# **TABLE OF CONTENTS**

Foreword1
Disclaimer1
Change History1
Indications and Symbols for Safe Use
1
Installation Precautions1
Flying Precautions2
Product Description5
Box Contents5
Transmitter5
Specifications5
Features5
Transmitter Controls6
Main Screen8
Main Menu9
Receiver9
Specifications9
Features9
Changing the signal mode10
Connection10
Firmware Upgrade11
Basic Operation13
Adjust the Stick Lever Tension13
Turn on/off the Transmitter13
Charging the Transmitter14
Binding14
Range Test15
Flight Mode16
Firmware Update16

Model Type17	7
Model Set18	3
Select Model [Model Select]18	3
Edit Model Name [Model Name] 19	9
Stick Mode [Stick Mode]19	9
Trainer Set [Trainer Set]20	
Channel Input Set [Channel Set] 22	
Fail Safe [Fail Safe]23	3
Reset Model [Reset Model]24	
Model Parameter (Airplane)26	ô
End Point [End Point]26	ŝ
Sub Trim [Sub Trim]27	
Reverse [Reverse]27	
Servo Delay [Servo Delay]28	
Switch Set [Switch Set]29	
Throttle Hold [THR Hold]30	)
Mix Set [Mix Set]3	1
Programmable Mixing [Program	
Mix]3	1
Throttle to Balance Mixing [THR-	•
BAL Mix]32	2
Veer to Elevator Mixing [Veer-	•
ELE Mix]33	3
V-tail Mixing [V-Tail Mix]35	5
Delta Mixing [Delta Mix]36	3
Flaperon Mixing [Flaperon Mix] 38	3
Aileron Curve [AIL Curve]40	)
Elevator Curve [ELE Curve]4	1
Throttle Curve [THR Curve]4	1



Rudder Curve [RUD Curve]	42
RS/LS/R KNOB/L KNOB Curve [RS/I	_S/F
KNOB/L KNOB Curve]	42
Model Parameter (Helicopter)	44
End Point [End Point]	44
Sub Trim [Sub Trim]	44
Reverse [Rev Set]	44
Servo Delay [Servo Delay]	44
Switch Set [Switch Set]	44
Throttle Hold [THR Hold]	45
Swash Mixing [Swash Mix]	45
Pitch Curve [PIT Curve]	47
Aileron Curve [AIL Curve]	48
Elevator Curve [ELE Curve]	48
Throttle Curve [THR Curve]	48
Rudder Curve [RUD Curve]	49
RS/LS/R Knob/L Knob Curve [RS/L	S/R
Knob/L Knob Curve]	49

Function Set	50
Timer Set [Timer 1/2 Set]	50
Downlink Data [Downlink Data]	52
Airplane Gyro	52
ESC Set	57
Channel Monitor	59
System Set	60
Language [Language]	60
PPM Set [PPM I&O]	60
Back-light Time [Bright Off]	60
Back-light Brightness [Brightness] .	61
Vibration [Vibration]	61
Volume [Volume]	61
Calibration [Stick&Knob Calibration	on
	62
About Information [About]	62

### **Foreword**

### Disclaimer

Thank you for purchasing this DETRUM product. This is a 2.4GHz digital proportional R/C system with high performance. In order to make full use of the features of this product and to safely enjoy your R/C activities, please read this manual carefully before using. Please install and use this product in strict accordance with the manual. The company assumes no liability or loss incurred directly or indirectly from improper use, installation, or any modification of this product.

Products shall be subject to any changes without additional notices.

This product is suitable for users experienced in operating model aircraft and aged 14 years or older.

Please fly at a locally recognized model aircraft flying field.

### **Change History**

No.	Version	Date	Records	
1	V1.0	2018-03-20	This manual was first released.	
2	V1.1	2018-05-10	Update the figures.	

### Indications and Symbols for Safe Use

The following symbols used in this manual indicate the precautions regarding possible danger which may occur following improper operation.



A DANGER: Procedures, which if not properly followed, may lead to a dangerous condition of death or serious injury.



MARNING: Procedures, which if not properly followed, may lead to the probability of property damage, collateral damage, and serious injury OR create a high probability of superficial injury.



A CAUTION: Procedures, which if not properly followed, may lead to the probability of physical property damage AND a possibility of serious injury.

Prohibited



### Installation Precautions

It is very important to properly install the R/C system on the model aircraft. Please refer to the following instructions:

- In order to protect the receiver, wrap the receiver with 10mm foam rubber, and then fasten it with a rubber band or a Velcro strap.
- The servos should be installed with rubber gaskets and brass eyelets to isolate the vibration from the fuselage. When locking the screws, follow the principle that the rubber gasket does not distort. If the locking is too tight, it will reduce the vibration-proof performance.
- When mounting a servo, make sure that the servo can rotate over its full travel and check that the push-rods and servo arms do not bind or contact each other.
- When mounting a power switch, keep away from the engine's exhaust pipe and any places with high vibration. And ensure that you can turn the switch on/off without binding.
- The two antennas of the receiver should be placed at 90 degrees to each other. Do not place the two antennas twisted together or in parallel.

## Flying Precautions



WARNING: Personal injury and property loss may be caused by improper aircraft handling. Please operate strictly according to the following safety instructions

#### Flying Field and Conditions:

In order to protect the personal safety and their property, please do not fly at the following places:

Near another radio control flying field

Near or above people

Near residential areas, schools, hospitals or other places where people congregate

Near high-voltage lines, tall buildings, or communication facilities

- Never fly on rainy day, thunder storm, when the wind is strong, and at night.
- Always keep away from humidity environment.

The R/C system is composed of precision electronic components and mechanical parts. Please keep away from humidity environment to prevent the components damage from vapor and cause a failure which would lead to a crash.

Always keep away from heat sources.

The R/C system is composed of precision electronic components and mechanical parts. Please keep it away from heat sources and sunshine to avoid distortion, or even damage caused by high temperature.

### Precautions before Flight:

- Always make sure that all servos in the model work properly following the transmitter stick movements prior to flight. And make sure that all switches work properly as well.
- Always check the remaining capacity of both the transmitter and receiver batteries before each flying session prior to flight. Low battery capacity will cause loss of control and a crash.
- Always perform a range test before each flying session.
- Always check the operation of each control surface before each flying session. When using the trainer function, please check both the instructor and student transmitters.
- For safety reasons, always set fail safe functions before each flying session. Especially set the throttle channel fail safe function.

### Precautions during Flight:

- Never grasp the transmitter antenna during flight. Otherwise, the transmitter output power will reduce drastically.
- O Do not point the antenna directly toward the aircraft during flight. When pointing the antenna directly, the transmitter output is the weakest. The strong radio wave radiate from the side of the transmitter antenna.
- Never turn on and off the power switch of transmitter during flight or while the engine or motor is running.
- O Do not touch the engine, motor, or other heating device during and immediately after use. These devices or components may become hot during use.
- For safety, always fly the aircraft in visible range. Flying behind tall buildings will not only lose sight of the aircraft, but also degrade the RF signal performance.
- Always return the transmitter setting screen to the initial main screen during flight. Erroneous input during flight is very dangerous.

#### Precautions in Other Conditions

- Never fly in the range check mode (test mode). In this mode, the transmitter output power is greatly reduced, it may cause a crash.
- When setting the transmitter during flight preparations, do not set it upright on the ground. The transmitter may fall to the ground, the sticks may move and the servos may rotate unexpectedly and cause injury.
- O Do not touch the receiver antenna directly by hands. Otherwise, the components may be damaged by static, and this may cause a reduction in transmission distance of the receiver.
- Before turning on the transmitter, always make sure the transmitter throttle

stick and throttle trim are in the lowest position.

- Always turn on the R/C system in proper sequence: turn on the transmitter first, then turn on the receiver, and then turn on the engine or motor. Incorrect sequence may cause loss of control and personal injury.
- Always turn off the R/C system in proper sequence: turn off the engine or motor first, then turn off the receiver, and then turn off the transmitter. Incorrect sequence may cause loss of control and personal injury.

## **Product Description**

### **Box Contents**

Blitz-DT9 Transmitter

User Manual

Simulator Convertor (optional)

Detrum BXC9M Receiver

Charging Cable

9g Servo \*4pcs (optional)

NOTE: The set contents depend on the type of set.

## Transmitter

### **Specifications**

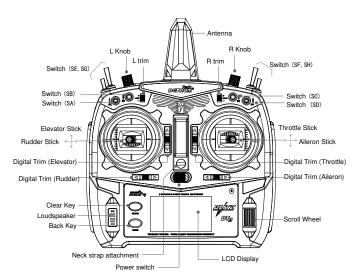
Parameters	Blitz-DT9 Specifications
Channel	9-channel
Transmitting frequency	2.4GHz
Power supply	7.4V 3000mAh Li-Po Battery
Consuming current	< 300mA
Charging Voltage	DC 12V/1.5A
Output pulse	1000ms~2000ms (neutral 1500ms)

#### **Features**

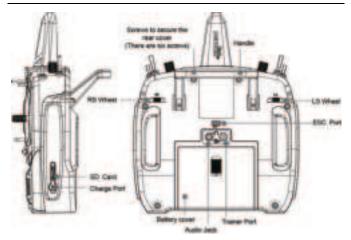
- Adopting powerful wireless chips and extended with power amplifier (PA) and low noise amplifier (LNA), can maximize the system output power while reducing the system noise factor, thereby improving the signal coverage.
- The R/C system adopts 2.4GHz direct sequence spread spectrum (DSSS) and multiple frequency-hopping spread spectrum (FHSS) technology, has strong anti-interference capability, can support a stable remote control for more than 1,000 meters on the ground and more than 1,600 meters in the air.
- The aircraft performance data can be displayed on the transmitter screen with corresponding receiver.
- It has 9 channels and can support more functions.
- Wireless trainer brings more convenience to instructor and student.
- It adjusts the program items of ESC directly without program card.
- When working with a stabilized receiver which is integrated with 6-axis gyro, Blitz-DT9 can be used to set its programmable items in real time.
- Low voltage alarm: Detecting the input voltage of the transmitter in real time, it will alarm in advance when it is low battery voltage. This will bring greater security for flight operation.

- User can charge the transmitter via the matched charging cable even in flight.
- Fail safe protection: Set the failsafe function by transmitter in advance. When
  the aircraft flies out of range, the receiver cannot receive a valid RF signal
  from the transmitter and will move the servos to predefined position.
- Upgrade via SD card: Copy the latest program to the SD card, then you can
  upgrade the Blitz-DT9 transmitter directly on the menu.

#### **Transmitter Controls**



NOTE: When the Stick Mode is set to MODE 1, the positions of sticks and digital trims are shown in the figure. The positions are different depending on the stick mode. For details, please refer to Stick Mode [Stick Mode] (Page 19).



- Antenna: the strong radio wave radiate from the side of the transmitter antenna. Do not point the antenna directly toward the aircraft during flight.
- Handle: the handle is designed for easily carrying and placing the transmitter.
- Power switch: Push the switch rightward to turn on the transmitter, push leftward to turn off.
- Neck Strap Attachment: for a long flight you can choose to use a neck strap for easy handing. The neck strap attachment is on the neutral position, in order to get the best balance for transmitter.

#### Switches

- SA: 3 positions, alternate, short lever.
- · SB: 3 positions, alternate, long lever.
- SC: 3 positions, alternate, long lever.
- SD: 3 positions, alternate, short lever.
- ----
- SE: 3 positions, alternate, short lever.
  SF: 3 positions, alternate, short lever.
- SG: 2 positions, momentary, long lever.
- SH: 2 positions, alternate, long lever.
- Sticks: when the Stick Mode is set to MODE 1, the positions of sticks are shown in the figure.

#### Digital Trims

- · Stick trims: four digital trims for stick output.
- L/R trims: two digital trims for L/R knob output.

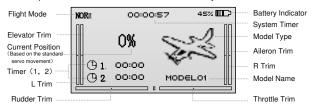
This transmitter is equipped with four stick trims. Each time you press a trim button, the trim position moves one step. If you press and hold it, the output will scroll in that direction until the trim button is released or the output reaches its ends. You can always monitor trim positions by referencing the I CD screen

A CAUTION: The trim positions you have set will be stored in memory and will remain there even the transmitter powered off.

- L/R Knob: It is used to adjust the value of L/R Knob curve.
- LS/RS Wheel: It is used to adjust the value of LS/RS curve.
- Keys
  - <CLEAR>: press it to return a selected value on screen to the default settina.
  - <BACK>: press it to return to the previous menu.
- Scroll Wheel: Scroll it to move through the screen content or change programming values. Press it to make a selection.
- LCD: You can get the current status from the main screen, and set the parameters from the menu.
- Simulator/Trainer Connector
  - When it is used as a simulator connector, connect the transmitter and computer by simulator dongle and dongle cable, and then you can learn flying skills on computer. In order to use this function, you need to purchase a simulator dongle and the matched simulation software.
  - When it is used as a trainer connector, connect the instructor and student transmitter with an optional trainer cable, and then a skilled instructor can teach a student with flying skills.
- Audio Jack: insert the earphone for voice broadcast.
- Charge Port: charging the transmitter via the matched charge cable.
- SD card slot: press the SD card into it.

#### Main Screen

Turn on the power switch of the transmitter and directly enter the main screen.



### Note:

- When the Stick Mode is set to MODE 1, the positions of trims are shown in the figure.
- For details about the flight modes, please refer to Flight Mode (Page 16).

#### Main Menu



### Receiver

This section is the introductions of DETRUM RXC9M Receiver. If you choose other receivers, please refer to the instructions of the other receivers.

### **Specifications**

Parameters	RXC9M Specifications
Туре	2.4GHz, 9-channel receiver
Sensitivity	-97dBm
Frequency interval	larger than or equal to 4MHz
Power supply	3.6V~16V
Weight	10g
Size	42.6mm*27.4mm*12.9mm

#### Features

- Adopting 2.4GHz direct sequence spread spectrum (DSSS) and multiple frequency-hopping spread spectrum (FHSS) technology, the receiver has high sensitivity and strong anti-interference capability.
- By using diversity antenna, can automatically switch the signals to ensure the stability of the received signal.
- Each transmitter has an individually assigned, unique ID code. Once the binding is made, the ID code is stored in the receiver and no further binding is necessary after restarting the receiver.
- When the aircraft flies out of range, the receiver cannot receive a valid RF signal from the transmitter and will move the servos to predefined position.

- Working with the optional telemetry module and sensors, RXC9M can transmit the aircraft performance data to the transmitter.
- Support PPM, PWM and D.BUS signal.
- USB upgrade: Upgrade by a USB cable help RXC9M always keeps the latest program.

### Changing the signal mode

According to the output signal types, RXC9M has a PPM mode, PWM mode and D.BUS mode. You can check the current mode from the mode LED on the receiver. When the RXC9M receiver powers up, the mode LED indicator will glow solid red/green/blue, and will be off after 5 seconds. When the mode LED is off, you can light this LED by clicking the Bind/Mode button.

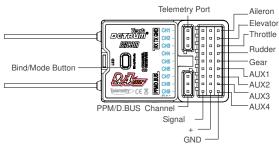
- Green: The receiver works on PWM mode.
- Red: The receiver works on D.BUS mode.
- Blue: The receiver works on PPM mode.

Users can change the receiver mode according to their demands. Now changing the receiver mode from PPM to D.BUS mode is taken as an example.

Press and hold the **Bind/Mode** button on the receiver, then power on the receiver. The mode LED will stay blue (PPM mode) for 2 seconds and then change into red on, indicating that the receiver switches to D.BUS mode, and the mode LED will be off 5 seconds later.

#### Connection

The channels of Detrum RXC9M receiver are labeled with number, as shown in the following figure. For each channel, signal wire is close to the decal of the receiver, middle is the positive and right is GND.



The RXC9M receiver has PPM, PWM and D.BUS modes. The connection of the receiver in these three modes is described as follows:

• On PWM mode, you can connect the receiver's channels directly to the servo,

- or connect them to the servos via the flight controller.
- On PPM mode, connect the PPM port of the flight controller which supports PPM signal to the PPM/D.BUS port of the receiver, and then connect the output port of the flight controller to the servos.
- On D.BUS mode, connect the D.BUS port of the flight controller which supports D.BUS signal to the PPM/D.BUS port of the receiver, and then connect the output port of the flight controller to the servos.

In order to transmit the flight data to the transmitter, user need to connect the telemetry port of the receiver to the flight controller. When working with optional telemetry module and sensors such as GPS, RXC9M can transmit the voltage, current, flying speed and flight time, etc.

NOTE: In order to use this function, the flight controller and transmitter you used should also have telemetry settings.

Installation Precautions for the receiver:

- When connecting the receiver, please note the line sequence and securely insert all of the connectors as far as they will go.
- The two antennas of the receiver should be placed at 90 degrees to each other. Do not place the two antennas twisted together or in parallel.

### Firmware Upgrade

User can upgrade the RXC9M online via the USB port.

#### Preconditions:

- The DetrumUpgrade software has been acquired and installed.
- The RXC9M device driver "RXC9M.inf" has been acquired and installed.
- The latest upgrade program has been acquired.

#### Steps:

1. Double-click the DetrumUpgrade software to open it.



- Click the Select button, set the path of this upgrade program in the pop-up dialog.
- Power on the RXC9M receiver and connect the receiver to computer via the USB cable

If the computer cannot recognize the RXC9M when it is connected, you need to install the RXC9M device driver first. Installation method: (1) Right-click **Computer**, select **Properties**  $\rightarrow$  (2) Select **Device Manager**, found **RXC9M** in the list  $\rightarrow$  (3) Right-click to select **Update Driver Software**  $\rightarrow$  (4) In the pop-up dialog box, select **Browse my computer for driver software**  $\rightarrow$  (5) Select the file path where the RXC9M device driver is located and click **Next**.

Ensure the information (firmware and product) is right and then click Upgrade to complete the firmware upgrade.

## **Basic Operation**

### Adjust the Stick Lever Tension

This allows adjustment of the stick lever tension to meet different operating habits.

Tools: Phillips screwdriver, ESD wrist strap or ESD gloves.

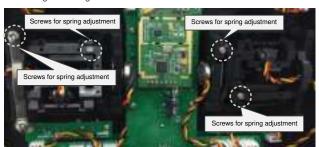
Conditions: Before operating, please wear an ESD wrist strap or ESD gloves.

### Steps:

- 1. Open the battery cover, and remove the batteries.
- 2. Remove the six screws on the rear cover with a Phillips screwdriver.
- Open the rear cover.



A CAUTION: Please gently ease off the transmitter's rear cover, to avoid breaking the wirings.



4. Use a Phillips screwdriver to adjust the spring strength as you prefer by turning the screw of the stick you want to adjust. Turning the screw clockwise increases the tension, counter clockwise to loosen.



CAUTION: To avoid abnormal work, do not loosen the screw too much.

- 5. Install the rear cover, and then tighten the six screws on the rear cover.
- 6. Install the batteries and the battery cover.

### Turn on/off the Transmitter

#### Turn on the transmitter:

- 1. Move the throttle stick to the lowest position before turning on the power switch
- 2. Push the power switch rightward to turn on the transmitter.

After power on, you will see the initialization interface in LCD as the following figure. The transmitter's LED indicator stays illuminated at the same time. Wait for about 2 seconds. the LCD will enter the main screen.



If the throttle stick is not at the lowest position, after turning on the power switch, the LCD will display the prompt information. Lower throttle stick to the lowest position, the information will disappear and the LCD will enter the main screen.

#### Turn off the transmitter:

1. Turn off the power switch, the transmitter shut down at once.

### **Charging the Transmitter**

Blitz DT-9 has an internal charger designed to charge the battery. The charge port is on the right side of the transmitter.

#### Steps:

- 1. Connect the charge cable to the transmitter charge port.
- Connect the other end of charging cable to a power outlet using the appropriate adapter.
  - Charging the transmitter when it is off, the LCD display will show charging status and the current battery level. Charging the transmitter when it is on, the battery level will be showed in the top right corner of the main screen.
  - User still can operate the transmitter on charging process.
- 3. Disconnect the charging cable when the battery is full charged.

### **Binding**

In order for the transmitter and receiver to communicate, it is essential to pair or bind them together. When you use the R/C system first time or change a transmitter/receiver, this procedure is necessary. Each transmitter has an individually assigned, unique ID code. Once the binding is made, the ID code is stored in the receiver and no further binding is necessary after restarting the receiver

Preconditions:

- Move the throttle stick to the lowest position and make sure the transmitter is powered off.
- Place the transmitter and the receiver close to each other within a distance of about one meter.

#### Steps:

- Power on RXC9M receiver. The status LED will start fast red flashing, indicating the transmitter is off.
- Long press (more than 2 sec) Bind/Mode button, the status LED will start slow red flashing, indicating the receiver is in bind mode and ready to be bound to the transmitter.
- While pulling and holding the SG switch of transmitter, turn on the transmitter. The system begins to bind.
- Once the status LED on the receiver stays green, indicating the receiver is bound to the transmitter. Release the SG switch.
- 5. Turn off the transmitter and receiver.

### **Range Test**

It is extremely important to perform a range check before each flying session. This enables you to ensure that each function is working as it should be. Blitz-DT9 transmitter allows you to reduce its power output and access the test mode. Then you can detect interference from environment and perform a range check.

### Steps:

- Lower throttle to the lowest position and make sure the transmitter is powered off.
- While pressing CLEAR key, turn on the transmitter, the transmitter will access the test mode.

The LCD will display as the following figure, and the transmitter's LED indicator will flash on test mode.

Rf Link Test

Rf Mode:-7dB

Tx Package:36

Rx Package:36

Enter Or Back, Exit GUI.

You can exit the test mode by pressing BACK key.

3. With the test mode on, walk away from the model while simultaneously

operating the controls. Have an assistant stand by the model to confirm that all controls are completely and correctly operational. You should be able to walk approximately 30~50 paces from the model without losing control.



WARNING: Never fly in range check mode (test mode).

### **Flight Mode**

The flight mode function allows switching between various aircraft flight characteristics (flight mode) using a switch. The flight modes which can be selected are various with model type.

- Airplane flight mode: NORM (normal) and HOLD (hold).
- Helicopter flight mode: NORM (normal), HOLD (hold), and ACR (acrobatic).

It is possible to activate these flight modes by the throttle hold switch and acrobatic flight switch:

- You can change between normal and throttle hold flight mode by toggling throttle hold switch. The switch can be customized, please refer to *Throttle* Hold [THR Hold] (Page 30) for airplane and Throttle Hold [THR Hold] (Page 45) for helicopter.
- You can change between normal and acrobatic flight mode by toggling acrobatic flight switch. The switch can be customized, please refer to Switch Set [Switch Set] (Page 44) for helicopter.

### **Firmware Update**

Blitz-DT9 will run the update automatically when SD card has the new update firmware.

Precondition: Download the latest firmware into the root directory of the SD card. Steps:

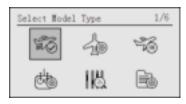
- 1. Press and hold the scroll wheel while turning on the transmitter, it will read the update automatically and install the firmware into the transmitter.
- 2. When the update is completed, the interface will go to the initialization interface automatically.

## **Model Type**

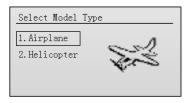
In this **Model Type** menu, you can select the mode type. The type can be select from airplane (AIRPLANE), helicopter (HELI).

#### Setting Method:

 Press the scroll wheel to enter the main menu. You will see the interface as the figure shown below.



After entering the main menu, roll the scroll wheel to select Select Model Type, and then press the scroll wheel to enter the setting interface.



Roll the scroll wheel to select the model type, and then press the scroll wheel to confirm the selection. The LCD display will back to the main menu automatically.

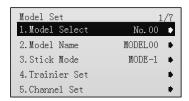
### **Model Set**

In the **Model Set** menu, you can edit a model, switch to another model, set the trainer function and fail safe function. Blitz-DT9 can store a maximum of 30 aircraft models.

After entering the main menu, roll the scroll wheel to select **Model Set**.



Then press the scroll wheel to enter the Model Set interface.

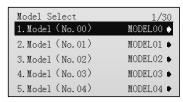


### Select Model [Model Select]

This is used to select a model, enables you to access any of the 30 aircraft models in the model list.

#### Setting Method:

In the Model Set menu, roll the scroll wheel to select Model Select, and then
press the scroll wheel to enter the setting interface.



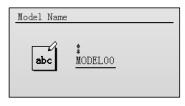
Roll the scroll wheel to select the model, and then press the scroll wheel to confirm the selection.

### **Edit Model Name [Model Name]**

The model name is used to display in the main screen. Users can edit the model name which is composed of upper- and lower-case letters, numbers (0~9), or special characters.

#### Setting Method:

In the Model Set menu, roll the scroll wheel to select Model Name, and then
press the scroll wheel to enter the Model Name interface.



- Roll the scroll wheel to move the cursor and press the scroll wheel to select one character; then roll the scroll wheel to change this character.
- After completing to edit one of the characters, press the scroll wheel to save the setting. User can edit the next character according to this way or press the BACK key to return the Model Set interface.

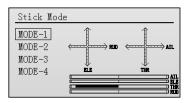
### Stick Mode [Stick Mode]

This function is used to change the stick mode to meet different operating habits.

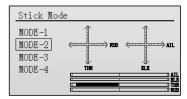
Values: MODE-1, MODE-2, MODE-3 and MODE-4. The default is MODE-1. Setting Method:

In the **Model Set** menu, roll the scroll wheel to select **Stick Mode**, and then press the scroll wheel to enter this interface. Next, roll the scroll wheel to select the value of stick mode. Values:

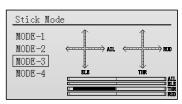
• MODE-1: As shown in the figure below.



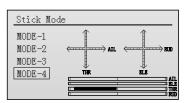
MODE-2: As shown in the figure below.



MODE-3: As shown in the figure below.



MODE-4: As shown in the figure below.



Press the scroll wheel after selecting the mode, the menu will back to **Model Set** automatically.

Note: Be sure to calibrate both stick gimbals after changing the stick mode. For details, please refer to Calibration [Stick&Knob Calibration] (Page 62).

### Trainer Set [Trainer Set]

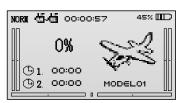
This function allows two transmitters to be connected by a trainer cord to allow dual control flight instruction. Then a skilled instructor can teach a student with fly skills using this trainer system. The instructor transmitter should be set for trainer operation. The trainer function makes it possible for the instructor to choose which functions and channels are to be used for instruction.

Always check operation of each control surface before each flying session. When using the trainer function, please check the operation of both the instructor and student transmitters.

Setting Method:

- 1. Connect two transmitters in one of the following ways.
  - Wireless Trainer: press and hold the BACK key on student transmitter while turning on it, the LED under the logo will start flashing. At the same time, toggle and hold the SG switch on instructor transmitter while turning on it. These two transmitters will be connected successfully.
  - Wired Trainer: use the trainer cable to connect these two transmitters and turn on respectively. Then set the parameter PPM I&O on student transmitter to Output and the PPM I&O on instructor one to Input. For details, please refer to PPM Set [PPM I&O] (Page 60). Then these two transmitters will be connected successfully.

After successfully connecting, the main screen should display as follow:



- Set the instructor transmitter for trainer operation, and choose the channels used for instruction.
- (1) In the Model Set menu, roll the scroll wheel to select Trainer Set, and then press the scroll wheel to enter the setting interface.



(2) Press and then roll the scroll wheel to edit the value of **Trainer SW**.

Values: OFF, ON, SA, SB, SC, SD, SE, SF, SG and SH.

Choose the **ON** or any other switch to open trainer function in this transmitter. And then press the scroll wheel to save it.

The setting interface is shown in the following figure.

Trainer Set	1/10 TxChs
1. Trainer SW:	ON ‡ AIL
2. AIL:	OFF 1 THR
3.ELE:	OFF # GEAR
4. THR:	OFF T AUX2
5. RUD:	OFF AUX

(3) Roll and then press the scroll wheel to select the channel, and then roll the scroll wheel to select the value of the channel.

Channels can be set include AIL, ELE, THR, RUD, GEAR, AUX1, AUX2, AUX3 and AUX4.

#### Values:

- ON: If one of the above channels is set to ON, it means this channel is to be used for trainer instruction.
- OFF: If one of the above channels is set to OFF, it means this channel is not to be used for trainer instruction, only the instructor side operates.

The default values for each channel are OFF, OFF, OFF, OFF, OFF, OFF, OFF, OFF, and OFF.

3. Start a dual control flight between instructor and student.

During flight, push and hold the trainer switch on the instructor transmitter, the model will be controlled by signals from the student transmitter. When the student operates erroneously, the instructor can release the trainer switch and the instructor transmitter regains control of the model. Then the instructor can operate the sticks to correct the flight.



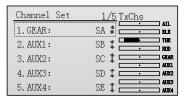
After finishing the trainer operation, please set the value of Trainer SW to OFF on both the instructor and student transmitters.

### Channel Input Set [Channel Set]

This function is used to set the control switch for GEAR, AUX1, AUX2, AUX3 and ALIX4 channels

#### Setting methods:

1. In the Model Set menu, roll the scroll wheel to choose the Channel Set and press the scroll wheel to enter the setting interface.



- 2. Roll the scroll wheel to choose the channel, including GEAR, AUX1, AUX2, AUX3, and AUX4.
- 3 Press and then roll the scroll wheel to edit the value of this channel Values: SA, SB, SC, SD, SE, SF, SG, SH, RS, LS, R KNOB, L KNOB, AIL. ELE, THR, RUD, and OFF.

The default values for each channel are SA, SB, SC, SD, and SE.

4. After the setting is completed, press the scroll wheel to save it. User can edit the value of next channel or press the BACK to return the Model Set.



**CAUTION:** The parameter of **AUX1** is not available for helicopter.

### Fail Safe [Fail Safe]

If there is signal interference to the transmitter, or the receiver does not receive a valid RF signal from the transmitter, this function moves the servos to predefined positions, to avoid a crash.

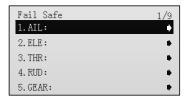


#### M WARNING:

- For safety, always set the failsafe function before each flying session. Especially set the throttle channel fail safe function, set an appropriate value for the throttle channel according to the model type.
- Remember to implement the failsafe setting after completing the aircraft settings.

#### Setting Method:

 In the Model Set menu, roll the scroll wheel to select Fail Safe, and then press the scroll wheel to enter the setting interface.

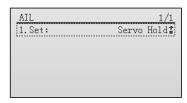


Roll the scroll wheel to select the channel, and then press the scroll wheel to enter the setting interface.

Channels can be set include AIL, ELE, THR, RUD, GERA, AUX1, AUX2, AUX3, and AUX4. You can select either mode for each channel in case of loss of RF signal:

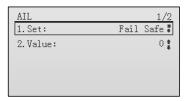
- Servo Hold: Maintain the servo positions as they were immediately before the radio signal was lost.
- Fail Safe: The servos move to predefined positions in case of loss of RF signal.

The default setting for each channel is **Servo Hold**. Take the aileron fail safe setting method as an example.



Change the value to Fail Safe by rolling the scroll wheel, and press the scroll wheel to activate fail safe function

When the failsafe function is activated, the setting interface is shown in the following figure.



4. Set the value to desired position.

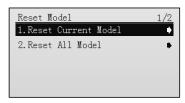
Values for each channel:  $-120\sim120$ . The default values for each channel are 0, 0, 0, 0, 0, 0, and 0.

## **Reset Model [Reset Model]**

This function allows you to reset all the setting of current model or all models to default values.

Setting Method:

1. In the Model Set menu, roll the scroll wheel to select Reset Model.



- Roll the scroll wheel to select to command, and then press to execute the command.
- Reset Current Mode: Reset the settings of current model to default values.
- Reset All Model: Reset the settings of all models to default values.

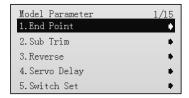
## **Model Parameter (Airplane)**

Before setting the model parameters, please select the model in **Model Set→ Model Select** menu, and set the model type in the **Select Model Type** menu. If
the model is airplane, set the model type to **Airplane**.

After entering the main menu, roll the scroll wheel to select Model Parameter.



Press the scroll wheel to enter the Model Parameter interface.



### **End Point [End Point]**

The adjustment is carried out with reference to the neutral position. This function allows independent adjustment of the servo left/right (or up/down) movement, for each channel.

When multiple channel mixing is used, the resultant servo movement angle may become too large, and an unreasonable force be applied to the linkages. It is possible to limit the maximum movement of the servos by setting the end point. Setting Method:

 In the Model Parameter menu, roll the scroll wheel to select End Point, and then press the scroll wheel to enter the setting interface.



Roll the scroll wheel to select one channel and then press the scroll wheel to enter the editing status.

On the editing status, you can press the scroll wheel continuously to choose one or two items at the same time. Then roll the scroll wheel to set its value.

There are two items for each channel which are used to adjust the left/right (or up/down) servo throws of each channel. Values: 0~120. The default is 100

3. After setting, press the scroll wheel to save the value.

### Sub Trim [Sub Trim]

This function is used to set the servo neutral position.

Setting Method:

 In the Model Parameter menu, roll the scroll wheel to select Sub Trim, and then press the scroll wheel to enter the setting interface.



Roll the scroll wheel to select the channel, and then press the scroll wheel to set the value of the channel.

Values: -100~100. The default is 0.

3. After setting, press the scroll wheel to save the value.

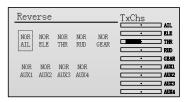
### Reverse [Reverse]

This function is used to reverse the servo operating direction for each channel. When set up a new model, you need to move the stick to check the servo direction, to determine whether the channel direction needs to be reversed.

#### Setting Method:

 In the Model Parameter menu, roll the scroll wheel to select Reverse, and then press the scroll wheel to enter the setting interface.

The state of each channel is displayed in real-time on the right.



Roll the scroll wheel to select the channel, press and then roll the scroll wheel to set the value of the channel. After that, press the scroll wheel to save the value.

#### Values:

- NOR: It means the direction of selected channel is the normal direction.
- $\bullet\,$  REV: It means the direction of selected channel is the reverse direction.

The default is NOR.



### WARNING:

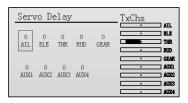
- Please set the Reverse function before setting the Fail Safe function.
   Otherwise it will affect the direction of the failsafe (opposite to the original direction).
- Generally, do not set the value of THR (throttle channel) to REV.

### Servo Delay [Servo Delay]

This function allows the user to delay input from the servos, then the servos will change at a slower rate when changing between different flying modes.

#### Setting Method:

 In the Model Parameter menu, roll the scroll wheel to select Servo Delay, and then press the scroll wheel to enter the setting interface.



Roll the scroll wheel to select the channel, press and then roll the scroll wheel to set the delay value. After that, press the scroll wheel to save the value.

Values: -20~20. The default is **0**. The larger the value is, more slowly the servo speed changes.

### Switch Set [Switch Set]

The switches (SA~SH) on the transmitter can be used to customize as the control switch for aileron curve, elevator curve, rudder curve, RS/LS curve and R/L KNOB curve.

### Setting Method:

 In Model Parameter menu, roll the scroll wheel to select the Switch Set, and then press the scroll wheel to enter the setting interface.

Switch Set	1/7
1. AIL Curve:	OFF 🕹
2. ELE Curve:	off 🌷
3. RUD Curve:	OFF 🕏
4. RS Curve:	OFF 🌷
5.LS Curve:	OFF \$

- Roll the scroll wheel to select the setting item. Press and then roll the scroll wheel to select the switch. After that, press the scroll wheel to save the value.
- All Curve: This parameter is used to set the control switch for alleron curve function. Values: SA, SB, SC, SD, SE, SF, SG, SH and OFF. The default is OFF.
- ELE Curve: This parameter is used to set the control switch for elevator curve function. Values: SA, SB, SC, SD, SE, SF, SG, SH and OFF. The default is OFF.
- RUD Curve: This parameter is used to set the control switch for rudder curve function. Values: SA, SB, SC, SD, SE, SF, SG, SH and OFF. The default is OFF
- RS Curve: This parameter is used to set the control switch for RS curve function. Values: SA, SB, SC, SD, SE, SF, SG, SH and OFF. The default is OFF.
- LS Curve: This parameter is used to set the control switch for LS curve function. Values: SA, SB, SC, SD, SE, SF, SG, SH and OFF. The default is OFF.
- R KNOB Curve: This parameter is used to set the control switch for R Knob curve function. Values: SA, SB, SC, SD, SE, SF, SG, SH and OFF. The

default is OFF.

 L KNOB Curve: This parameter is used to set the control switch for Knob TL curve function. Values: SA, SB, SC, SD, SE, SF, SG, SH and OFF. The default is OFF.

### Throttle Hold [THR Hold]

This function is for auto rotation landing by holding the throttle servo at a low position. Using a selected switch, the throttle servo can be fixed at an optional position, and the throttle stick will lose effect on throttle hold mode.

### Setting Method:

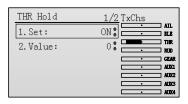
 In the Model Parameter menu, roll the scroll wheel to select THR Hold, and then press the scroll wheel to enter the setting interface



2. Press and then roll the scroll wheel to edit the value of Set.

Values: OFF, ON, SA, SB, SC, SD, SE, SF, SG, and SH. The default is OFF. Choose the ON or any other switch to enable the throttle hold function in airplane, and then press the scroll wheel to save the setting.

After opening the throttle hold switch, the **THR Hold** setting interface will display as the figure below.



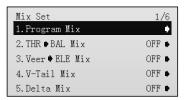
- Roll the scroll wheel to select the Value. Press and then roll the scroll wheel to edit it. After that, press the scroll wheel to save the value.
  - This parameter is used to adjust the throttle position (expressed as a percentage and based on the throttle travel). Values: -10~50. The default is 0.
- Open the throttle hold switch to fix the throttle servo at a preset position. Then the characters HOLD will display on the main screen.



### Mix Set [Mix Set]

Mixing allows control input for a channel to affect more than one channel at a time. It supports mixing a channel to another channel and mixing a channel to itself

In the **Model Parameter** menu, roll the scroll wheel to select **Mix Set**, and then press the scroll wheel to enter the setting interface.

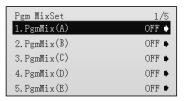


### Programmable Mixing [Program Mix]

User can customize the mix sets according to their demands. Support 5 programmable mixings. Take the **PgmMix A** setting as an example.

### Setting Method:

 In the Mix Set setting interface, roll the scroll wheel to select Program Mix, and then press the scroll wheel to enter the setting interface.

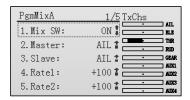


2. Press the scroll wheel to enter the PgmMixA setting interface.



3. Press and then roll the scroll wheel to set the value of Mix SW.

Values: OFF, ON, SA, SB, SC, SD, SE, SF, SG and SH. The default is OFF. Change the value to ON or any other switch. Then press the scroll wheel to activate this mixing function.



- Roll the scroll wheel to select the item. Press and then roll the scroll wheel to set the value of this item. After that, press the scroll wheel to save the value.
- Master: This parameter is used to define the master channel in mixing function. Values: AIL, ELE, THR, RUD, GEAR, AUX1, AUX2, AUX3, and AUX4.
- Slave: This parameter is used to define the slave channel in mixing function.
   Values: AIL, ELE, THR, RUD, GEAR, AUX1, AUX2, AUX3, and AUX4.
- Rate 1: This parameter is used to set the mixing rate (percentage) from master channel to slave channel when the stick of master channel located between the middle and top position. Values: -100~100.
- Rate 2: This parameter is used to set the mixing rate (percentage) from master channel to slave channel when the stick of master channel located between the middle and lowest position. Values: -100~100.

### Throttle to Balance Mixing [THR→BAL Mix]

Corresponding model type: airplane, general

This function mixes the throttle operation to the aileron, rudder, and elevator.

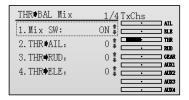
### Setting Method:

 In the Mix Set setting interface, roll the scroll wheel to select THR→BAL Mix, and then press the scroll wheel to enter the setting interface.



2. Press and then roll the scroll wheel to set the value of Mix SW.

Values: OFF, ON, SA, SB, SC, SD, SE, SF, SG and SH. The default is OFF. Change the value to ON or any other switch. Then press the scroll wheel to activate this mixing function.



- Roll the scroll wheel to select the setting item. Press and then roll the scroll wheel to set the value of the item. After that, press the scroll wheel to save the value
- THR→AIL: This parameter is used to set the mixing rate (percentage) from throttle channel to aileron channel. Values: -100~100. If the value is negative, it will adjust the aileron operation in the negative direction. If the value is positive, it will adjust the aileron operation in the positive direction. The default is 0.
- THR—RUD: This parameter is used to set the mixing rate (percentage) from throttle channel to rudder channel. Values: -100~100. If the value is negative, it will adjust the rudder operation in the negative direction. If the value is positive, it will adjust the rudder operation in the positive direction. The default is 0.
- THR-ELE: This parameter is used to set the mixing rate (percentage) from throttle channel to elevator channel. Values: -100~100. If the value is negative, it will adjust the elevator operation in the negative direction. If the value is positive, it will adjust the elevator operation in the positive direction. The default is 0.

### Veer to Elevator Mixing [Veer→ELE Mix]

Corresponding model type: airplane, general

This function mixes aileron and rudder to elevator.

The mixing amounts from aileron and rudder to elevator can be set separately for left and right as two independent settings.

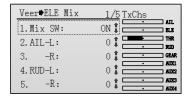
#### Setting Method:

 In the Mix Set setting interface, roll the scroll wheel to select Veer→ELE Mix, and then press the scroll wheel to enter the setting interface.



Press and then roll the scroll wheel to set the value of Mix SW.

Values: OFF, ON, SA, SB, SC, SD, SE, SF, SG and SH. The default is OFF. Change the value to ON or any other switch. Then press the scroll wheel to activate this mixing function.



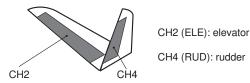
- Roll the scroll wheel to select the setting item. Press and then roll the scroll wheel to set the value of the item. After that, press the scroll wheel to save the value.
- AIL-L: This parameter is used to set the mixing rate (percentage) from aileron channel to elevator channel when operating the aileron stick to left. Values:
   -100~100. If the value is negative, it will adjust the elevator operation in the negative direction. If the value is positive, it will adjust the elevator operation in the positive direction. The default is 0.
- AIL-R: This parameter is used to set the mixing rate (percentage) from aileron channel to elevator channel when operating the aileron stick to right. Values:
   -100~100. If the value is negative, it will adjust the elevator operation in the negative direction. If the value is positive, it will adjust the elevator operation in the positive direction. The default is 0.
- RUD-L: This parameter is used to set the mixing rate (percentage) from

rudder channel to elevator channel when operating the rudder stick to left. Values: -100~100. If the value is negative, it will adjust the elevator operation in the negative direction. If the value is positive, it will adjust the elevator operation in the positive direction. The default is **0**.

 RUD-R: This parameter is used to set the mixing rate (percentage) from rudder channel to elevator channel when operating the rudder stick to right.
 Values: -100~100. If the value is negative, it will adjust the elevator operation in the negative direction. If the value is positive, it will adjust the elevator operation in the positive direction. The default is 0.

### V-tail Mixing [V-Tail Mix]

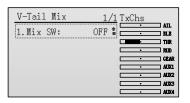
Corresponding model type: airplane, V-tail



V-tail mixing mixes channel 2 (ELE) to channel 4 (RUD) allowing the ruddervators to operate both as rudders and elevators.

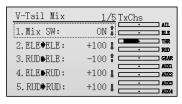
### Setting Method:

 In the Mix Set setting interface, roll the scroll wheel to select V-Tail Mix, and then press the scroll wheel to enter the setting interface.



2. Press and then roll the scroll wheel to set the value of Mix SW.

Values: OFF, ON, SA, SB, SC, SD, SE, SF, SG and SH. The default is OFF. Change the value to ON or any other switch. Then press the scroll wheel to activate this mixing function.

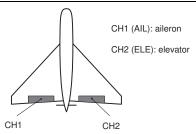


- 3. Roll the scroll wheel to select the setting item. Press and then roll the scroll wheel to set the value of the item. After that, press the scroll wheel to save the value.
- ELE→ELE: This parameter is used to set the mixing rate (percentage) from elevator channel to itself. Values: -100~100. If the value is negative, it will adjust the elevator operation in the negative direction. If the value is positive, it will adjust the elevator operation in the positive direction. The default is 100.
- RUD→ELE: This parameter is used to set the mixing rate (percentage) from rudder channel to elevator channel. Values: -100~100. If the value is negative, it will adjust the elevator operation in the negative direction. If the value is positive, it will adjust the elevator operation in the positive direction. The default is -100.
- ELE→RUD: This parameter is used to set the mixing rate (percentage) from elevator channel to rudder channel. Values: -100~100. If the value is negative. it will adjust the rudder operation in the negative direction. If the value is positive, it will adjust the rudder operation in the positive direction. The default is 100.
- RUD→RUD: This parameter is used to set the mixing rate (percentage) from rudder channel to itself. Values: -100~100. If the value is negative, it will adjust the rudder operation in the negative direction. If the value is positive, it will adjust the rudder operation in the positive direction. The default is 100.

CAUTION: You cannot set V-tail mixing when Delta mixing has already been set. In order to enable V-tail mixing, you need to cancel Delta mixing function first (modify the value of Mix SW to OFF). However, it is allowed to use V-tail and Flaperon mixing simultaneously.

### Delta Mixing [Delta Mix]

Corresponding model type: airplane, delta wing



Delta (elevon) mixing mixes channel 1 (AIL) to channel 2 (ELE) allowing the elevons to operate in unison (as elevators) or in opposition (as ailerons).

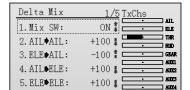
#### Setting Method:

 In the Mix Set setting interface, roll the scroll wheel to select Delta Mix, and then press the scroll wheel to enter the setting interface.



2. Press and then roll the scroll wheel to set the value of Mix SW.

Values: OFF, ON, SA, SB, SC, SD, SE, SF, SG and SH. The default is OFF. Change the value to ON or any other switch. Then press the scroll wheel to activate this mixing function.



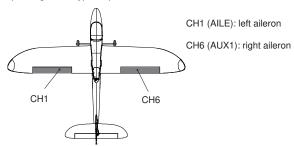
- Roll the scroll wheel to select the setting item. Press and then roll the scroll wheel to set the value of the item. After that, press the scroll wheel to save the value.
- AIL→AIL: This parameter is used to set the mixing rate (percentage) from aileron channel to itself. Values: -100~100. If the value is negative, it will adjust the aileron operation in the negative direction. If the value is positive, it will adjust the aileron operation in the positive direction. The default is 100.

- ELE→AIL: This parameter is used to set the mixing rate (percentage) from elevator channel to aileron channel. Values: -100~100. If the value is negative, it will adjust the aileron operation in the negative direction. If the value is positive, it will adjust the aileron operation in the positive direction. The default is -100.
- AIL→ELE: This parameter is used to set the mixing rate (percentage) from aileron channel to elevator channel. Values: -100~100. If the value is negative, it will adjust the elevator operation in the negative direction. If the value is positive, it will adjust the elevator operation in the positive direction. The default is 100.
- ELE→ELE: This parameter is used to set the mixing rate (percentage) from elevator channel to itself. Values: -100~100. If the value is negative, it will adjust the elevator operation in the negative direction. If the value is positive, it will adjust the elevator operation in the positive direction. The default is 100.

**CAUTION**: The delta mixing function cannot be utilized when either the V-tail or Flaperon mixing function are active.

### Flaperon Mixing [Flaperon Mix]

Corresponding model type: airplane, 2 ailerons



The two aileron servos are connected to channel 1 (AIL) and channel 6 (AUX1). Flaperon mixing allows the ailerons to operate in the same direction (as ailerons) and in opposing directions (as flaps).

#### Setting Method:

 In the Mix Set setting interface, roll the scroll wheel to select Flaperon Mix, and then press the scroll wheel to enter the setting interface.



2. Press and then roll the scroll wheel to set the value of Mix SW.

Values: OFF, ON, SA, SB, SC, SD, SE, SF, SG and SH. The default is OFF. Change the value to ON or any other switch. Then press the scroll wheel to activate this mixing function.

Flaperon	1/5 TxChs
1. Mix SW:	ON \$ BLE
2. AIL♦AIL:	+100 # THR
3. AIL♦FLP:	-100 <b>f</b> GEAR
4. FLP♦AIL:	+100 #
5.FLP⇒FLP:	+100 #

- Roll the scroll wheel to select the setting item. Press and then roll the scroll wheel to set the value of the item. After that, press the scroll wheel to save the value
- AIL→AIL: This parameter is used to set the mixing rate (percentage) from aileron channel to itself. Values: -100~100. If the value is negative, it will adjust the aileron operation in the negative direction. If the value is positive, it will adjust the aileron operation in the positive direction. The default is 100.
- AIL

  FLP: This parameter is used to set the mixing rate (percentage) from aileron channel to flap channel. Values: -100~100. If the value is negative, it will adjust the flap operation in the negative direction. If the value is positive, it will adjust the flap operation in the positive direction. The default is -100.
- FLP AIL: This parameter is used to set the mixing rate (percentage) from flap channel to aileron channel. Values: -100~100. If the value is negative, it will adjust the aileron operation in the negative direction. If the value is positive, it will adjust the aileron operation in the positive direction. The default is 100.
- FLP→FLP: This parameter is used to set the mixing rate (percentage) from flap channel to itself. Values: -100~100. If the value is negative, it will adjust the flap operation in the negative direction. If the value is positive, it will adjust the flap operation in the positive direction. The default is 100.



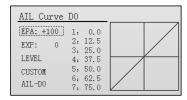
- When using Flaperon mixing function, do not set the flap to full travel, otherwise the aileron will be invalid.
- You cannot set V-tail mixing when Flaperon mixing has already been set. In order to enable Flaperon mixing, you need to cancel Delta mixing function first (modify the value of Mix SW to OFF). However, it is allowed to use Flaperon and V-tail mixing simultaneously.

## Aileron Curve [AIL Curve]

This function is used to adjust servos operation in response to aileron stick operation. The servo position can be set independently for a maximum of 9 point positions. There are three aileron curves D0, D1 and D2. They have the same setting method. Take the setting of **All Curve D0** curve as an example.

#### Setting Method:

 In the Model Parameter menu, roll the scroll wheel to select AIL Curve, and then press the scroll wheel to enter the AIL Curve D0 setting interface.



- Roll the scroll wheel to select the setting item. Press and then roll the scroll wheel to set the value of the item. After that, press the scroll wheel to save the value.
- EPA: EPA (end point adjustment) is used to adjust the end point. The larger the value is, the larger the servo travel is when move the stick. Values: -100~100. The default is 100.
- EXP: It is used to set the exponent of the curve. Offer a servo travel that is not directly proportional to the stick travel. The control response is milder below half-stick, but becomes increasing stronger as stick travel approaches 100%. The larger the value is, the milder below half-stick. Values: 0~50. The default is 0. When the value is set to 0, the servo travel is proportional to the stick travel.
- LEVEL: It is used to move up or down the curve.
- CUSTOM/DEFAULT: When the value is CUSTOM, you can set the curve.
   When the value is DEFAULT, the curve is switched to the default.
- AIL-D0/AIL-D1/AIL-D2: When the value is AIL-D0, you can set the aileron curve D0. When the value is AIL-D1, you can set the aileron curve D1. When

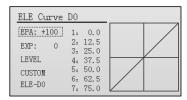
- the value is AIL-D2, you can set the aileron curve D2.
- 1~9: It is used to set the value of a specific point. The servo position can be set independently for a maximum of 9 point positions. The screen can only display 7 points at a time. You can scroll to select other setting points by roll the scroll wheel.

### **Elevator Curve [ELE Curve]**

This function is used to adjust servos operation in response to elevator stick operation. The servo position can be set independently for a maximum of 9 point positions. There are three elevator curves D0, D1 and D2. They have the same setting method. Take the setting of **ELE Curve D0** curve as an example.

#### Setting Method:

 In the Model Parameter menu, roll the scroll wheel to select ELE Curve, and then press the scroll wheel to enter the ELE Curve D0 setting interface.



Roll the scroll wheel to select the setting item. Press and then roll the scroll wheel to set the value of the item. After that, press the scroll wheel to save the value

For the descriptions of each parameter, please refer to Aileron Curve [AIL Curve] (Page 40).

### Throttle Curve [THR Curve]

This function is used to adjust throttle servo operation in response to throttle stick operation. The servo position can be set independently for a maximum of 9 point positions. There are three throttle curves D0, D1 and D2. They have the same setting method. Take the setting of **THR Curve D0** curve as an example.

#### Setting Method:

 In the Model Parameter menu, roll the scroll wheel to select THR Curve, and then press the scroll wheel to enter the THR Curve D0 setting interface.

THR Curve	D0		
EPA: +100		0.0	
EXP: 0		12.5 25.0	
LEVEL		37.5	<u> </u>
CUSTOM		50.0	
THR-D0		62. 5 75. 0	

Roll the scroll wheel to select the setting item. Press and then roll the scroll wheel to set the value of the item. After that, press the scroll wheel to save the value.

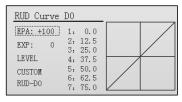
For the descriptions of each parameter, please refer to Aileron Curve [AIL Curve] (Page 40).

### **Rudder Curve [RUD Curve]**

This function is used to adjust servos operation in response to rudder stick operation. The servo position can be set independently for a maximum of 9 point positions. There are three rudder curves D0, D1 and D2. They have the same setting method. Take the setting of **RUD Curve D0** curve as an example.

#### Setting Method:

 In the Model Parameter menu, roll the scroll wheel to select RUD Curve, and then press the scroll wheel to enter the RUD Curve D0 setting interface.



Roll the scroll wheel to select the setting item. Press and then roll the scroll wheel to set the value of the item. After that, press the scroll wheel to save the value

For the descriptions of each parameter, please refer to Aileron Curve [AIL Curve] (Page 40).

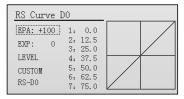
# RS/LS/R KNOB/L KNOB Curve [RS/LS/R KNOB/L KNOB Curve]

This function is used to adjust servos operation in response to R Wheel/L Wheel/R KNOB/L KNOB operation. The servo position can be set independently for a maximum of 9 point positions. There are three RS/LS/R KNOB/L KNOB

curves D0, D1 and D2. They have the same setting method. Take the setting of RS Curve D0 curve as an example.

### Setting Method:

 In the Model Parameter menu, roll the scroll wheel to select RS Curve, and then press the scroll wheel to enter the RS Curve D0 setting interface.



Roll the scroll wheel to select the setting item. Press and then roll the scroll wheel to set the value of the item. After that, press the scroll wheel to save the value.

For the descriptions of each parameter, please refer to Aileron Curve [AlL Curve] (Page 40).

# **Model Parameter (Helicopter)**

Before setting the model parameters, please select the model in **Model Set** → **Model Select** menu, and set the model type in the **Select Model Type** menu. If the model is helicopter, set the model type to **Helicopter**.

After entering the main menu, roll the scroll wheel to select **Model Parameter**. Then press the scroll wheel to enter the **Model Parameter** interface.

### End Point [End Point]

Please refer to End Point [End Point] (Page 26).

# Sub Trim [Sub Trim]

Please refer to Sub Trim [Sub Trim] (Page 27).

## Reverse [Rev Set]

Please refer to Reverse [Reverse] (Page 27).

# Servo Delay [Servo Delay]

Please refer to Servo Delay [Servo Delay] (Page 28).

## Switch Set [Switch Set]

The switches (SA~SH) on the transmitter can be used to customize as the control switch for acrobatic fly, aileron curve, elevator curve, rudder curve, RS/LS curve and R/L KNOB curve.

### Setting Method:

 In Model Parameter menu, roll the scroll wheel to select the Switch Set, and then press the scroll wheel to enter the setting interface.

Switch Set	1/8
1.ACR Fly:	off 🖫
2. AIL Curve:	off 🌷
3.ELE Curve:	OFF 🕏
4. RUD Curve:	OFF 🎩
5.RS Curve:	OFF 🕏

Roll the scroll wheel to select the setting item. Press and then roll the scroll wheel to select the switch. After that, press the scroll wheel to save the value.

- ACR Fly: This parameter is used to set the control switch for acrobatic fly function. Values: SA, SB, SC, SD, SE, SF, SG, SH and OFF. The default is OFF.
- AIL Curve: This parameter is used to set the control switch for aileron curve function. Values: SA, SB, SC, SD, SE, SF, SG, SH and OFF. The default is OFF.
- ELE Curve: This parameter is used to set the control switch for elevator curve function. Values: SA, SB, SC, SD, SE, SF, SG, SH and OFF. The default is OFF.
- RUD Curve: This parameter is used to set the control switch for rudder curve function. Values: SA, SB, SC, SD, SE, SF, SG, SH and OFF. The default is OFF.
- RS Curve: This parameter is used to set the control switch for RS curve function. Values: SA, SB, SC, SD, SE, SF, SG, SH and OFF. The default is OFF.
- LS Curve: This parameter is used to set the control switch for LS curve function. Values: SA, SB, SC, SD, SE, SF, SG, SH and OFF. The default is OFF.
- R KNOB Curve: This parameter is used to set the control switch for R Knob curve function. Values: SA, SB, SC, SD, SE, SF, SG, SH and OFF. The default is OFF.
- L KNOB Curve: This parameter is used to set the control switch for Knob TL curve function. Values: SA, SB, SC, SD, SE, SF, SG, SH and OFF. The default is OFF.

# Throttle Hold [THR Hold]

Please refer to Throttle Hold [THR Hold] (Page 30).

# Swash Mixing [Swash Mix]

NOTE: This function is available for helicopter only.

Using three servos to control the swash plate, the swash mixing function allows coordinated control of the aileron, elevator, and pitch. This swash mixing is essential for helicopters that incorporate CCPM (collective-cyclic pitch mixing) system, and can make the swash plate setting easier.

 In the Model Parameter menu, roll the scroll wheel to select Swash Mix, and then press the scroll wheel to enter the setting interface.

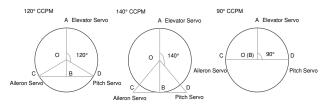
Swash Mix		1/4	1 TxChs
1. Type:	1	Servo 1	AIL . RLE
2. AIL Mix:		+100	THR
3.ELE Mix:		+100	GBAR
4.PIT Mix:		+100	AUX2
			- AUX3

Roll the scroll wheel key to select Type. Press and then roll the scroll wheel to set the swash type.

#### Values:

- 1 Servo: Each channel controls one servo, each servo controls one kind of operation, without mixing. If the Type is set to 1 Servo, do not need to set the mixing rate in step 3.
- 90°: This swash type is shown in the following figure. After selecting this swash type, you can adjust the swash mixing by setting the mixing rate in step 3.
- 120°: This swash type is shown in the following figure. After selecting this swash type, you can adjust the swash mixing by setting the mixing rate in step 3.
- 140°: This swash type is shown in the following figure. After selecting this swash type, you can adjust the swash mixing by setting the mixing rate in step 3.

#### The default is 1 Servo.



- Roll the scroll wheel to select the mixing rate item. Press and then roll the scroll wheel to set the value of the item. After that, press the scroll wheel to save the value.
- AIL Mix: This parameter is used to set the mixing rate (percentage) from aileron to pitch when operating the aileron stick. Values:-100~100. If the value is negative, it will adjust the pitch operation in the negative direction. If the value is positive, it will adjust the pitch operation in the positive direction. The default is 100.
- ELE Mix: This parameter is used to set the mixing rate (percentage) from

elevator to aileron and pitch when operating the elevator stick. Values: -100~100. If the value is negative, it will adjust the aileron and pitch operation in the negative direction. If the value is positive, it will adjust the aileron and pitch operation in the positive direction. The default is **100**.

PIT Mix: This parameter is used to set the mixing rate (percentage) from aileron to aileron and elevator when operating the aileron stick. Values: -100~100. If the value is negative, it will adjust the aileron and elevator operation in the negative direction. If the value is positive, it will adjust the aileron and elevator operation in the positive direction. The default is 100.

### Pitch Curve [PIT Curve]

It is used to adjust pitch operation in response to throttle stick operation. The servo position can be set independently for a maximum of 9 point positions. There are three pitch curves D0, D1 and D2. You can set pitch curve for the **HLD** (hold), **NORM** (normal) and **ACR** (acrobatic) flight modes of helicopter respectively.

- HLD PIT Curve (Pitch Curve D0): It is used to adjust pitch operation in response to throttle stick operation when the helicopter is in hold flight mode.
- NORM PIT Curve (Pitch Curve D1): It is used to adjust pitch operation in response to throttle stick operation when the helicopter is in normal flight mode.
- ACR PIT Curve (Pitch Curve D2): It is used to adjust pitch operation in response to throttle stick operation when the helicopter is in acrobatic flight mode.

#### Setting Method:

 In the Model Parameter menu, roll the scroll wheel to select PIT Curve, and then press the scroll wheel to enter the HLD PIT Curve setting interface.

Roll the scroll wheel to select **PIT-D0** and edit this item that user can change to the **PIT Curve D1** or **PIT Curve D2** setting interface.

HLD PIT Cu	rve	
EPA: +100		
EXP: 0	2: 12.5 3: 25.0	
LEVEL	4: 37.5	
CUSTOM	5: 50.0 6: 62.5	
PIT-DO	7: 75.0	

Roll the scroll wheel to select the setting item. Press and then roll the scroll wheel to set the value of the item. After that, press the scroll wheel to save the value For the descriptions of each parameter, Please refer to Aileron Curve [AlL Curve](Page 40).

After setting the helicopter's pitch curve, you can select the hold, normal, or acrobatic pitch curve by using throttle hold switch and acrobatic flight switch.

### Aileron Curve [AIL Curve]

Please refer to Aileron Curve [AIL Curve] (Page 40).

### **Elevator Curve [ELE Curve]**

Please refer to Elevator Curve [ELE Curve] (Page 41).

### Throttle Curve [THR Curve]

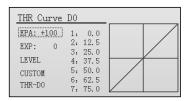
This function is used to adjust throttle servo operation in response to throttle stick operation. The servo position can be set independently for a maximum of 9 point positions. You can set throttle curve for the helicopter's **NORM** (normal) and **ACR** (acrobatic) flight mode respectively.

- NORM THR Curve (Throttle Curve D0): It is used to adjust throttle servo
  operation in response to throttle stick operation when the helicopter is in
  normal flight mode.
- ACR THR Curve (Throttle Curve D1): It is used to adjust throttle servo
  operation in response to throttle stick operation when the helicopter is in
  acrobatic flight mode.

#### Setting Method:

 In the Model Parameter menu, roll the scroll wheel to select THR Curve, and then press the scroll wheel to enter the THR Curve D0 setting interface.

Roll the scroll wheel to select **THR-D0** and edit this item that user can change to the **THR Curve D1** setting interface.



Roll the scroll wheel to select the setting item. Press and then roll the scroll wheel to set the value of the item. After that, press the scroll wheel to save the value. For the descriptions of each parameter, Please refer to Aileron Curve [AIL Curve](Page 40).

After setting the helicopter's throttle curve, you can select the normal or acrobatic throttle curve by using acrobatic flight switch.

## Rudder Curve [RUD Curve]

Please refer to Rudder Curve [RUD Curve] (Page 42).

# RS/LS/R Knob/L Knob Curve [RS/LS/R Knob/L Knob Curve]

Please refer to RS/LS/R KNOB/L KNOB Curve [RS/LS/R KNOB/L KNOB Curve](Page 42).

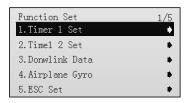
# **Function Set**

In the **Function Set** menu, you can set the timer, airplane gyro, ESC and check the flight data, etc.

After entering the main menu, roll the scroll wheel to select the Function Set.



Press the scroll wheel to enter the Function Set interface.



# Timer Set [Timer 1/2 Set]

This transmitter incorporates two timer systems which are displayed on the main screen. Take the timer 1 setting method as an example.

#### Setting Method:

 In the Function Set menu, roll the scroll wheel to select Timer 1 Set, and then press the scroll wheel key to enter the setting interface.

Timer 1 Set	1/6
1.Timer Type:	OFF 🕏
2.Trigger:	Threshold:
3.Swtich:	OFF 🕏
4.THR Threshold:	-90 🕻
5.Timer (min):	01

Roll the scroll wheel to select **Timer Type**. Press and then roll the scroll wheel to set the timer type.

#### Values:

- OFF: This timer is disabled. You do not need to set the following items when OFF is selected.
- UP Timer: This timer is enabled, and displays on the main screen as up timer.
- DOWN Timer: This timer is enabled, and displays on the main screen as down timer.

The default is OFF.

After that, press the scroll wheel to save this value and set the next item.

Roll the scroll wheel to select Trigger. Press and then roll the scroll wheel to set the value.

### Values:

- Threshold: The timer will be programmed to start when the throttle is raised above a predefined position. If the parameter Trigger is set to Threshold, you need to set the THR Position (as shown in Step 5).
- Switch: The timer will be programmed to start by toggling the switch. If the
  parameter Trigger is set to Switch, you need to set the Switch item (as
  shown in Step 4).

The default is Threshold.

After that, press the scroll wheel to save this value and can set the next item.

 Roll the scroll wheel to select Switch. Press and then roll the scroll wheel to set the value. Values: SA, SB, SC, SD, SE, SF, SG, and SH. The default is SF.

The timer will be programmed to start when you put the switch on top or middle position, and pause when you put the switch on bottom position.

After that, press the scroll wheel to save this value and can set the next item.

Note: Do not need to set this item when Trigger is set to Threshold.

 Roll the scroll wheel to select THR Threshold. Press the then roll the scroll wheel to set the value. Values: -100~100. The default is -90.

The timer will be programmed to start when the throttle is raised above a predefined position, and pause when falling below this position.

After that, press the scroll wheel to save this value and can set the next item.

- Note: Do not need to set this item when the parameter Trigger is set to Switch.
- Roll the scroll wheel to select the Timer (min)/Timer (sec). Press and then roll the scroll wheel to set the value. After that, press the scroll wheel to save the value.

# **Downlink Data [Downlink Data]**

The aircraft performance data can be displayed on this menu with corresponding receiver and flight controller that can send the data back.

In the Function Set menu, roll the scroll wheel to select Downlink Data, and then press the scroll wheel to enter this interface.



The data includes the GPS, voltage, yaw, roll, pitch, speed, height, distance, and so on.

### Airplane Gyro

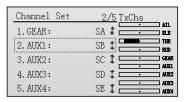
This menu is specifically designed to set the programmable items of the airplane gyro. When working with the stabilized receiver which is integrated with 6-axis gyro, this menu can be used to set its programmable items. For example, mode switch, roll/pitch/yaw gain, roll/pitch offset, mounting direction, and wing type, etc.

#### Preconditions:

- The transmitter and the stabilized receiver are well bound.
- The transmitter and the stabilized receiver are powered on and connected.

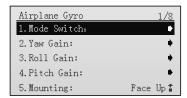
#### Setting Method:

- Assign a 3-position switch to AUX1 channel. This switch is used as the mode switch for the stabilized receiver and used to change its flight modes.
- (1) In the main menu, roll the scroll wheel to select Model Set, and then press the scroll wheel to enter the setting interface.
- (2) Roll the scroll wheel to select the Channel Set, and then press the scroll wheel to enter this interface.
- (3) Assign a 3-position switch to AUX1 channel and make sure this switch does not have other functions.



- NOTE: It is suggested to assign a 3-position switch to AUX1 channel. If you assign a 2-position switch to AUX1 channel, you can only switch between two flight modes during flying.
- 2. Enter the Airplane Gyro menu.

In the **Function Set** menu, roll the scroll wheel to select **Airplane Gyro**, and then press the scroll wheel to enter the setting interface.



Programmable items include: Mode Switch, Yaw Gain, Roll Gain, Pitch Gain, Offset on Roll Axis. Offset on Pitch Axis, Mounting, and Wing.

If the receiver is disconnected or powered off, the transmitter cannot enter the **Airplane Gyro** setting interface and will enter the following interface.



- 3. Assign the desired flight mode to the mode switch.
- (1) In the Airplane Gyro menu, roll the scroll wheel to select Mode Switch, and then press the scroll wheel to enter the setting interface.
- If a 3-position switch is assigned to AUX1 channel, the interface is shown as the figure below.

Mode Switch(SB)	1/3
1.Position-1:	Auto-Recovery 🕽
2.Position-2:	Gyro Off 🕻
3.Position-3:	Normal ‡

 If a 2-position switch is assigned to AUX1 channel, take SH switch as an example, the interface is shown as below.



If AUX1 channel is set to OFF, the interface is shown as the figure below.
 Please return to Step 1 and reset the value of AUX1 channel.



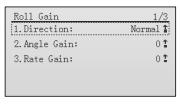
- NOTE: If AUX1 channel is set to OFF, the stabilized receiver works on Normal mode.
- (2)(The operation for 3-position switch) Roll the scroll wheel to select Position-1. Press and then roll the scroll wheel to set the value. After that, press the scroll wheel to save the value. Set the value of Position-2, and Position-3 in the same way.

**Position-1**, **Position-2**, and **Position-3** are respectively used to assign the desired flight mode to position-1, position-2, and position-3. Values:

- Gyro Off: Choose this mode to disable the gyros for all channels. The airplane will be completely under the control of the transmitter. Generally, it is only used to test.
- Normal: In this mode, the gyro will sense angular velocity on each axis and make a momentary reaction. The normal mode is suitable for all types of

airplane. It can effectively improve the stability of your airplane, especially on a windy day.

- Auto-Recovery: It is also called Auto Balance Mode. Choose this mode to
  lock the tilt angle on pitch and roll axis. When operating in this mode, the
  airplane will maintain level flight automatically. When switch it to this mode
  from any other modes in an emergency, the airplane will recover to the level
  flight automatically, which it is known as one-click rescue. This mode is
  suitable for the new beginners or the FPV (First Person View) applications.
- Aerobatic: By adding the attitude hold function to the gyros, it will lock the
  airplane to its previous attitude if there is no command sent from the
  transmitter in a flight. This mode can effectively help you to accomplish an
  aerobatic flight. Operate the sticks in this mode, the controller won't affect
  the operation and can improve the stability of the airplane. Once release
  the sticks, the controller will save the previous flight attitude and lock the
  airplane to this attitude.
- ▲ CAUTION: Flying in this mode, do not drastically adjust the trims, excessive trims will affect the judgment of neutral position for the transmitter. Set the trims during test, and then restart the RC system.
- Adjust the roll, pitch, and yaw gain. Adjusting the roll gain is taken as an example.
- (1) In the Airplane Gyro menu, roll the scroll wheel to select Roll Gain, and then press the scroll wheel to enter the setting interface.



- (2) Roll the scroll wheel to select the setting item. Press and then roll the scroll wheel to set the value of the item. After that, press the scroll wheel to save the value.
- Direction: This parameter is used to specify the adjusting direction of the gain. Values:
  - Normal: Adjust the gain in positive direction. When the servo moves in normal direction, Set the value to Normal.
  - Reverse: Adjust the gain in negative direction. When the servo moves in reverse direction, Set the value to Reverse.

The default is Normal.

- Angle Gain: This parameter is used to set the value (percentage) of the angle gain. When the value is 0, the gain is the lowest. The larger the value is, the larger the gain is. Values: 0~100. The default is 50.
- Rate Gain: This parameter is used to set the value (percentage) of the angular velocity gain. When the value is 0, the gain is the lowest. The larger the value is, the larger the gain is. Values: 0~100. The default is 50.
- NOTE: There are different requirements for the gain in different application. You need to adjust the gain to get the best result. If the gain is set too high, there is a result of over amplification of the gyros, this rapid back and forth movement can make the airplane hard to control. But if the gain is too low, will cause the airplane become blunt. We suggest you start your first flight with a lower gain setting and then increase them gradually.
- 5. Adjust the level offset on Roll and Pitch.

This function is used to offset the absolute angle error caused by installation, and try to establish the appropriate level flight attitude of the plane when flying in auto-balance mode. If your plane drops down or up when switch to auto-balance mode, you will need to perform a level offset. Usually you just need to do it once after installation.

In the Airplane Gyro menu, roll the scroll wheel to select Offset on Roll Axis/ Offset on Pitch Axis. Press and then roll the scroll wheel to set the value. After that, press the scroll wheel to save this value.

Offset on Roll Axis and Offset on Pitch Axis are respectively used to offset the absolute angle on roll and pitch axis. Values: -20~20. The default is 0.

- NOTE: For ease of observation, you can turn the roll and pitch gain larger temporarily when adjusting the parameters, and restore it after you finish the adjustment.
- 6. Set the mounting direction of the stabilized receiver.

In the **Airplane Gyro** menu, roll the scroll wheel to select **Mounting**. Press and then roll the scroll wheel to set the value.

This parameter is used to specify the mounting direction of the stabilized receiver. The value must be consistent with the actual mounting direction. Otherwise the airplane cannot work properly. Values:

- Face Up: The mounting direction is face up.
- Face Down: The mounting direction is face down.
- Face Right: The mounting direction is face right.
- Face Left: The mounting direction is face left.

The default is Face Up.

Set the wing type.

In the Airplane Gyro menu, roll the scroll wheel to select Wing. Press and

then roll the scroll wheel to set the value. After that, press the scroll wheel to save this value.

This parameter is used to specify the wing type of the airplane mounted with the stabilized receiver. The value must be consistent with the actual wing type. Otherwise the airplane cannot work properly. Values:

- · Normal: Normal airplane.
- Delta Wing: Delta wing airplane.
- V-tail: V-tail airplane.

The default is Normal.

### **ESC Set**

This menu is specifically designed to set the programmable items of the ESC. When working with Detrum ESC, Blitz-DT9 can set the programmable item of the ESC without programming card. It is currently used to set programmable parameters for the Skylord Series, Skylord Advanced Series, and Volcano Series ESCs.

#### Setting Method:

- 1. Insert the signal wire of ESC into the transmitter ESC port as required.
- In the Function Set menu, roll the scroll wheel to select the ESC Set. Press the scroll wheel to wait for connecting.

```
Connect, Init…
Waiting, Connect…
Waiting, Power on…
>>>>>>
```

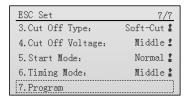
Power on the ESC. The transmitter will read the parameter of ESC and display the programmable item. Take the Skylord ESC as an example; you will see the interface shown as the figure below.

ESC Set	1/7
1.Brake:	OFF 🕻
2.Battery Type:	Li-Po 🕻
3.Cut Off Type:	Soft-Cut 🕻
4.Cut Off Voltage:	Middle 🕯
5.Start Mode:	Normal 🕻



CAUTION: Ensure that connect the ESC to transmitter first. And then power on the ESC. Or the connection fails.

- 4. Roll the scroll wheel to select programmable item. Press and then roll the scroll wheel to set the value. After that, press the scroll wheel to save the value.
- 5. After the setting is completed, roll the scroll wheel to select Program and press the scroll wheel to save all the values.



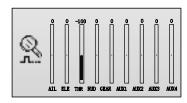
# **Channel Monitor**

You can check the status of each channel through the channel monitor.

After entering the main menu, roll the scroll wheel to select **Channel Monitor**.



And then press the scroll wheel to enter the channel monitor interface.



• AIL: Aileron channel

ELE: Elevator channel

THR: Throttle channel

RUD: Rudder channel

• GEAR: Gear channel

GLAII. Geal Chaille

AUX1: Auxiliary channel 1AUX2: Auxiliary channel 2

•

AUX3: Auxiliary channel 3

AUX4: Auxiliary channel 4

# **System Set**

The **System Set** menu sets up functions of the transmitter, does not set up any model data.

After entering the main menu, roll the scroll wheel to select **System Set**, and then press the scroll wheel to enter the **System Set** interface.



### Language [Language]

It is used to set the language displayed on LCD, including Chinese and English. Setting Method:

In the **System Set** menu, roll the scroll wheel to select **Language**. Press and then roll the scroll wheel to set the language. After that, press the scroll wheel to save the value.

### PPM Set [PPM I&O]

When connect two transmitter in wired trainer way, user need to set this item to ensure the realization of trainer function.

### Setting Method:

In the **System Set** menu, roll the scroll wheel to select the **PPM I&O**. Press and then roll the scroll wheel to set the value. After that, press the scroll wheel to save the value.

#### Values:

- **Input**: It is the instructor transmitter when using trainer function.
- Output: It is the student transmitter when using trainer function.

# Back-light Time [Bright Off]

It is used to adjust the back-light appearance time.

Values: NORM ON. 10sec, 20sec, 30sec, 40sec, 50sec, and 60sec. When NORM ON is selected, the back-light will be always on. When 10sec, 20sec, 30sec, 40sec, 50sec, or 60sec is selected, if there is no operation, the back-light