, dents or scratches.

A legal proof of purchase, receipt or invoice is not provided or is reasonably believed to have been forged or tampered with.

Any fault or damage of the product is caused by unauthorized use or modification of the product, including exposure to moisture, entry of foreign bodies (water, oil, sand, etc.) or improper installation or operation.

Product labels, serial numbers, waterproof marks, etc. show signs of tampering or alteration.

Damage is caused to the product by uncontrollable external factors, including fire, floods, high winds or lightning strikes.

A product is not delivered to SIYI within seven (7) calendar days after Return & Refund Service confirmation is sent from SIYI.

Other circumstances stated in this policy.

10.1.2 15-Day Replacement

You can request Replacement Service:

Within fifteen (15) calendar days of receiving the product if the product has sustained a substantial damage in transit, provided always that the damage proof issued by the carrier can be provided to SIYI.

Within fifteen (15) calendar days of receiving the product if the product does not match the original description of the product in one or more significant respects.

Within fifteen (15) calendar days of receiving the product if the product suffers performance failure.

Replacement Service will not be provided where:

Service is requested more than fifteen (15) calendars days after receiving a product.

Legal proof-of-purchase, receipts, or invoices are not provided, or are reasonably believed to have been forged or tampered with.

A product sent to SIYI for replacement does not include all original accessories, attachments and packaging, or contains items damaged by user error.

A product is found to have no defects after all appropriate tests are conducted by SIYI.

Any fault or damage of the product is caused by unauthorized use or modification of the product, including exposure to moisture, entry of foreign bodies (water, oil, sand, etc.) or improper installation or operation.

Damage is caused by uncontrollable external factors, including fires, floods, high winds, or lightning strikes.

Received product has not been sent back to DJI seven (7) calendar days after replacement confirmation from DJI.

Proof of damage during transit issued by the carrier cannot be provided.

Other circumstances stated in this policy.

10.1.3 1-Year Warranty Repair

You can request warranty repair service:

If a product does not function as warranted during the warranty period, you may obtain after-sales service by contacting SIYI's service center. You will need to provide a valid proof-of-purchase, receipt or order number for the warranty service.

Charges may apply for services not covered by this Limited Warranty. Please contact SIYI for information specific to your location.

Please note that the warranty service is only available in the respective SIYI service regions where you purchased your SIYI product.

Warranty Repair service will not be provided where:

Crashes or fire damage caused by non-manufacturing factors, including but not limited to pilot errors.

Damage caused by unauthorized modification, disassembly, or shell opening not in accordance with official instructions or manuals.

Damage caused by improper installation, in correct use, or operation not in accordance with official instructions or manuals.

Damage caused by non-authorized service provider.

Damage caused by unauthorized modification of circuits and mismatch or misuse of the battery and charger.

Damage caused by operation in bad weather (i.e. strong winds, rain, sand/dust storms, etc.)

Damage caused by operating the product in an environment with electromagnetic interference (i.e. in mining areas or close to radio transmission towers, high-voltage wires, substations, etc.)

Damage caused by operating the product in an environment suffering from interference from other wireless devices (i.e. transmitter, video-downlink, Wi-Fi signals, etc.)

Damage caused by reliability or compatibility issues when using unauthorized third-party parts.

Damage caused by operating the unit with a low-charged or defective battery.

Products or parts with an altered identification label or from which the identification label has been removed.

11 FCC STATEMENT

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.

WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: 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.

FCC Radiation Exposure Statement:
The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

SAR Information Statement

The product is designed and manufactured not to exceed the emission limits for exposure to radiofrequency (RF) energy set by the Federal Communications Commission of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health. The exposure standard for wireless mobile phones employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg. Tests for SAR are conducted with the product transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the product while operating can be well below the maximum value. This is because the product is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output. Before a product model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government adopted requirement for safe exposure. The tests are performed in positions and locations (e.g., at the ear and worn on the body) as required by the FCC for each model. The highest SAR value for this model product when tested for use worn on the body, as described in this user guide, use at the ear is 0.341 W/kg .
(Body-worn measurements differ among phone models, depending upon
available accessories and FCC requirements). While there may be differences between the SAR levels of various product and at various positions, they all meet the government requirement for safe exposure. The FCC has granted an Equipment Authorization for this model product with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model product is on file with the FCC and can be found under the Display Grant section of http://www.fcc.gov/ oet/fccid after searching on.
FCC ID:2AXLB-VD32T. Additional information on Specific Absorption Rates (SAR) can be found on the Cellular Telecommunications Industry Asso-ciation (CTIA) web-site at http://www.wow-com.com. * In the United States and Canada, the SAR limit is 1.6 watts/kg (W/kg) averaged over one gram of tissue. The standard incorporates a sub-stantial margin of safety to give additional protection for the public and to account for any variations in measurements.

Body-worn Operation

This device was tested for typical body-worn operations. To comply with RF exposure requirements, a minimum separation distance of 0mm is used between the user's body and the handset, including the antenna. Third-party belt-clips, holsters, and similar accessories used by this device should not contain any metallic components. Body-worn accessories that do not meet these requirements may not comply with RF exposure requirements and should be avoided. Use only the supplied or an approved antenna.

SIYI Technology (Shenzhen) Co., Ltd.

+86 400 838 2918

support@siyi.biz