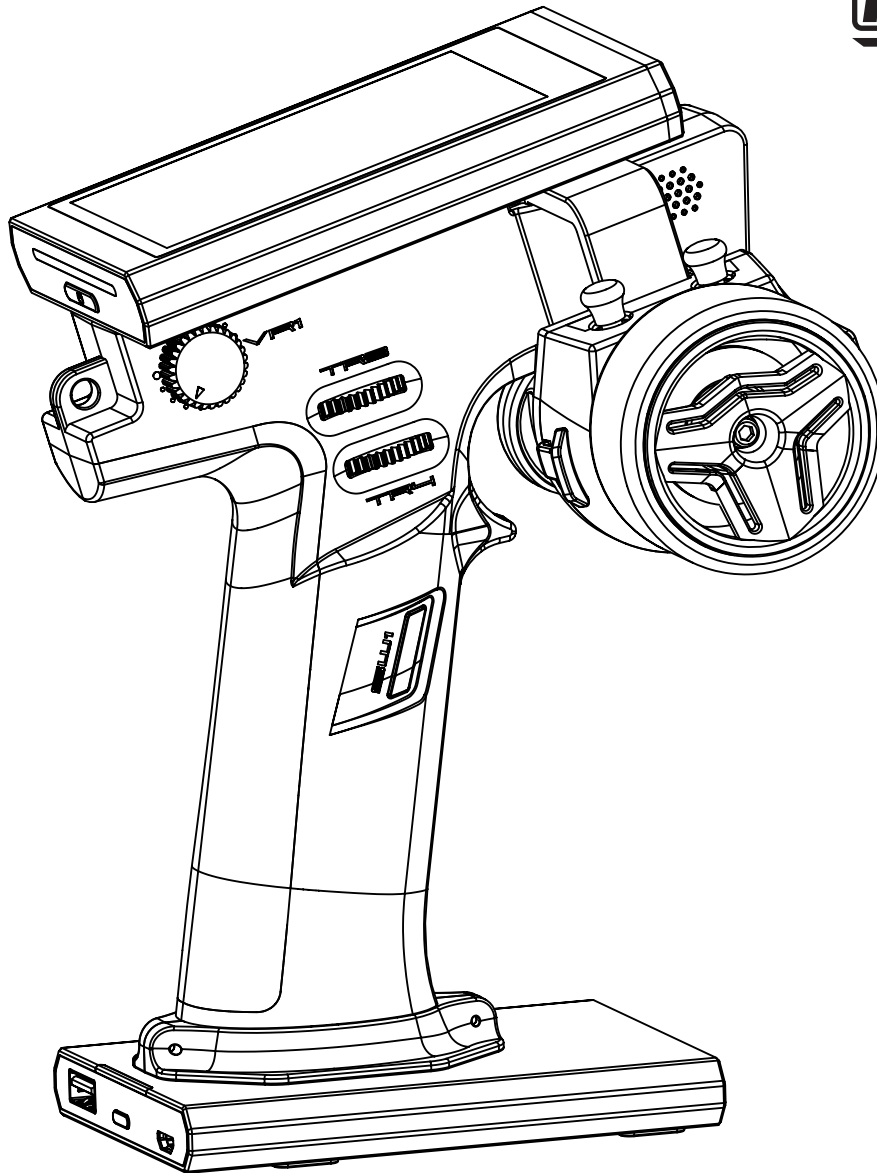# Noble NB4

USER MANUAL

2.4GHz AFHDS 3

FLYSKY

Touching Infinity

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FLY SKY

Thank you for purchasing our products.

Read the manual carefully to ensure your personal safety as well as the safety of your equipment. If you encounter any problems during using, please refer to this manual first.

If the problem is still not resolved, please contact the local dealer directly or contact the customer service staff via the website below:

www.flysky-cn.com

Contents

1. Safety

1.1 Safety Symbols

Pay close attention to the following symbols and their meanings. Failure to follow these warnings could cause damage, injury or death.

⚠ Danger	• Not following these instructions may lead to serious injuries or death.
⚠ Warning	• Not following these instructions may lead to major injuries.
⚠ Attention	• Not following these instructions may lead to minor injuries.

1.2 Safety Guide

🚫 Prohibited	❗ Mandatory

🚫

- **Do not use the product at night or in bad weather like rain or thunderstorm. It can cause erratic operation or loss of control.**
- **Do not use the product when visibility is limited.**
- **Do not use the product on rain or snow days. Any exposure to moisture (water or snow) may cause erratic operation or loss of control.**
- **Interference may cause loss of control. To ensure the safety of you and others, do not operate in the following places:**
  - Near any site where other radio control activity may occur
  - Near power lines or communication broadcasting antennas
  - Near people or roads
  - On any body of water when passenger boats are present
- **Do not use this product when you are tired, uncomfortable, or under the influence of alcohol or drugs. Doing so may cause serious injury to yourself or others.**
- **The 2.4GHz radio band is limited to line of sight. Always keep your model in sight as a large object can block the RF signal and lead to loss of control.**
- **Never grip the transmitter antenna during operation. It significantly degrades signal quality and strength and may cause loss of control.**
- **Do not touch any part of the model that may generate heat during operation, or immediately after use. The engine, motor or speed control, may be very hot and can cause serious burns.**

❗

- **Misuse of this product may lead to serious injury or death. To ensure the safety of you and your equipment, read this manual and follow the instructions.**
- **Make sure the product is properly installed in your model. Failure to do so may result in serious injury.**
- **Make sure to disconnect the receiver battery before turning off the transmitter. Failure to do so may lead to unintended operation and cause an accident.**
- **Ensure that all servos operate in the correct direction. If not, adjust the direction first.**
- **Make sure the model flies within a certain distance. Otherwise, it would cause loss of control.**

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2.Introduction

This product uses the 2.4GHz Third Generation AFHDS 3 protocol. The NB4 transmitter and FGr4P receiver constatute a system, compatible with model cars, boats and other models. and it also supports the USB simulator function (Default enabled).
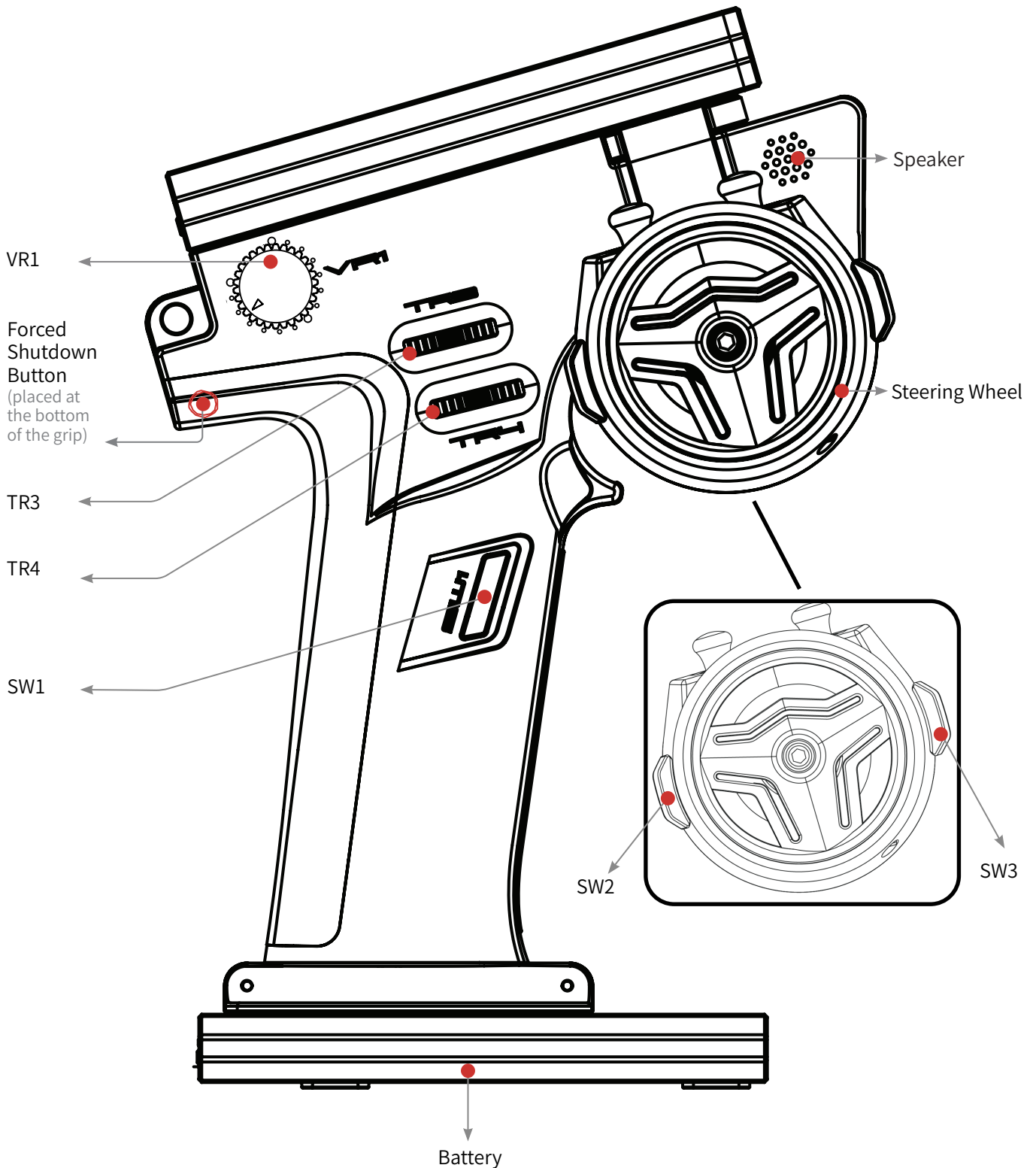
2.1 System Features

AFHDS3 (third-generation automatic frequency hopping digital system) is a newly developed digital wireless system. It is compatible with single antenna bidirectional real-time data packet transmission and data stream transmission. With the advantages that come with the WS2A wireless system and the new 2.4GHz chip, the system can dynamically set: number of channels, channel resolution, range, anti-interference requirements and latency to meet the needs of different users.

Single Antenna Bidirectional Real-time Data Transmission	The receiver can receive data from the transmitter and the transmitter can receive data from the receiver, this includes data from sensors, such as temperature and speed and support the i-BUS. This gives more control over the aircraft and constant information on its current status.
Uncorrected Data Transmission	The independent uncorrected data transmission module is built into RF system; it can send many different types of data including flight control data.
Intelligent RF configuration	Depending on hardware, certification, the amount of data to be transmitted, anti-interference, latency and distance requirements, the system intelligently adapts the corresponding RF configuration to meet the requirements of the user.
Multi-channel Frequency Hopping	This systems bandwidth ranges from 2.402GHz to 2.480GHz. This band is divided in 140 channels. Each transmitter hops between 16 channels (32 for Japanese and Korean versions) in order to reduce interference from other transmitters.
Unique ID Recognition System	Each transmitter and receiver has it's own unique ID. Once the transmitter and receiver have been paired, they will only communicate with each other, preventing other systems accidentally connecting to or interfering with the systems operation.
Low Power Consumption	The system is built using highly sensitive low power consumption components, maintaining high receiver sensitivity, while consuming as little as one tenth the power of a standard FM system, dramatically extending battery life.

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2.2 Transmitter Overview

VR1

Forced
Shutdown
Button
(placed at
the bottom
of the grip)

TR3

TR4

SW1

Speaker

Steering Wheel

SW2

SW3

Battery

Note: If you can't shut down the transmitter properly, please shut down the transmitter by pressing the force shutdown button on the transmitter. (Operation: pull the hand grip placed at the top of transmitter's grip or take off the whole handle grip. Use a relatively slender tool, insert the tool into the round hole on the right side of the grip, and press the forced switch button in the round hole. After pressing the button, the transmitter will be shut down immediately.

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Noble NB4

Screen

VR1

Lanyard Eye

TR3

TR4

SW1

Grip

Trigger Spring Adjsustment

Trigger Size Adjustment

Battery Port

USB Port (Charging), Update program, and connect the simulator interface.

Power Button

USB 5V 2A (Power Out)
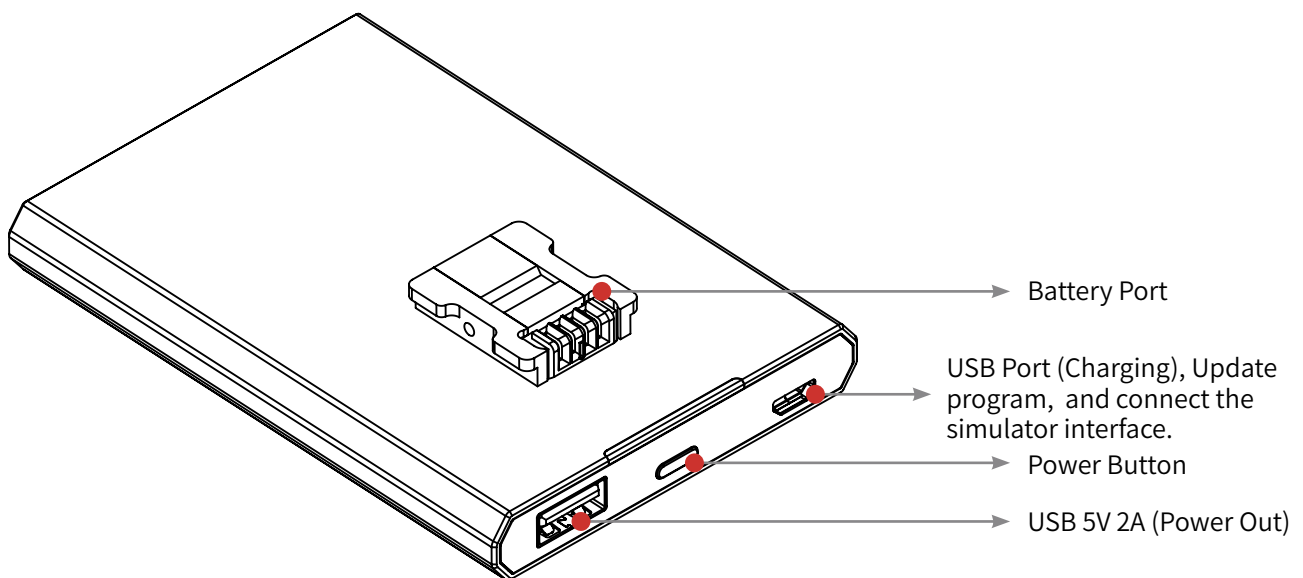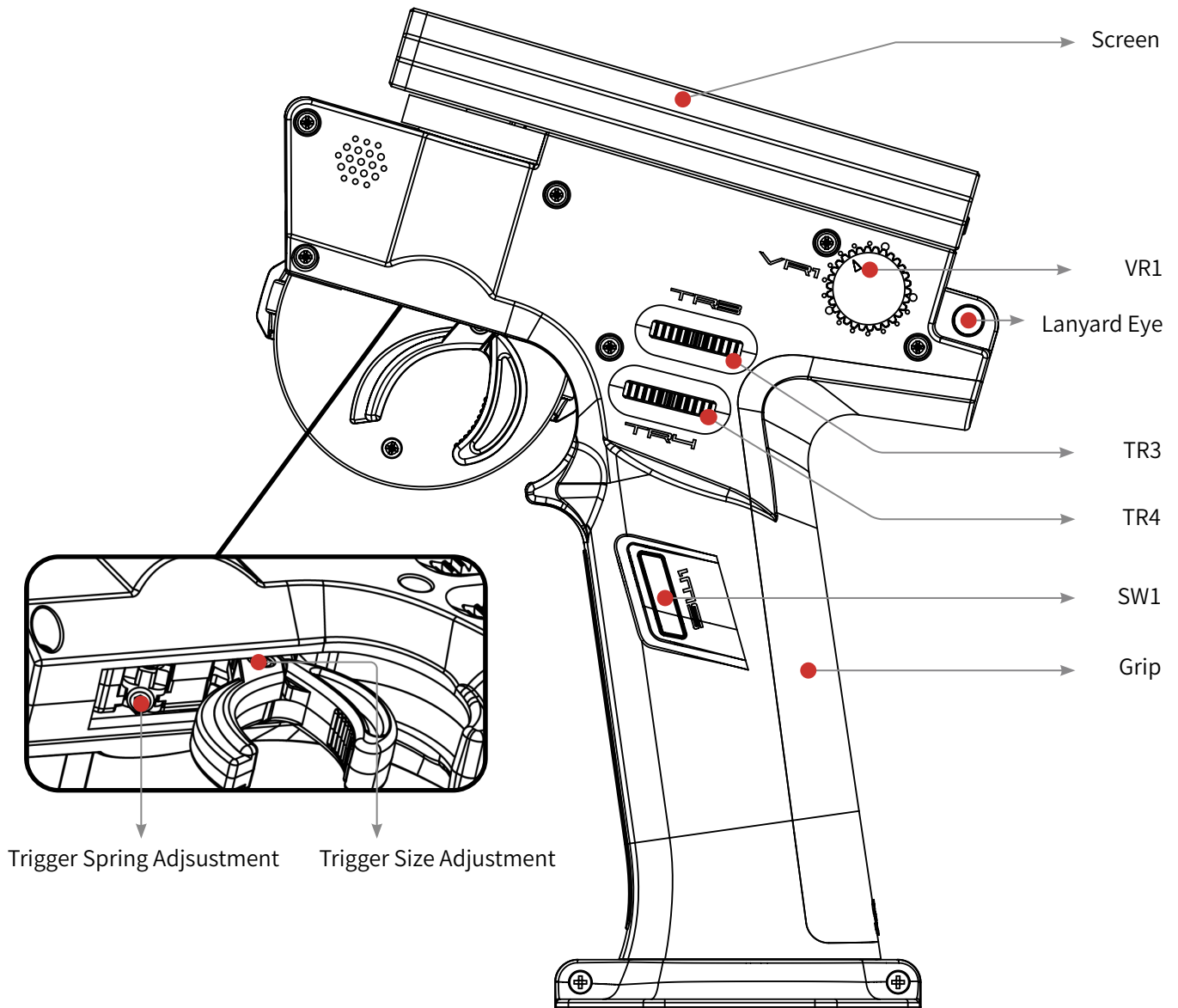
Base power button: Press for a short time to charge the battery at the transmitter handle and to charge external devices. Press 2 seconds to turn off the output of the power supply.

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Screen

RGB LED

Power Button

Adjustable Arm

TR2 Trim

TR1 Trim

Steering Wheel
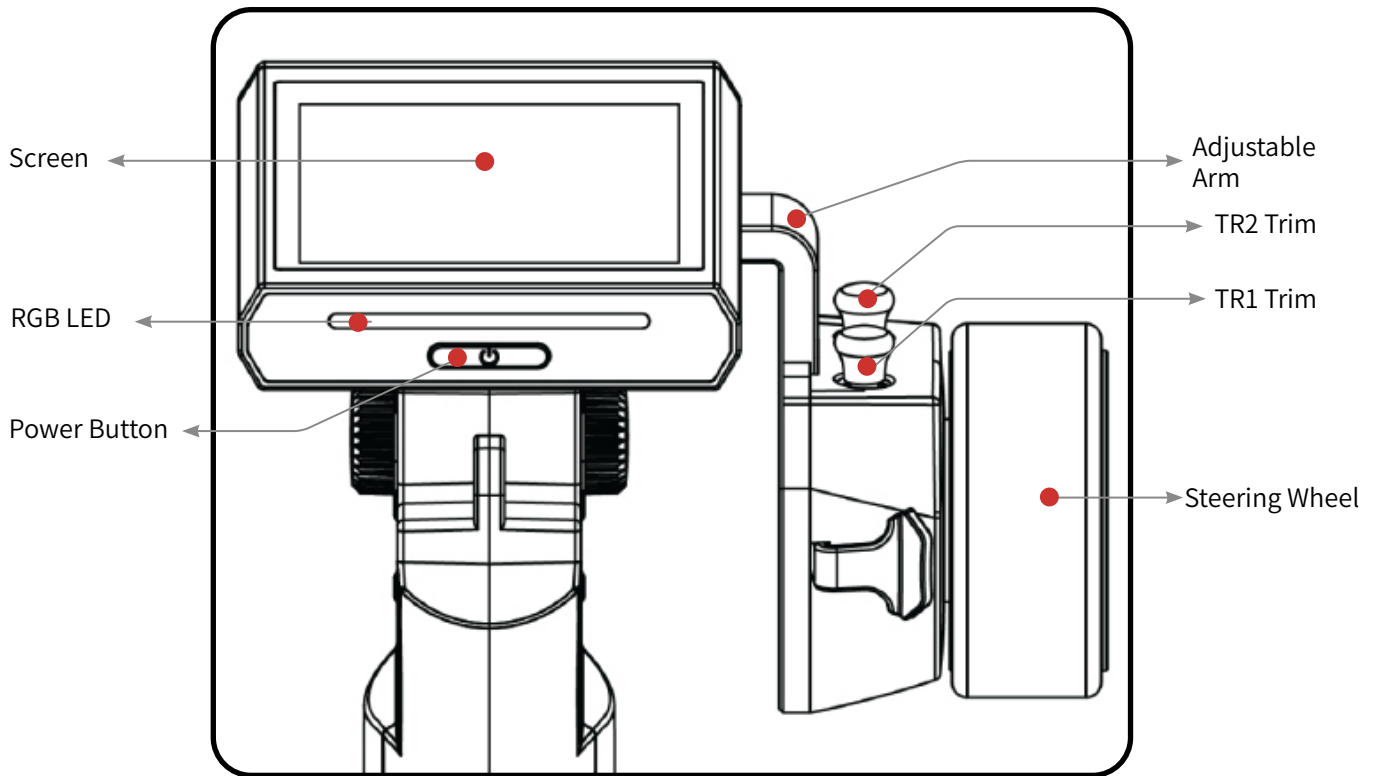
Trigger Position Adjustment Screw
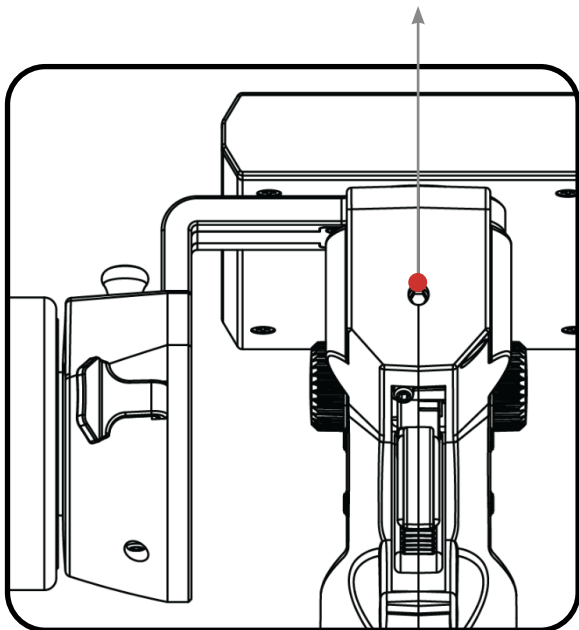
Wheel Tension Adjustment Screw
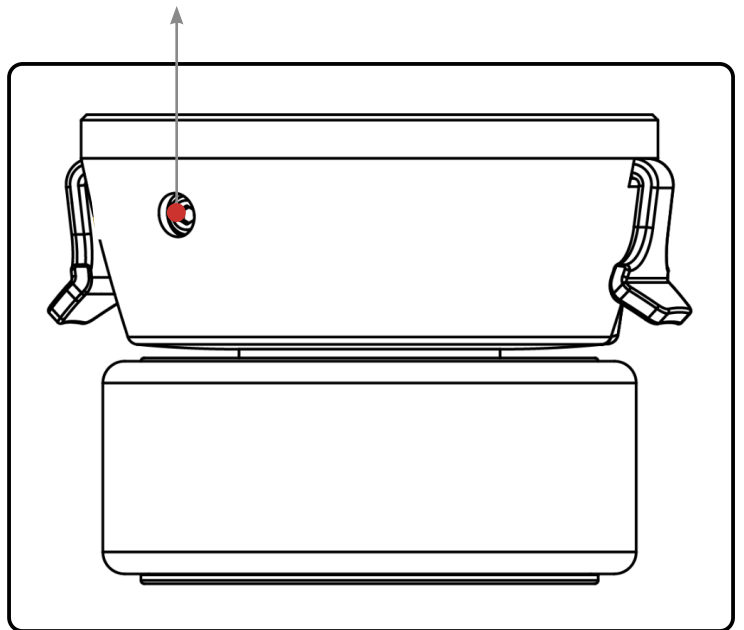
2.3 Receiver Overview (FGr4P)
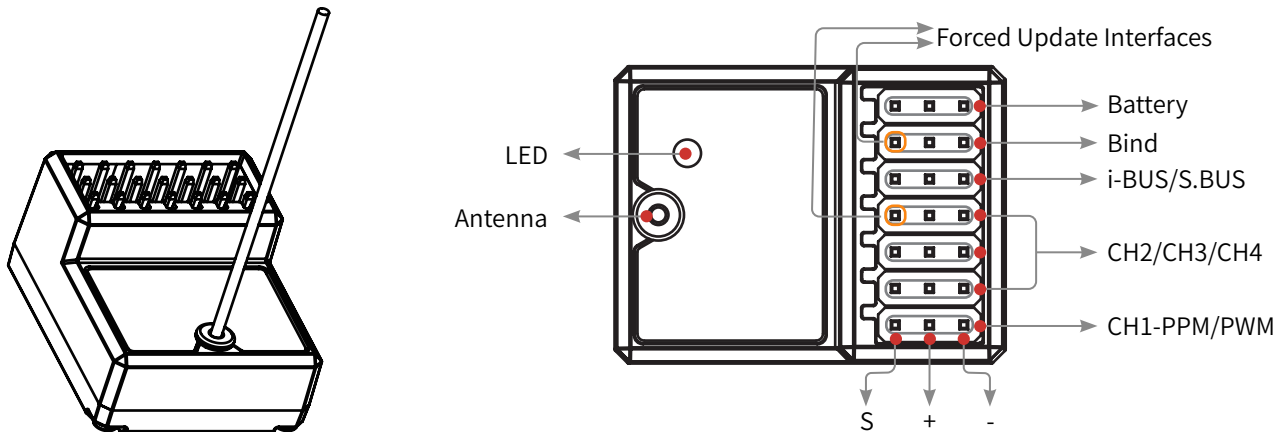
2.3.1 Status Indicator

The status indicator is used to indicate the power and working status of the receiver.

- Off: The power is not connected.
- Solid on in red: The receiver is powered on and working.
- Flashing quickly: The receiver is binding.
- Flashing slowly: The bound transmitter is off or signal is lost.
- Three-flash-one-off state: The receiver enters forced firmware update.

3. Getting Started

Before operation, install the battery and connect the system as instructed below.

3.1 Transmitter Battery Installation

⚠ Danger	•	Only use included batteries .
⚠ Danger	•	Do not open, disassemble, or attempt to repair the battery.
⚠ Danger	•	Do not crush/puncture the battery, or short the external contacts.
⚠ Danger	•	Do not expose to excessive heat or liquids.
⚠ Danger	•	Do not drop the battery or expose to strong shocks or vibrations.
⚠ Danger	•	Always store the battery in a cool, dry place.
⚠ Danger	•	Do not use the battery if damaged.

The NB4 has 2 batteries, one located in the handle and one in the removeable base.

To attach the base:
1. Line up the base so that the transmitter handle has a slight over hang on the back.
2. Carefully insert the base contacts into the hole in the bottom of the handle.
3. Hold the handle firmly and pull the battery backwards. When it is secure you should hear a click.

4. Operation Instructions

After setting up, follow the instructions below to operate the system.

4.1 Power On

Follow the steps below to turn on the transmitter:

1. Make sure that：
    *   The battery is fully charged and installed correctly.
    *   The receiver is installed correctly and powered on.
2. Hold the power button until the screen turns on.
3. Connect the power supply to the receiver.

⚠ Note	• Operate with caution in order to avoid damage or injury.
⚠ Note	• Make sure that the throttle is at its lowest position and the switches are set to their up position.

4.2 Binding

Ex-factory bind setting between transmitter and receiver is completed successfully. If you need to re-bind them, please follow the following steps.

Notes:

1. **Receivers equipped with AFHDS 3 protocol come in classic edition and enhanced edition. Models of classic edition: FGr4, FGr4S, FGr4P, FTr4, FTr10 and FTr16S (there will be pop-up menus). Models of enhanced edition: FGr4B, FGr8B, FGr12B, FTr8B, FTr12B, GMr and TMr.**

2. **When AFHDS 3 2 way is selected for RF standard: The receiver LED is solid on if binding is successful, and the transmitter automatically exits the bind interface. When AFHDS 3 1 way is selected for RF standard: The receiver LED flashes slowly if binding is successful. Exit the bind interface by clicking ◁ at the transmitter side.**

3. **User needs to choose between classic and enhanced editions when binding.**

4. **When there is a stable two-way communication established between the transmitter and the receiver, the transmitter recognizes the receiver as a non FLYSKY receiver, the system will prompt and interrupt the communication.**

Binding steps:

1. Start the transmitter and enter [RX Set]. Click [Bind Set] and select classic or enhanced receiver. Click [Start Bind] to enter binding state;

2. Make the receiver to enter the binding state;

3. Check to make sure everything functions as expected. If not, repeat the steps above.

Notes:

1. **If the enhanced receiver is selected, you can choose the [Two receiver mode] in this interface. The default is single receiver mode. In this mode, you have only to set the start channel and click [Start Bind] to enter binding state. In dual receiver mode, you need to tick the dual receiver mode first, set the start**

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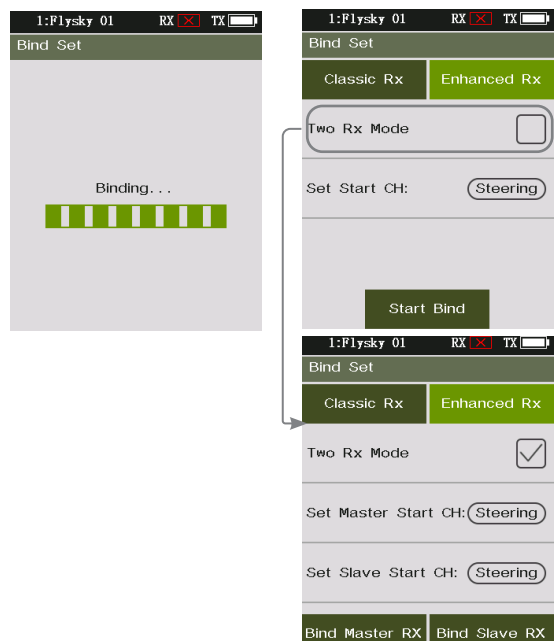
channels of the primary and secondary receivers respectively, and then click "Classic receiver" and "Enhanced receiver" to enter binding state.

2. The default start channel of the primary receiver is "Steering", and that of the secondary receiver is automatically adjusted according to the number of channels of the transmitter. For example, if the transmitter has 4 channels, the default start channel of the secondary receiver is "Steering"; when there are more than 4 channels, CH5 is the default start channel.

3. Different receiver models are slightly different in binding operation. Please refer to the receiver's manual for specific steps.

•	The products are subject to constant update. Please enter FLYSKY website for the latest transmitter and receiver compatibility form.

4.3 Transmitter LED Indicator

This LED has five colors, red, green, blue, yellow, white and off which can be set according to user preference. You can also check the battery indicator.The transmitter LED can also be used as a power indicator.

To change the LED color see the LED Strip section of this user manual.

4.4 Power Off

Follow the steps below to turn off the system:

1. Disconnect the receiver power first.
2. Hold the transmitter power button until the screen turns off.

⚠ Danger	• Make sure to disconnect the receiver power before turning off the transmitter. Failure to do so may lead to damage or serious injury.

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5. System Interface

The main interface mainly displays information related to the model, such as transmitter voltage information, function status and so on.

The display on the main interface can be customized as required, including the states and data of the main interface. Up to 8 states and data can be displayed.

Main interface left slide: Channel display; right slide: Failsafe; upward slide: Timer; downward slide: System settings. If you need to change settings, click [8.7 Main Interface Shortcut].

Model Name

Sensors

Function Status Bar

Trigger Trim

Menu Icon

TX's Battery Volume

RX's Battery Volume

Display Custom of Main Interface

Click the Custom to enter the setting interface, which can display up to eight parameters. Enter the next menu by clicking any parameter.

The state of the function or channel will be displayed in the main interface after selection.

Note: If two items in the same line in this area are set to the same, it will display by merging, such as CH4; Or two adjacent rows of four items are set to timer, the timer is displayed by merging.

Steering Trim

Lock icon

Hold the lock icon for 2 seconds to lock or unlock the screen.

Function Status Bar

The function status bar displays the status of various functions. If the function shows in bright color, then it is active; if it is light gray, then it is inactive.

TH CURVE ENG CUT BOAT Brake Mixing TIMER

ABS IDLE UP CRUISE Programming Mixes System Sound
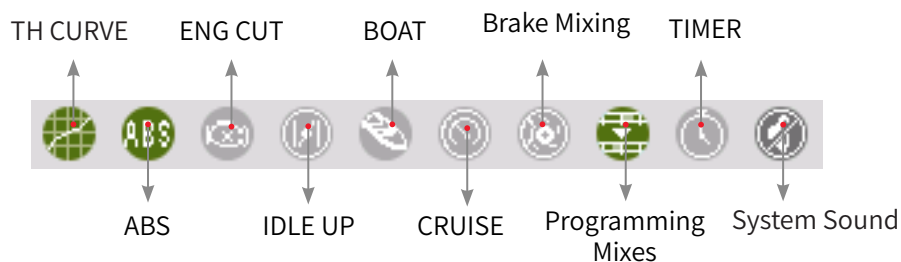
It indicates that the function is currently disabled and all settings are invalid.

It indicates that the function is currently enabled and all settings have taken effect.

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6. Function Settings

This section introduces details functions and their use.

Notes:

1. The default ex-factory state of this transmitter allows the user to set the functions under CH1-CH4, follow the steps for specific function settings for other channels (Refer to Channel Number Definition of 6.9 MODEL for setting 6 channels or 8 channels).

2. Some functions are disabled by default, and you may need to tap [⊠] and enable the function for the setting to take effect.

3. The function menus may vary with the receiver protocols. The actual product menu shall prevail.

6.1 REV

The REV(Reverse function) is used to correct a servo or motor's direction in relation to the systems controls.

Setup:

1. Touch the box next to the channels name. If the channel is in normal mode, the box will display "NOR", if it is reversed it will display "REV".

2. Test to make sure everything is working as expected.
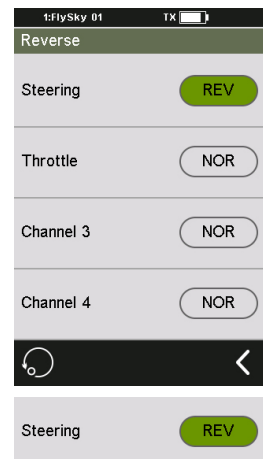
6.2 EPA

Endpoints are the limits of the channels range of movement. There are two endpoints, a low endpoint and a high end point.

Setup：

1. Touch a low or high endpoint box on a channel or move the control to the diection you wish to limit. The selected endpoint will be highlighted in green.

2. Use "+" and "- " to change the end point position(Press and hold to accelerate the adjustment). The maximum is 120% and minimum is 0%.

3. Test to make sure everything is working as expected.
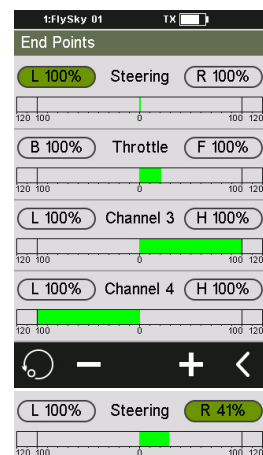
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6.3 SUB TR

SUBTRIM can be used to adjust the error of the structure by changing the channel neutral position.

For example, if a car's wheels are slightly out of aline-ment, even when the transmitter steering wheel is not being touched, subtrim can be used to correct the alignment.

Setup：

1. Touch the box next to the channel name to select it. When selected, the box will be highlighted.
2. Use "+" and "-" to change subtrim position.
3. Test to make sure everything is working as expected.
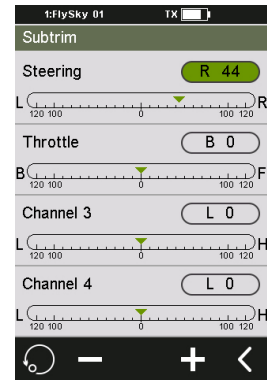
6.4 ST DR/EXP

This function changes the steering channel's response curve.

This function is enabled by default, click [icon] to disable the function, then the icon changes to [icon] .

This function can be switched on or off through SW controls, and the corresponding rates and curves can be tuned by other trims or knobs. Please refer to [Assign] function for setting.

There are 2 main parameters:

[Rate]: Changes the outer limits of the steering, the default and maximum is 100%.

[Exp]: Changes the steering curve, which changes the response of the steering wheel. The Exp. setting can be positive or negative.

Setup:

1. Touch [Rate] or [EXP](When an option is selected, it will be highlighted).
2. Use "+" and "-" to raise or lower the percentage as needed. The rate value increases in case of clicking "+", and decreases by clicking "-".
3. To turn off the function by touching [icon] . The icon changes to [icon] , then the function is disabled.
4. Test to make sure everything is working as expected.

6.5 TH DR/EXP

This function which is similar to the ST DR/EXP function is used to control the throttle channel.

This function can be switched on or off through SW keys, and the corresponding rates and curves can be tuned by other trims or knobs. Please refer to [Assign] function for setting.
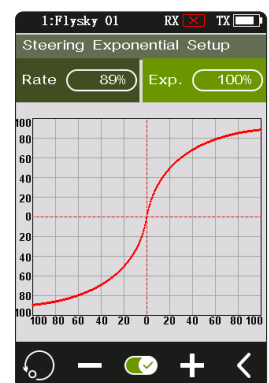
[Rate F] and [Rate.B]: Used to adjust the slope of the forward or brake curve, the smaller the rate is set, the smaller the slope. The maximum range is 100%.

[Exp.F] and [Exp.B]: Changes the forward or brake curve. When the value is set to 0, the curve changs to a line. And the setting range is -100% - 0 - 100%.

Setup:

1. Touch [Rate.F], [Rate.B], or [Exp.F],[Exp.B].

2. Use "+" and "-" to raise or lower the percentage as needed. The curve slope increases when touching "+" and decreases by touching "-".

3. Repeat for the other setting as needed.

4. Test to make sure everything is working as expected.
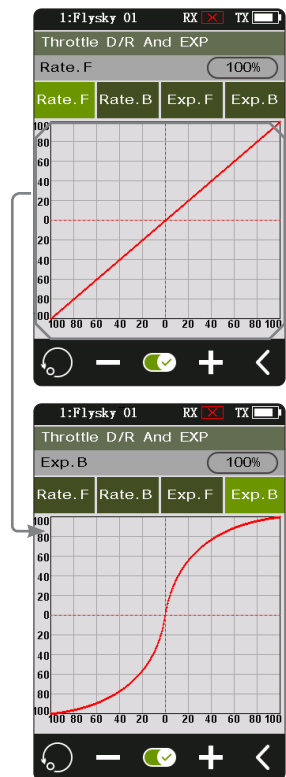
6.6 ABS

A.B.S. stands for auto breaking system. This function is used to stop the wheels from locking which can lead to loss of control or a skid. A.B.S. manages this by regulating the amount of pressure the breaks use, which is done by pumping the breaks on and off rather than a constant force.

There are six sub menus for A.B.S. function setting, [Brake Return], [Delay], [Cycle Length], [Trigger Point], [Duty Cycle], and [Steering Mix].
In the submenus, pulses are shown as a square wave, the peaks indicating brake on, and troughs in-dicating reduction in braking. As the value changes, the square wave will change to represent the function's current settings.

The trigger point is represented as a white line on the graph.

Below the graph is a bar that shows the real-time braking position. When this function is active and the brake is applied, the green bar will oscillate in real time showing the A.B.S. in action.

To activate this function press 🔘 . The icon will change to 🔘 when active.

Break Return

Controls the reduction of braking during each pulse. Can be set to any value between 0% and 100%. By default it is set to 50%. If set to 60%, when the brakes are active; the system will remove 60% of the brakes strength on each pulse.
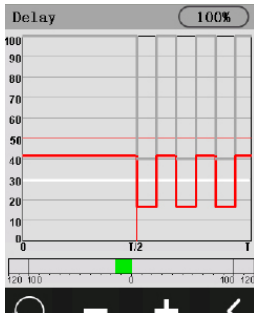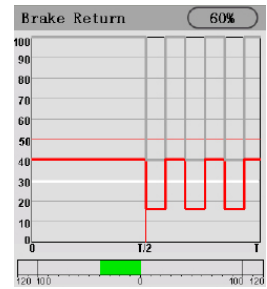
Delay

Determines how long it takes for the A.B.S. system to take effect. At a setting of 0%, the A.B.S. system will take effect as soon as the brake is applied. The higher the value, the longer it will take for the A.B.S. to function.

When set to 0% there will be no delay, meaning the breaks will be applied as soon as they are triggered. The maximum setting of 100% will result in a delay of 2 seconds.

Cycle Length

Increases or decreases the time between pulses. The higher the value, the longer the pulse.

The maximum setting of 100% will result in a cycle length of 0.5 seconds.
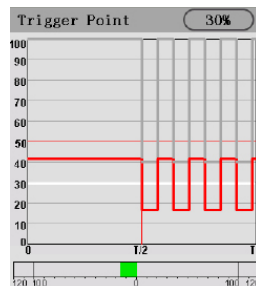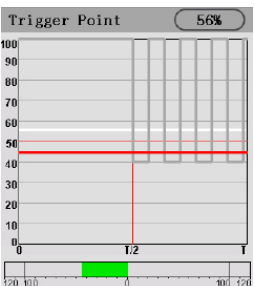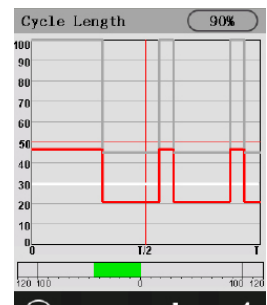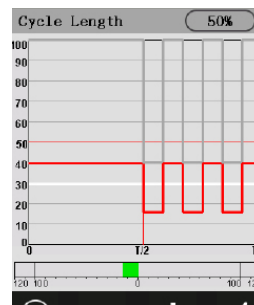
Trigger Point

Configures the point at which the A.B.S. starts to function. The higher the percentage, the further the trigger has to be moved to activate the A.B.S.

0%-100% represents the entire stroke of breaking servo.

Duty Cycle

Changes the length of each pulse and the gap between them. Adjustment range is from-4 to +4 cycles. As the value changes, the length of the braking waves peaks and troughs will change independently of each other and will no longer be symmetrical.
Adjusting the brake to release ratio
When the period is set to "0", the ratio is 1: 1;
When the period is set to "1", the ratio is 1: 2;
When the period is set to "-1", the ratio is 2: 1.

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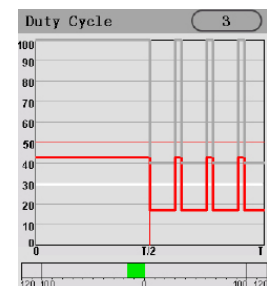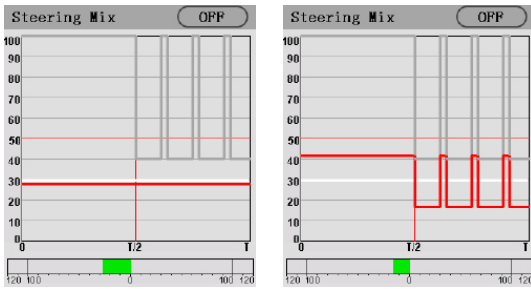
Steering Mix

A.B.S. can be enabled or disabled automatically while turning when mixed with steering wheel .

The percentage represents the trigger position through its entire range of movement. E represents inside, N represents outside; if 50% N is set, the ABS function is to turn off when within 50% (10% N-50% N), and outside 50% (50% N-100% N) is to turn on the ABS function;

If 50% E is set, the ABS function will be turned on within 50% (10% E-50% E), and the ABS function will be turned off outside 50% (50% E-100% E).

Setup:

1. Touch to enable this function.
2. Touch a setting to select it.
3. Touch "+" or "-" to change the value.
4. Repeat as needed.
5. Test to make sure everything is working as expected.

6.7 TIMER

This function can set with a variety of timers, to generally calculate the total model run time, competition specific time spent, or transmitter run time, etc.

The function can be enabled, disabled or cycle-counted by SW keys, and the timer can be reset at one touch. Please refer to [Assign] function.

The timer function can be activated in three modes:

Mode Ⅰ :

1. Click the [Timer Mode: Up Timer]. Then click the corresponding function as needed. Click ◀ to return to the previous interface.
2. Click [Start] to start the timer. Click [Stop] to stop the timer. Click [Reset] to reset the single timer function to its default value.

Mode Ⅱ :

1. Click the [Throttle Start Timer]. Click "+" or "-" to change the throttle start value.

    Press "+" or "-" for seconds to accelerate the throttle start value. The value change level is 1, and the level range is -100 to 100. Users can adjust it as desired.

2. Click to activate this function. The interface shows "Throttle start timer open". That indicates successful activation.
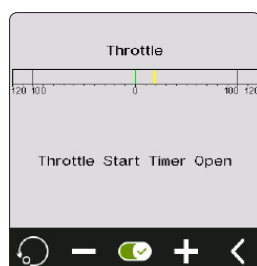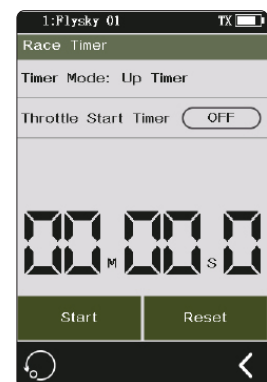
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3. Verify that the setting is normal as expected. Namely, when the throttle is adjusted to the set value, the timer will start timing.

Mode III :

The timer can be enabled or disabled quickly through the key assignment function. The system will send out a reminder when it reaches a minute sharp.

The race timer has 3 modes:

[Up timer]: Start the clock from zero.

[Down Then UP Timer]: Countdown from the set time, the shortest time is 1 second. The system will send out a reminder when it reaches a minute sharp. When the countdown is less than 1 minute, the system will give voice prompt in 30 seconds, 20 seconds, 15 seconds. And when the countdown time left only 10 seconds, the system will send a voice prompt every second. When the timer reaches 0, the system will send a voice to prompt that the timer time is up, and start up timer.

Click [Down Then Up Timer]. Then click the minutes or seconds display interface, by clicking "+" or "-" to change the duration. Press and hold the "+" or "-" to acceleratethe adjustment. The maximum duration is 99 minutes and 59 seconds.

[Lap Timer]: Keeps track time for each individual lap.Once triggered the on icon will become the lap icon. Each time the lap icon is pressed the last lap will be recorded in the lap timer list. The maximum number of laps is 99 and the minimum lap time must be over 3 seconds.

[Lap Memory]: Records the results from the lap timer.
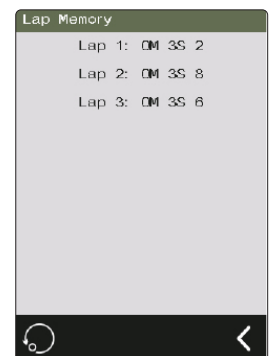
6.8 ASSIGN

The key assignment function is used to assign keys or switches to different functions for quick switch or control. If the base color of a control is green, indicating the control has been assigned.

SW Controls

The keys of SW1L, SW1R, SW2 and SW3 can enable, disable or switch CH3 to CH8 and many functions. The combo of SW2 and SW3 can adjust the values of the selected channels and functions.

Note: The number of channels to control depends on [Channel Number Definition].

[Function]: Assign functions to this key or knob.

[Direction]: Used to set the forward or reverse of this button or knob.

[Mode]: When "Trigger" is selected, channel data will change once through key triggering. Channel data will return to the state before key operation when the key is released. When "TURN" is selected, channel data remains in effect at the time of trigger if the button is rebounded.

[Step]: Step, which is used to adjust the value change of a single operation. "1" means move the key once, the value change level is 1, the level range is 1-120, the user can adjust it as needed.

Setup:

1. Touch [SW1-L] or any of the other button icons.

2. Touch [Function], then touch function or channel as desired.

    If the function or channel has been assigned to another key, The system will prompt "The function is already assigned to SW2. Are you sure? Assigned to SW1-L." click [Yes] to switch.

3. Click the [Trigger] option on the right side of [Mode]. Then, [TURN] is displayed. It indicates that channel data is changed once for each trigger of this button, and the data is kept in the state of the trigger is effective.

4. Click the [NOR] option on the right side of [Direction]. Then, [REV] is displayed. It indicates the actual operation of this button is reversed with the output.

Switching to C BTN(combination button)

1. Click [SW2] or [SW3] to enter the submenu, then click [Button Type S BTN] to switch [C BTN].

    [Button Type S BTN]: Means the key or knob can control enabling, disabling, or switching from one direction separately.

    [Button Type C BTN]: Means the key or knob can adjust the function or channel values in two directions (upward and downward).

2. Click [Type], switch between [Normal], [2 POS], and [3 POS] as required.

3. Touch [Function] when the type is set to Normal, touch the function as desired, and click ◁ to return to the previous interface.

    A key or switch can be assigned one function or channel. When [Type] is set to [2 POS] or [3 POS], the function cannot be assigned.

4. Click the [NOR] option to the right of [Direction], and the display of [Reverse] indicates that the actual operation of this button is reversed with the output.

5. Click [Step], then use "+" or "-" to change the value. When [Type] selects [2 POS] or [3 POS], the step value is not adjustable.
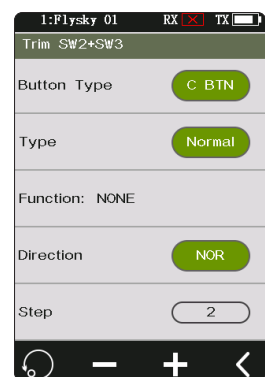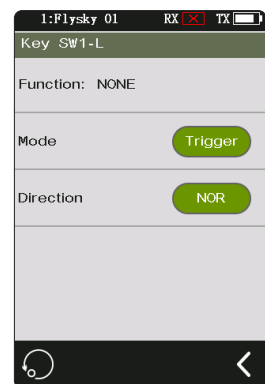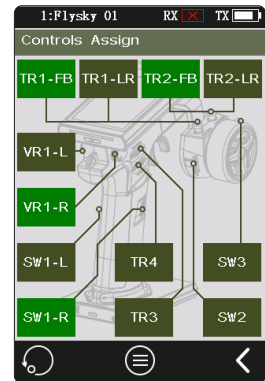
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TR Controls

The six keys or knobs (TR1-FB, TR1-LR, TR2-FB, TR2-LR, TR3, and TR4) have the same function and can be used to quickly adjust the values of CH3 to CH8 and multiple functions, with assigning 2-position or 3-position switches.

Note: the number of channels controlled is subject to the [Channel Number Definition].

The operation procedure of this function is basically the same as the SW control setting.

VR Controls

The functions of VR1-L and VR1-R are the same as above. However, the step is not adjustable.
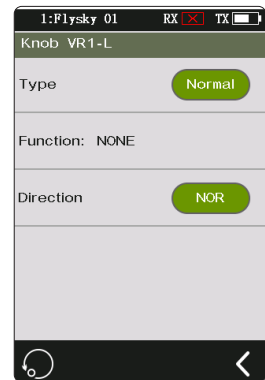
Keys Assign

Click ▤ to enter the [Keys Assign]. In this list, you can view detailed information about the function assignment of all keys and knobs.

You can directly click the corresponding button function to set the function.
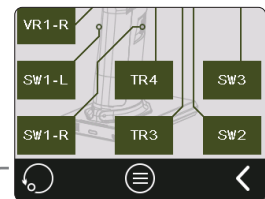
6.9 MODEL

The model functions are used to change, reset, rename, copy or customize the display and sorting of the main menu. The Noble Pro can store up to 20 models.

Select Model

Selects a model.

Touch [Select Model], then touch a model from the list. Then click "Yes" in the prompt menu.

Name: FlySky 01

To name the model.

After clicking, use the keyboard in the interface to type in a new name. When the setting is finished, click "Enter" to save the setting. Click ◄ to return.

Channel Number Definition

This function is used to select the number of channels(4~8 channels).

Tap [Channel Number Definition], then tap the channel number as desired, click "Yes" in the prompt menu.

If the larger number of channels is switched to the lower number of channels, the system will prompt "The model will reset need re-binding, Are you sure?". Click "Yes". Switching is successful. If the lower number of channels is switched to the larger number of channels, the system will prompt "After switching you need re-binding, Are you sure?". Click "Yes". Switching is successful.

Radio Frequency Setup

It includes RF protocol setup and RF module update of the transmitter and receiver.

RF Std.(RF Standard)

[AFHDS3 1 Way]: It features lower latency, allowing one transmitter to connect multiple receivers. It is applied when the model does not need any return data.

[AFHDS3 2 Way]: With the two-way return function, it can return feedback data from receivers and sensors and realize one transmitter to one receiver.

[Mini-Z(EVO)]: It is used with Kyosho FHSS receiver to control the cars of Kyosho miniZ EVO. The number of channels is fixed (two channels).

[Mini-Z(FHSS)]: It is used with a Kyosho FHSS receiver to control the cars of Kyosho miniZ FHSS. The number of channels is fixed (four channels).

FS-RM005 RF head supports a Noble transmitter. It is only compatible with Kyosho Mini-Z (FHSS) cars.

Binding steps when using FS-RM005 RF module:

1. Remove the transmitter base's mobile power supply and insert the RF head into the transmitter base correctly (as shown in the figure on the right).
2. Click [MODEL]. Select the RF setting as Mini-Z (FHSS).
3. Insert FS-RM005 RF module and re-install the transmitter base power supply.
4. Connect the power cord to the transmitter. Press the receiver bind key while connecting the receiver power supply. At this time, the receiver LED indicator flashes quickly.
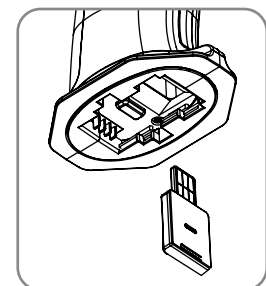
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- Operation modes vary with receivers in case of their bind state.
- When Mini-Z(FHSS) is not selected, the FS-RM005RF module does not have the RF transmit function, and its power supply is turned off.

5. Click [RX SET]. Select [Bind Set]. After the receiver LED flashes slowly, the transmitter will automatically exit the binding state. When the receiver LED is solid on, it indicates the binding is successful.

6. Check whether the servo is working properly. If a binding is required again, repeat the above steps.

Change the RF protocol

Click [RF Std. (RF standard)] to enter the submenu. Click the right side of the corresponding function. Select "Yes" after the prompt box pops up and click ◁ to return to the previous level interface.

- If you switch to the RF standard, the model will be reset and a bind is required again.

Update RF

The update RF function can be used to update the firmware of the built-in RF module. After the firmware of the transmitter is updated, you need to update the RF when the system prompts that the RF fails or the bind of the receiver fails.

Click [Update RF], Click "Yes" after the prompt interface pops up. An update progress bar appears. Wait a few seconds. The update is completed. The transmitter will automatically exit the update interface. If the transmitter cannot enter the update RF status, there is no RF module or the RF module is faulty.

Custom Main Menu

You can customize the sort and hide functions of the main menu. To show the menu, select the check box. To hide the menu, uncheck the box. To adjust the menu order, select the menu to move (highlighted), and click [Move up] or [Move down] below to change the menu order.

Note: By default, the "Beginner Mode" function is hidden. Except for [System] and [Model], all other functions can be hidden.

Model Reset

To reset a model.

Touch [Model reset], then select the model you wish to reset from the list. The system will ask if you are sure, select "Yes".

Copy Model

To duplicate a model.

Touch [Copy Model], then touch the model to copy from the list. Next select a target slot from the list, this will overwrite everything in that slot. The system will ask if you are sure, select "Yes".

Import or Export Model

You can import and export models by FlySky Assistant which can be downloaded via the FlySky official website, and then operate it on the PC (No need go back to click the menu on the transmitter, you can operate it directly)!

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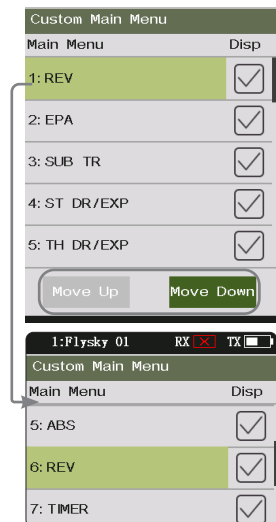
6.10 SENSOR

This function can display the sensor information received by the receiver on the transmitter.

This function shows all sensors connected to the receiver, including sensor type, ID and real-time value.

It can also be accessed quickly from the home screen.

This function is availale when the receiver is bound to the transmitter using the AFHDS 3 2 Way protocol.

1:Flysky 01	RX ☐ TX ☐
Sensor	
Display Sensors	
Choose Sensors	
Speed And Distance	
Speed Sensor Set	
Altitude Zero Set	
GPS Set	
Curr and Vol Sensor Set	

Display Sensors

This list displays all sensor data connected to this transmitter device, including sensor type, ID, real-time value, and polarity and limit values.

[Type]: To show the sensor type.

[ID]: To display the sensor's number.

By default, the number zero in the list includes the TX Voltage, RX Voltage, Signal, RSSI, Noise and SNR.

No. 1 is the return information of the Slave (secondary) receiver.

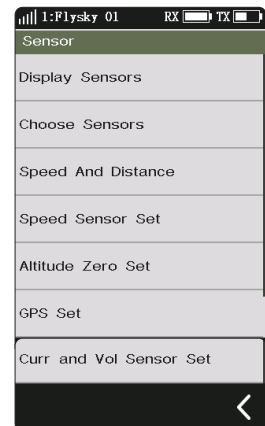No. 2 is the first external sensor connected to the receiver, and so on, it supports up to 14 sensors.

This list data is displayed in real time. When the receiver is connected to a sensor, this list will be refreshed to display the new sensor's data. When the sensor is disconnected, the sensor data will not be displayed.

[Value]: To display the data returned by a sensor.

1:Flysky 01		RX ☐ TX ☐
Display Sensors		
Type	ID	Value
TX Voltage	0	3.82V
RX Voltage	0	5.09V
Signal Strength	0	100
RSSI	0	-58dBm
SNR	0	46dB
Noise	0	-103dBm
Temperature	2	28.0℃
Motor Speed	3	0rpm
Motor Speed	4	0rpm
Ext Voltage	5	-0.01V
Air Pressure	6	998.3hPa
Altitude	6	125m

i-BUS series sensor connection diagram

New port(NPA→i-BUS in)

FS-CPD01   FS-CVT01   FS-CTM01   FS-CPD02   FGr4B
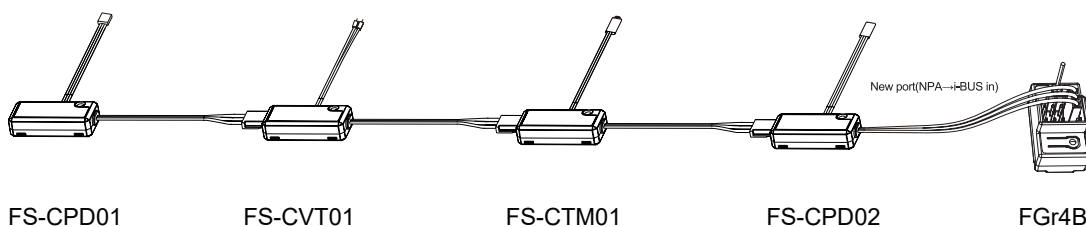
Notes:

1. If using the AFHDS 3 classic version receivers, you must select the [RX Interface Protocol] in the [RX SET] menu and select [i-BUS], save and exit, then connect the sensor to the receiver's i-BUS port. All other steps remain the same.
2. If you use an enhanced version receiver, you need to set the New Port interface to i-BUS in.

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Speed sensor (FS-CPD01, FS-CPD02)

The speed sensor is applied to test the speed of the motor.

- "Motor speed" indicates that the sensor is testing the motor speed; "0rpm" is the speed measurement value.

Magnetic induction speed sensor (FS-CPD01)

1. Connect the FS-CPD01 sensor to the receiver or other sensors connected to the receiver using the same method as shown above.
2. Place the sensor next to the magnet, which is fixed at the position of the axial rotation to be tested (e.g. inside the wheel hub of the model car).
3. Place the sensor within 2 mm of the magnet, with the south or north pole of the magnet parallel to the sensor.
4. Turn on the transmitter, and select [Sensor] > [Display Sensor]. Turn the gear. When the [Type] column shows "RPM" and the RPM value (0rpm) in the [Value] column changes. It indicates that installation is successful. Otherwise, repeat the above steps.

Wheel   magnet   Sensor

N
S $\updownarrow$ <2mm
Sensor
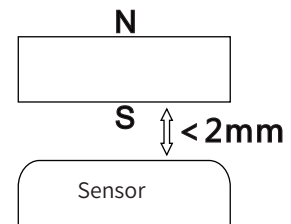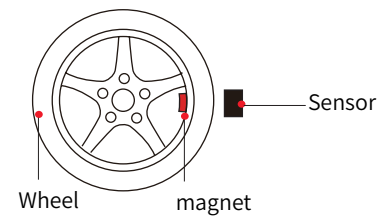
Light induction speed sensor (FS-CPD02)

1. Connect the FS-CPD02 to the relevant device, with the same connection method as above.
2. Fix the sensor and the reflective sticker at the position of the axial rotation to be tested. Keep the sticker flat and perpendicular to the sensor probe. Keep a moderate distance between the sensor probe and the sticker.
3. Turn on the transmitter, and select [Sensor] > [Display Sensor]. Turn the gear. When the "Type" column shows "RPM" and the RPM value (0rpm) in the "Value" column changes. It indicates that installation is successful. Otherwise, repeat the above steps.

Sensor   Wheel   Reflection zone
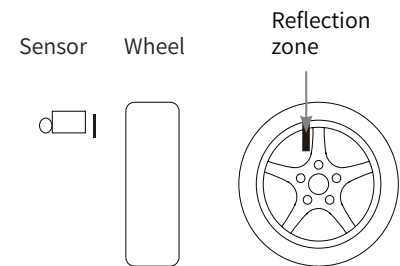
Temperature Sensor（FS-CTM01）

Used to monitor the temperature of various components. The temperature of the component can be monitored via the transmitter. Alarms can be set.

1. Connect the FS-CTM01 to the receiver or other sensors using the same method as used with other sensors.
2. Use a spongy double-sided tape to stick the temperature probe to the part you wish to monitor (such as: motor, battery).
3. Turn on the transmitter, enter [Sensor]> [Display Sensors] and rotate the wheel. If the "Type" column displays "Temperature" and the "Value" column displays a temperature then the installation was successful, otherwise repeat the above steps.

Voltage sensor (FS-CVT01)

It is used to monitor the model's battery voltage. The battery voltage can be monitored through the transmitter. Alarms can be set.

1. Connect FS-CPD02 following the same steps as above.

2. Insert the red and black wire pins into the plug of the battery used for testing. The red wire is the power anode and the black wire is the power cathode. Make sure to connect correctly.

3. Turn on the transmitter, enter [Sensor] > [Display Sensors] menu and rotate the wheel. If the "Type" column displays "External Voltage" and the "Value" column displays a voltage then the installation was successful, otherwise repeat the above steps.

i-BUS2 Series Sensor Connection Diagram

FS-iBS01

FGr4B
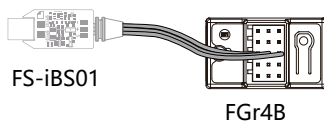
Notes:

1. **The i-BUS2 series sensors are only compatible with AFHDS 3 enhanced version receivers. Take the FS-iBS01 sensor connection diagram as an example. The method for connecting other i-BUS2 sensors is the same.**

2. **The i-BUS2 series sensor must be connected to the New Port of the receiver, and set the New Port interface protocol to i-BUS2 via [RX SET]>[Receiver Interface Protocol].**

i-BUS2 Optical Perception Sensor(FS-iBS01)

It is used to monitor the model's speed, such as motor speed. Alarms can be set.

- "Motor Speed" indicates that the sensor is testing the motor speed; "0rpm" is the speed measurement value.

1. Use 3M stickers to fix the sensor at the appropriate location of the model as shown right in the figure. And make the optical perception detection elementper pendicular to the reflective surface of the motor rotor. It should be noted that the fixed surface should be flat. You can also use a cable tie to tie it to the model. In this case, you should control the force.

2. Connect the sensor to the receiver using the same method as shown above.

3. Turn on the transmitter, enter [SENSOR] , then select [Display Sensors] menu. When the "Type" column shows RPM and the RPM value (0rpm) in the "Value" column. It indicates that installation is successful. Otherwise, repeat the above steps.

- The distance between the optical perception detection element and the propeller or rotor is not more than 50 mm or 30 mm (with a light shield).

Propeller

RPM Sensor

Receiver

50mm
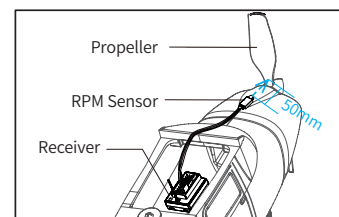
Note: Please refer to the FS-iBS01 manual for more details.

i-BUS2 Altitude Sensor(FS-iBA01)

It is used to monitor the model's altitude. Alarms can be set.

- "Air Pressure" indicates that the sensor is monitoring air pressure; "Height" means the height measurement, "Altitude" is the altitude measurement.

1. Use 3M stickers to fix the altitude sensor at the appropriate location of the model. It should be noted that the fixed surface should be flat. You can also use a cable tie to tie it to the model. In this case, you should control the force

2. Connect the sensor to the receiver using the same method as shown above.

3. Turn on the transmitter, enter [SENSOR] , then select [Display Sensors] menu. When the "Type" column shows Air Pressure, Height, Altitude and their values in "Value" column. It indicates that installation is successful. Otherwise, repeat the above steps.

Note: Please refer to the FS-iBA01 manual for more details.

i-BUS2 Temperature Sensor(FS-iBT01)

It is used to monitor component temperature. Alarms can be set.

1. Use 3M stickers to fix the temperature sensor at the appropriate location of the model. It should be noted that the fixed surface should be flat. You can also use a cable tie to tie it to the model. In this case, you should control the force.

2. Use soft glue to stick the temperature detecting element on the parts to be detected, for example, motor, ESC or engine.

3. Connect the sensor to the receiver using the same method as shown above.

4. Turn on the transmitter, enter [SENSOR] , then select [Display Sensors] menu. When the "Type" column shows temperature and the value in "Value" column. It indicates that installation is successful. Otherwise, repeat the above steps.
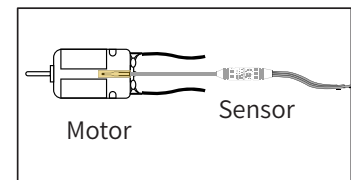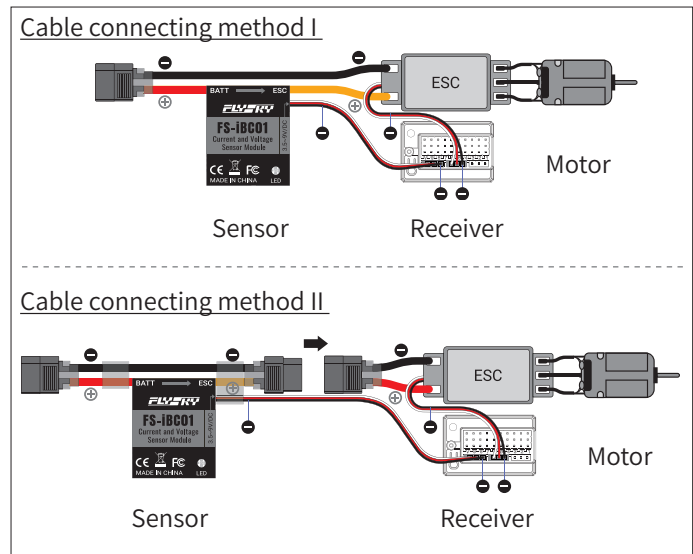
Note: Please refer to the FS-iBT01 manual for more details.

Motor   Sensor

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i-BUS2 Current and Voltage Sensor(FS-iBC01)

It is used to monitor the information such as the voltage, current and actual battery consumption capacity of the ESC in real time.

1. Use 3M stickers to fix the sensor at an appropriate location of the model. It should be noted that the fixed surface should be flat. You can also use a cable tie to tie it to the model. In this case, you should control the force.

2. Finish cable connecting according to the cable connecting digrams as shown. Make sure the cables are connected correctly.

3. Turn on the transmitter, enter [SENSOR] , then select [Display Sensors] menu. When the "Type" column shows Curr and Vol, Voltage, Current, etc., and the corresponding values of voltage and current in "Value" column. It indicates that installation is successful. Otherwise, repeat the above steps.

Cable connecting method I

Cable connecting method II

Note: Please refer to the FS-iBC01 manual for more details.

⚠ Warning	• Make sure to refer to the "Installation and Cable Connecting" section of the FS-iBC01 user manual for correct wiring. Otherwise, there may be an explosion or fire.

Choose Sensor

This function allows you to select the sensor to be displayed on the main screen and high and low alarm values for that sensor.

There are four settings under this function: [Transmitter Voltage], [Receiver Voltage], [Signal Strength] and [RSSI], for setting high and low alarm values of the corresponding sensor.

For example , the Signal Strength Indication (RSSI). It refers to the distance between the transmitter and the model determined by received signal strength. A low signal strength indicates a weaker signal received by the receiver. This may cause the model to lose signals. A high signal strength indicates that the signal received is too strong, and this may interfere with the signals of the receiver and cause the model to lose control. Therefore, users can also choose to set the strong alarm alert.

Setup:

[TX voltage]:

1. Eenter this menu, then touch 🔘 to enable this function. When this function is enabled, the icon will change to 🔘 .

2. Touch [Low Alarm] to select. [Value] is the corresponding status alarm value. Touch "+" or "-" to change the trigger value. Same with the [Hight Alaram] .

• For example, set the low alarm value of the speed sensor to 200rpm, if the speed is lower than this value, then the transmitter will alarm, alarm mode: sound and vibration, and the corresponding item in the sensor display area of the main interface will blink red.

[RX voltage], [Signal strength], [RSSI] can all be set using the above instructions.


Noble NB4
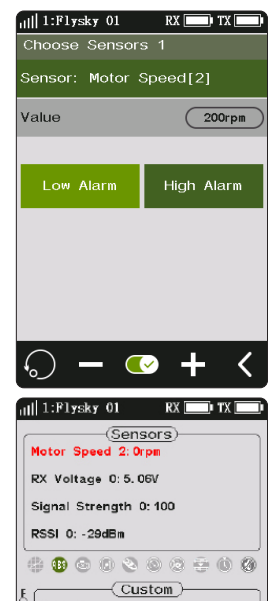
Speed and Distance

This function is used to detect monitor wheel revolutions and distance traveled.

[Speed Sensor]: Selects the target sensor. If the sensor and receiver are connected, then it will appear in this menu automatically. You can choose between two speeds or [None].

[Set Rotation Length]: If a speed sensor is installed on the wheel, you need to define the Rotation Length. This length will be used to calculate the distance traveled. Click "+" or "-" to adjust the radius.

[Reset Odometer 1]: Odometer 1 is used to record the distance traveled.

[Reset odometer 2]: Odometer 2 is used to record the total driving distance, and as such is the cumulative distance from each session.
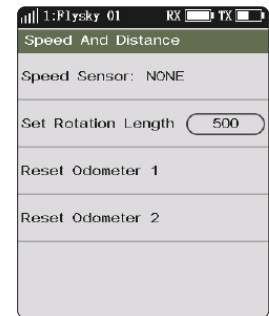
i-BUS2 Speed Sensor Set

This function is used to set the number of reflective spots on the corresponding sensor.

[Speed Sensor]: Select the sensor.

Click it to enter, then select the sensor. Click ◄ to return.

[Reflective Spot]: To set the number of sensor reflective spots. Namely, this value corresponds to the actual number of reflecting points on the device. Click "+" or "-" to adjust the number.

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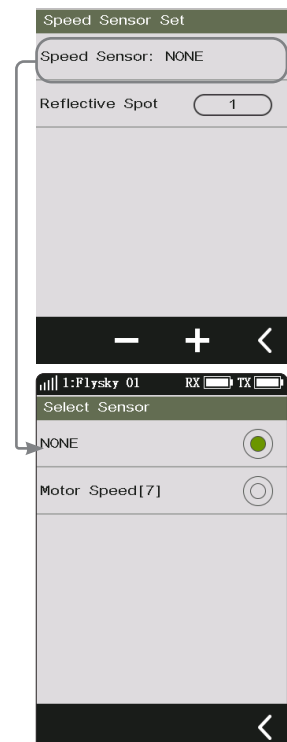
Altitude Zero Set
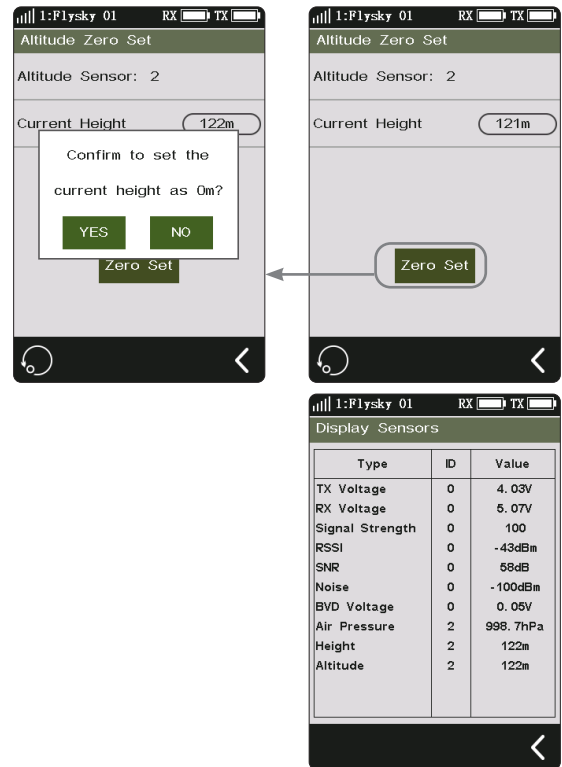
This function is used to set the current height to 0 m base height.

[Alitude Sensor]: To display the ID of the sensor. If multiple altitude sensors are connected, by default, this is the sensor with the smallest ID.

[Current Height]: Display the real time height information after performing zero adjustment. otherwise, it is the actual altitude information.

After performing zero adjustment, the height information before and after zero adjustment will displayed in [Sensor List]. That is, it is height and altitude.
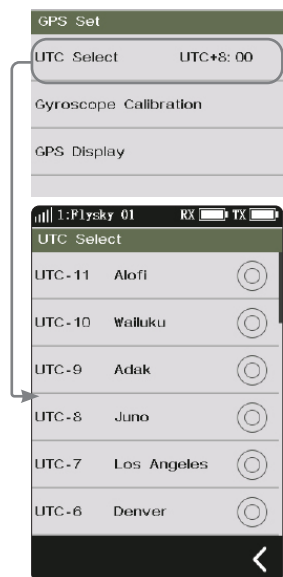
Click 🔘 to reset the current altitude to the actual altitude. After clicking, Select "YES" after the prompt box pops up.

1:Flysky 01	RX	TX
Altitude Zero Set		
Altitude Sensor: 2		
Current Height	122m	

Confirm to set the current height as 0m?

YES   NO

Zero Set

1:Flysky 01	RX	TX
Altitude Zero Set		
Altitude Sensor: 2		
Current Height	121m	

Zero Set

1:Flysky 01		RX	TX
Display Sensors			
Type	ID	Value	
TX Voltage	0	4.03V	
RX Voltage	0	5.07V	
Signal Strength	0	100	
RSSI	0	-43dBm	
SNR	0	58dB	
Noise	0	-100dBm	
BVD Voltage	0	0.05V	
Air Pressure	2	998.7hPa	
Height	2	122m	
Altitude	2	122m	

GPS Set

This function is applicable to GPS module of i-BUS2protocol. Through this function, you can set the standard time zone, perform gyroscope level calibration, and view GPS parameter display interface to get relevant information.

[UTC Select]: Sets UTC. Tap UTC select to enter, and tap an appropriate time zone. Then click ◁ to return.

GPS Set

UTC Select	UTC+8: 00

Gyroscope Calibration

GPS Display

| 1:Flysky 01	RX	TX
UTC Select		
UTC-11	Alofi	◎
UTC-10	Wailuku	◎
UTC-9	Adak	◎
UTC-8	Juno	◎
UTC-7	Los Angeles	◎
UTC-6	Denver	◎

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[Gyroscope Calibration]: Calibrates the gyroscope. Before calibration, please connect the GPS sensor to the device correctly and make sure the device is placed horizontally. Tap Gyroscope Calibration to enter, then click Calibration. The system will calibrate automatically. When calibration succeeds or fails, the system prompts a pop-up screen with the success or failure of calibration. Recalibrate it in case of failure.
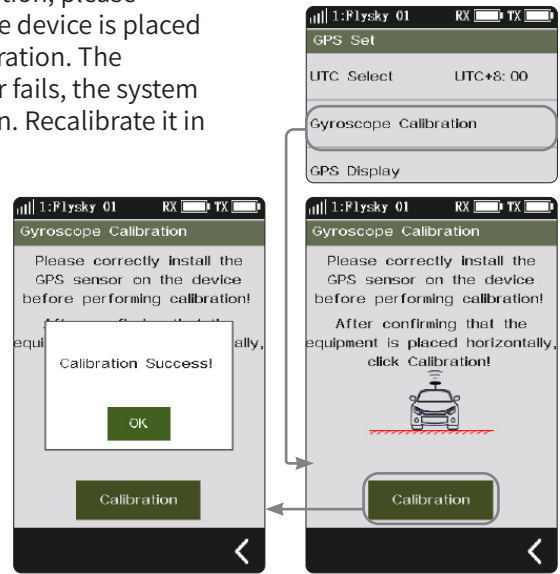
[GPS Display]: To display the information returned by the GPS sensor.

To display the number of satellites returned by GPS.
When the number of displayed satellites is more than 10, the GPS positioning accuracy is high, otherwise there is positioning error.

To show whether the positioning is successful or not. If the icon is blue indicating the positioning is successful, the icon is gray, then the positioning is failure.

To display the real-time latitude and longitude of the model.

Reset Icon
Reset the position of starting point to default value.

To display the date and time in 24-hour clock.

Model data displaying area

To display the real-time latitude and longitude of the starting point.

Azimuth angle shows the relative orientation of the model relative to the starting point.

The direction indicated by the green icon represents the real-time moving direction of the model. The center point indicates the starting position, and the outer circle indicates the relative orientation of the model. Click " + " or "- " to change the offset angle and the step is 10°.

Set the data source of yaw angle.
When checked, the data is from the gyroscope angle for calculation. If unchecked, the data comes from the actual motion condition.

Attitude angle displays the real-time attitude information of the model relative to the horizontal position, including the pitch angle parallel to the direction of the connection line between the vehicle head and tail and the roll angle perpendicular to this line.

"+" indicates pitching up or rolling right; "-" indicates pitching down or rolling left.

Curr and Vol Sensor Set (Current and Voltage Sensor Set)

This function is adapted to i-BUS2 protocol current and voltage sensors, to reset sensor data and related max/min data.

[Power on Recovery Data]: Sets whether the recorded data will be cleared automatically when the current and voltage sensor is powered on. And the recorded data include the maximum/minimum voltage, maximum current, average current,battery consumption capacity, and run time.

When the item is ticked, the recorded data will be cleared automatically, otherwise, it will not be cleared.

[All Data]: Clears all recorded data. And the recorded data include the maximum/minimum voltage, maximum current, average current,battery consumption capacity, and run time.

Tap [All Data], then select "YES" after the prompt box pops up.

[Limit Value Reset]: Resets all extreme value which includes the maximum/minimum voltage and the maximum current.

Tap [Limit Value Reset], then select "YES" after the prompt box pops up.

[Voltage CAL]: Calibrates the battery voltage. Note that properly connect the sensor's detection line to the device to be detected before starting calibration.

Setup:

1. Tap [Voltage CAL] to enter the next level interface;
2. Tap [Calibration], the system prompts that the calibration is successful. Click "OK" to finish the calibration.
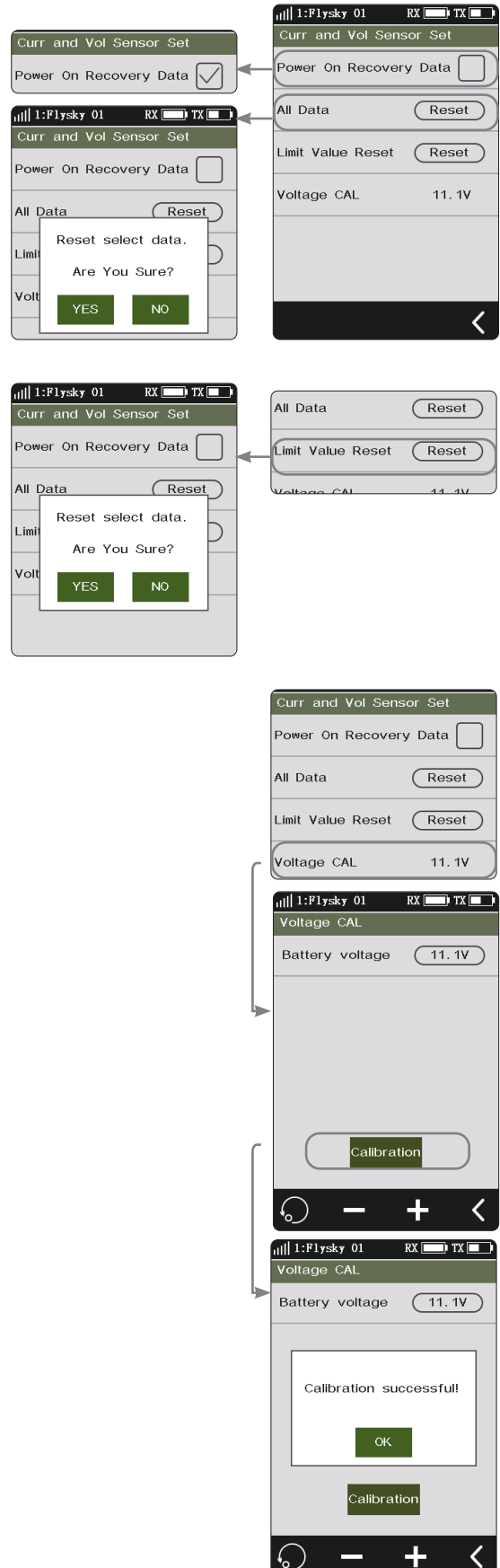
6.11 CH SPEED

This function allows you to set the steering speed, forward speed, brake speed and response speeds of CH3 to CH8.

Note: the number of channels controlled is subject to the [Channel Number Definition].

[Steering]: Changes the corresponding speed of the servo when the steering channel is outputting at fast speed. The minimum delay is 0.00s, and maximum delay is 10.00s. The adjustment step is 0.01s.

This function can be used for adjustment when the vehicle is operated with fast steering, which may cause the vehicle to lose control or when the vehicle structure cannot withstand a too fast steering speed.

[Front]: Sets the response speed of the throttle channel.

This function can be used to imitate models with slow acceleration and deceleration response (for example, large trucks).

[Brake]: Used for vehicle models.

The [Steering Speed Turn], [Steering Speed Ret.(Steering Speed Reset)], [Throttle Speed Go], [Throttle Speed Ret.(Throttle Speed Reset)], [Brake Speed Go] and [Brake Speed Ret.(Brake Speed Reset)] can be adjusted after assigning VR and TR keys or knobs in the [ASSIGN] function. A window will pop up when you adjust the real-time value by keys.

Back to neutral speed

Forward speed
Turning speed
Start speed

Channel Speed - Steering

Setup:

[Turn speed]: Slows down channel output speed when the steering wheel is moving from the neutral position to maximum travel.

[Return speed]: Slows down channel output speed when the steering wheel returns to the neutral position.

1. Click [Turn Speed] or [Return Speed]. This item is highlighted when selected.
2. Click "+" or "-" to change response duration as needed.
3. Verify that the settings are normal as expected.

Progress bar 1: Shows the channel output speed after the delay (as shown on the right).

Progress bar 2: Shows the actual speed before the delay takes effect (as shown on the right).

Progress bar 1

Progress bar 2
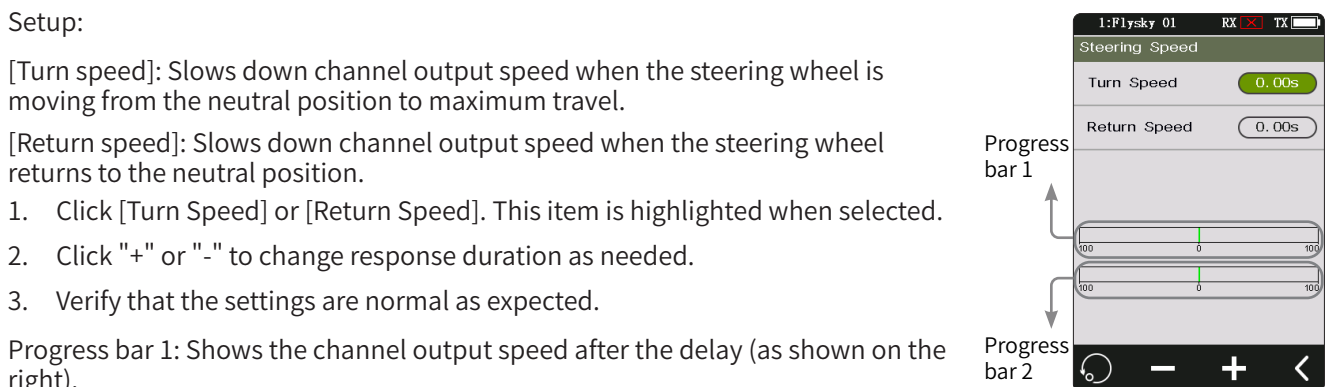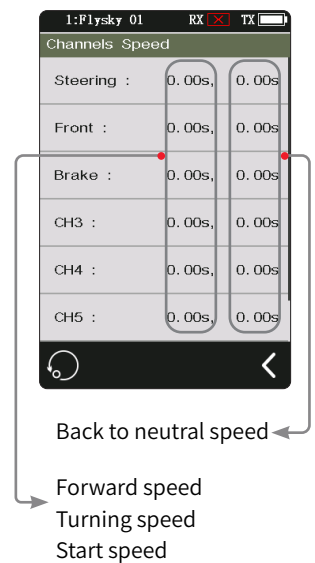
Channel Speed-Brake

This function is only applicable to normal mode. This function is not displayed in ship mode.
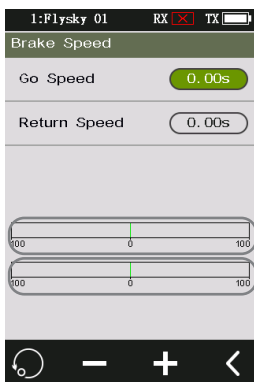
Setup:

[Go Speed]: Sets the speed of the throttle brake.

[Return speed]: Sets the speed at which the throttle brake returns to the neutral position.

1. Click [Go Speed] or [Return Speed]. This item is highlighted when selected.
2. Click the "+" or "-" icon to change the response duration as needed.
3. Verify that settings are normal as expected.

Progress bar 1: Shows the channel output speed after the delay (as shown on the left).

Progress bar 2: Shows the actual speed before the delay takes effect (as shown on the left).
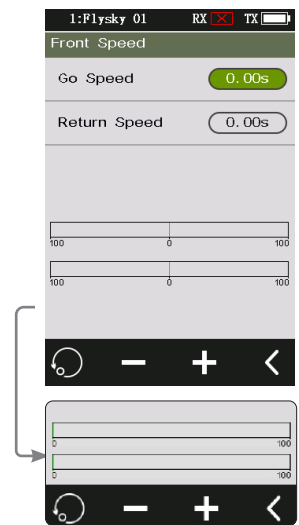
Channel Speed - Front

This function is used to set the delay of the throttle start and return-to-neutral.

[Go Speed]: Sets the speed of throttle acceleration.

[Return Speed]: Sets the speed at which the throttle returns to the neutral position.
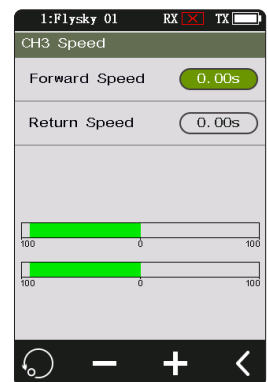
Setup:

1. Click the option that needs to be set. This item is highlighted when selected.
2. Click "+" or "-" to change the response time or the percentage of the corresponding point as required.
3. Verify the settings are normal as expected.

```
1:Flysky 01        RX [X]  TX [  ]
Front Speed
  Go Speed              0.00s
  Return Speed          0.00s

         100      0      100
         100      0      100

     ◌      —      +      ‹
```
```
     0                100
     0                100
     ◌      —      +      ‹
```

Channel Speed - CH3-CH8

This function is used to set the delay time of CH3-CH8 forward and return-to-neutral.

```
1:Flysky 01        RX [X]  TX [  ]
CH3 Speed
  Forward Speed         0.00s
  Return Speed          0.00s

     100           0           100
     100           0           100

     ◌      —      +      ‹
```

6.12 MIXES

This function allows you to set 3 mixing functions, that is, [4WS Mixing], [Brake Mixing], and [Programming Mixes].

4WS Mixing

Used to set the wheels that control steering of the vehicle, front, rear or all four wheels.

This function is applicable to crawler with steering on both front and rear wheels.

By default, the front wheel steering is used in this function.

[Mixing Rate]: Sets the amount of mixing from the steering channel mixing to the mixed channel. The adjustment range is 0-100%.

Setup:

1. Click [Ch3] on the right side of [Mixing Channel]. Then click the corresponding channel as needed. After selection, the channel will be occupied. Click ◄ to return to the previous interface.

    •   Each channel can only be assigned one mixing function. It is not allowed to conflict with other Func Assign channel. When the selected channel is assigned with other mixing functions, the system will give a pop-up window reminder.

2. Click "+" or "-" to change the rate as required.

3. Select the steering type as required. You can select [Steering Mix Mode] in the [Assign] function, and assign SW controls to switch four different functions. Alternatively, you can select [Steering Mix Rear], [Steering Mix Same] or [Steering Mix Reverse], to realize fast switch between this function and [Steering MIx Front] through SW controls.

4. Click ⬛ to enable this function. After this function is enabled, the icon will change to ⬛ .

5. Verify the settings are normal as expected.
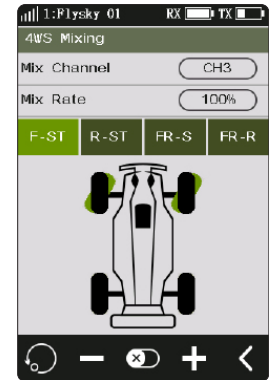
Brake Mixing

This function has two sets of brake mixing controls, to use multiple servos to control brakes; for example, models using different servos to control the front and rear brakes.

If your model uses multiple channels to control the brakes together, you can use this function to control the brake channel as a mixer channel for the throttle channel.

Setup:

1. Click [Brake Mixing 1: Off] option to enter the submenu.

2. Click [CH3] on the right side of [Mix Channel]. Then click the corresponding channel as needed. This channel will be occupied after selection. Click ◄ to return to the previous level interface.

    •   Each channel can only be assigned one mixing function. It is not allowed to conflict with other Func Assign channel. When the selected channel is assigned with other mixing functions, the system will give a pop-up window reminder.

3. Perform the settings by following the steps of setting the [EXP] and [ABS] function.

4. Use the servo display function. Verify that the settings are normal as expected.

You can select the menu corresponding to brake mixing in [ASSIGN], and assign VR, TR key or knob for adjustment. A pop-up window will appear to show the real-time value during the adjustment by key. Select [Brake 1 EXPs], [Brake 1 A.B.S.] or [Brake 2 EXP], [Brake 2 A.B.S.] to assign SW controls for fast enable/disable of two sets of brake mixing functions.

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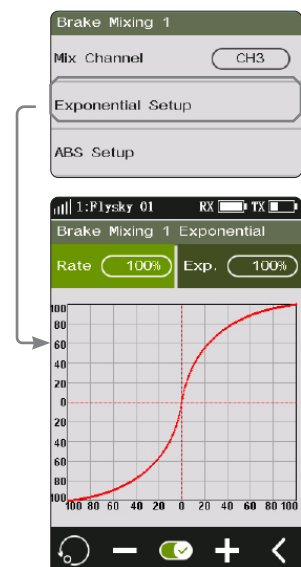
Programming Mixes

The Mixing function can be used to set the mix-control relationship between channels, containing a total of 8 groups of mixing relationships.

Setup:

1. Click [Mix 1] or other mixing options as needed to enter the setting interface.

2. Click ⊠ to enable this function. When this function is enabled, the icon will change to ✓ .

3. Click [Master Channel], select a primary channel from the list. The primary channel will affect the slave channel.

4. Click [Slave Channel] and select a slave channel from the list.

5. Select [Low Side Mix] or [High Side Mix] as needed. Click "+" or "-" to change the percentage to adjust the amount of low end or high end mixing. Click ◀ to return to the menu when the setting is complete.

6. Click [Offset]. Then click "+" or "-" to change the offset associated with the master channel and the slave channel.

7. Repeat the above operations to set other mixing controls.
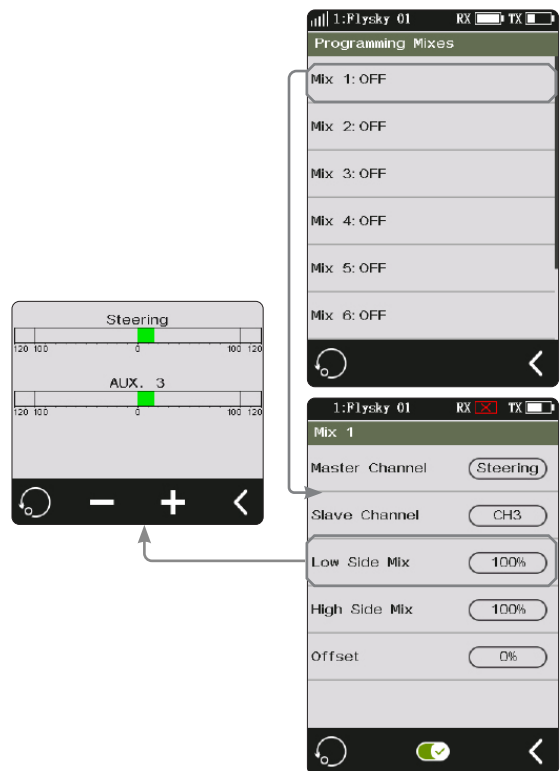
Assign VR, TR keys or knobs in the [Assign] function to adjust 8 groups of programmed mixing controls of [Low Side Mixing], [High Side Mixing] and [Offset] rates. A pop-up window will appear in the adjustment by pressing the key, prompting real-time value. In addition, it is possible to quickly enable or disable Mix 1 to Mix 8 functions by using the SW key.

6.13 TH MID

The TH MID(throttle middle) function is used to set the neutral position of the throttle and brake to correct the problem of unequal throttle travel and brake travel of some models. If the neutral position is not set correctly, the model may start acceleration and driving directly after power-on.

Setup:
1. Click "+" or "-" to change the percentage as needed.
2. Verify the settings are normal as expected.
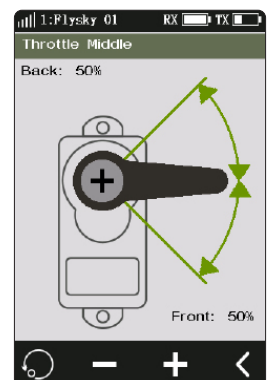
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6.14 TH NEUTRAL

The function is used to set a "dead zone" for throttle control, in which the throttle always outputs the neutral value, and throttle channel does not change when moving the trigger.

[Forward]: When it exceeds the dead zone, the throttle channel will output this value directly to accelerate forwards.

[Dead Zone]: The range of the dead zone. By default, the value is 0%.

[Backward]: When it exceeds the dead zone, the throttle channel will brake or output this value directly to accelerate forwards.

Setup：

1. Touch [Forward], [Dead Zone] or [Backward], This item is highlighted when selected.

2. Use "+" and "- " to to change the percentage as needed.

3. Repeat with other settings as needed.

4. Test to make sure everything works as expected.
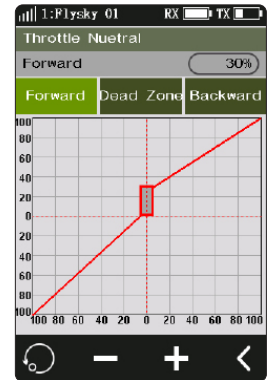
6.15 TH CURVE

The throttle curve function is used to adjust the response speed of the throttle at different positions. By default, it is disabled and the throttle curve is output linearly.

Setup:

1. Assign a switch for throttle curve in the function of [ASSIGN];

2. Touch 🔘 to enable the function. The icon will change to 🔘 when enabled.

3. Touch a point. When selected, the option will be highlighted.

4. Use "+" and "- " to raise or lower the points position as needed.

5. Repeat for the other points as needed.

6. Test to make sure everything is working as expected.
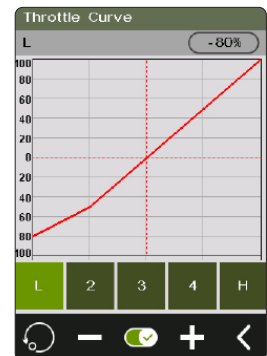
6.16 IDLE UP

Throttle Idle Up is used for models that use a fuel based engine that will stall.

If left at 0 throttle. Idle up makes sure that the engine always has some throttle in order to keep it from stalling.

This function must be assigned to a control in order to be activated .

This function will reset after shutting down. You need to restart this function after turning on again.

Setup:

1. Assigned a switch for idle up in the function of [ASSIGN].

2. Click 🔘 to enable this function. When this function is enabled, the icon will change to 🔘 .

3. Click "+" or "-" to change the percentage as needed.

4. Test to make sure everything is working as expected.
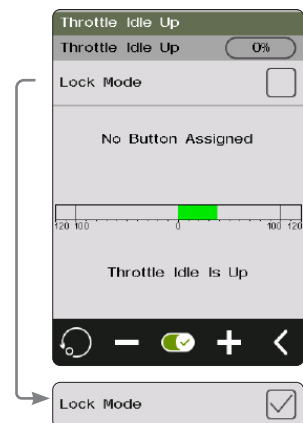
6.17 ENG CUT

When Engine Cut is triggered via a button it sets the throttle channel to a predefined position.

This function must be assigned to a switch/button in order to be activated.

This function will reset after shutting down. You need to restart this function after turning on again.

Setup:

1. Assigned a switch for engine cut in the function of [ASSIGN].
2. Click ⬛ to enable this function. When this function is enabled, the icon will change to ⬛ .
3. Click "+" or "-" to change the percentage as needed.
4. Test to make sure everything is working as expected.
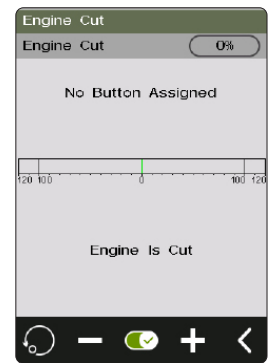
6.18 CRUISE   Note: This function is available for version 2.0.101 or later.

When the cruise function is enabled, the throttle channel remains the channel value output as the function is enabled.

When the vehicle travels at the desired speed, the cruise function can be enabled, and the vehicle will continue to travel at the same speed after it is enabled.

The function interface displays the percentage of throttle channel output value in real time.

Pull the trigger or toggle the assigned control to exit cruise state.

Setup:

1. Assign a switch to enable or disable the function via ASSIGN function. When this function is enabled, the icon will change to ⬛ .
   - Assign SW controls to enable/disable the cruise function quickly. A pop-up window will appear, indicating the current status.
2. Click "+" or "-" to change the percentage as needed.
   - Assign TR controls to adjust the value of the fixed speed cruise. A pop-up window will appear in the adjustment by pressing the key, prompting real-time value. And when SW2 and SW3 are in the state of key combination, can also be assigned to adjust the value of cruise.
   - The percentage cannot be adjusted when cruise function is not enabled.
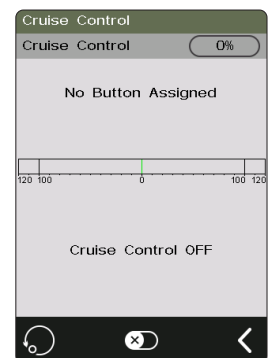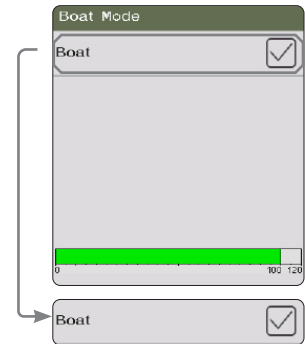
6.19 BOAT

This function is used only when you are using a model boat. When this function is active, the throttle channel is set to its lowest position and the brake functionality is disabled.

To enable this function, select [Boat] to switch to boat mode. When switching is successful, [Normal Mode] is changed to [Boat Mode]. The check box is selected.

6.20 DISPLAY

This function displays the model's channel output and can be used to test output and servo range.

Press ⊗ to start servo test mode, which will move all the channels slowly though their entire range of motion. Press ⊗ to turn off servo test mode.

⚠ WARNING	• Make sure the model engine is powered off while the test function is activated.

Click ⊜ to enter the channel display interface. In this list, you can view the data progress bar of all channels and the percentage data of channels.
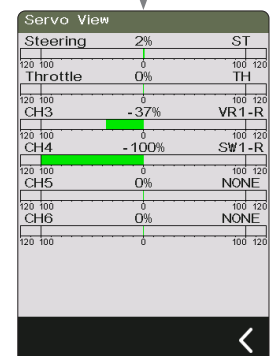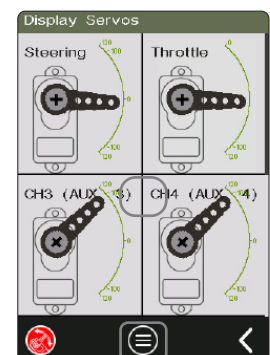
6.21 BEGINNER

The beginner mode is suitable for entry level players to improve the safety of operations by limiting the amount of throttle servo.

This function is hidden by default. You need to enable it manually.

Setup:

1. Go to the [Custom Main Menu] menu under the [MODEL] menu bar, and select the [Beginner] check box. After selection, this function is displayed on the menu interface.

2. Find the function in the menu and click to enable this function. When this function is enabled, the icon will change to 。

    Assign SW controls to enable/disable the beginner function.
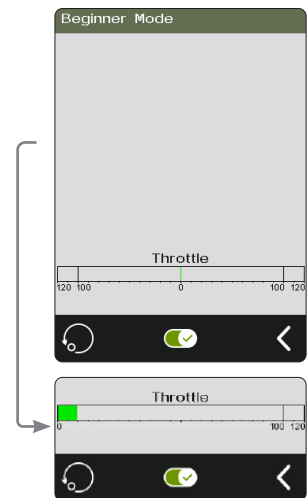

No Brake Mode

6.22 SVC

The receivers configured with this function are INr4-GYB (built-in gyroscope) and GMr (with gyroscope interface).

After the transmitter has bound with the receiver in AFHDS3 2 Way mode, press the SVC to access the function, coming along a prompt for gyroscrop level calibration. It is recommended that the user should follow the prompt on the interface to complete the gyroscope calibration when using the gyroscope for the first time.

Assign SW controls to quickly enable/disable the SVC function.

Assign VR/ TR controls to quickly adjust Steering Gain, Throttle Gain, Priority, and Advanced functions such as ST Wheel Gain, Damper Point, Damper, and Filter.

Assign SW keys to quickly switch between model vehicle types.
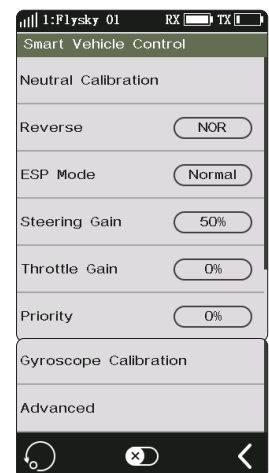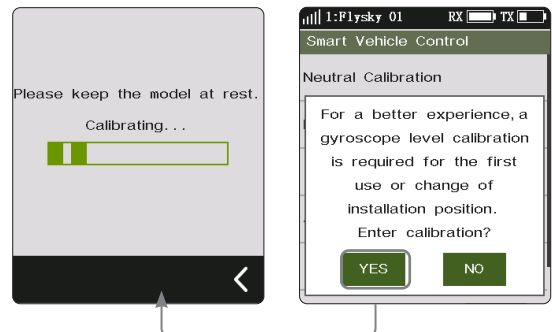
Neutral Calibration

Used for gyroscope to calibrate steering and throttle neutral to make the best driving condition when the vehicle is driving normally.

Before enabling the SVC function, you need to adjust the vehicle's steering servo volume, neutral trim and throttle neutral to the best driving condition. After completion, start the [Smart Vehicle Control] function for neutral calibration. Every time you change the trim or throttle curve, you need to calibrate the neutral position. The steering throttle should be placed in the neutral stationary state during the calibration process.

Reverse

You can set the direction when the gyroscope mixes with the steering channel.

ESP Mode

Used for model assisted stability. Two modes are available: normal/lock.

[Normal]: When the vehicle is yawing or steering, the gyroscope automatically provides an opposite compensation to control the servo to keep it stable or prevent drifting according to the angular velocity generated.

[Lock]: If the steering wheel is return-to-center, the gyroscope will control the servo in the opposite direction according to the yaw angle when the vehicle is yawing, to make it go back to the expected direction (if the steering wheel is not return-to-center in the "Lock mode", it will be the same as the "Normal mode").

Steering Gain

Used to change the sensitivity of the mixing steering channel. And the setting range is between 0% and 100%.

Throttle Gain

Used to change change the sensitivity of the mixing throttle channel. And the setting range is between 0% and 100%.

Priority

Used to set the control ratio between steering wheel control and gyroscope in the steering, i.e., turning radius. In direction turning by using the steering wheel, the steering angle will be reduced due to the influence of gyroscope mixing. When the value is 0%, the mixing control is the strongest, that is, the turning radius is the largest. When the value is 100%, the mixing control is 0, that is, the turning radius is the smallest. And the setting range is between 0% and 100%.

Gyroscope Calibration

Used for the first time to enable the gyroscope via binding or gyroscope calibration required after replacement.The model keeps a stable and stationary state. Click calibration. The receiver flashes twice and exits automatically. This indicates that the calibration is successful.

(The above are the adjustable parameters when the transmitter is adapted to the GMr receiver and FS-GY01 gyroscope, and it is also adjustable when it is adapted to the

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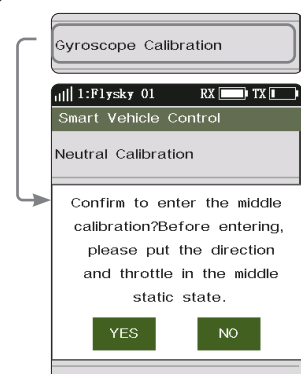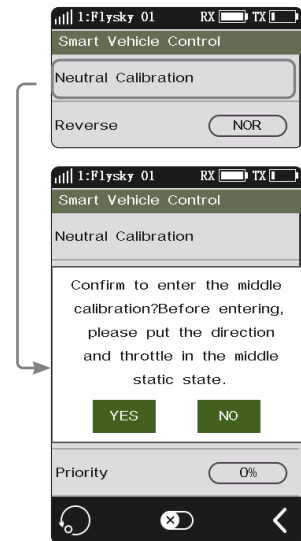
INr4-GYB receiver.)

Advanced

To adapte INr4-GYB receiver compatible with model drift cars, etc. You can set type of the model cars, and customize parameters for [ST Wheel Gain], [Damper Point], [Damper] and [Filter].

[ST Wheel Gain]: Adjustment of intervention ratio of steering operation to gyro control, It is more sensitive in the steering control when the value increases.

[Damper Point]: Adjusts the servo to the damper point in front of the target angle position. In the damping interval, the servo oscillation speed will be slowed down. The higher the value, the larger the interval in which the servo speed is slowed down.

[Damper]: Slow down the servo speed in the damper point, and adjust the damping effect in the damper point. The higher the value, the slower the servo slowing down in the damper point. As a result, it takes longer time for the servo to reach the target angle. This parameter needs to be set together with [Damper point] to achieve the best result.

[Filter]: Used to suppress jitter. The higher the value, the stronger the jitter suppression.

Setup:

1. Tap ▣ to enable this function. When this function is enabled, the icon will change to ▣ .

   • If the gyroscope is not connected, this function cannot be activated, and the system prompts "The current receiver is not properly connected to the gyroscope".

2. Click [Neutral calibration]. A pop-up box will appear "Are you sure you want to enter neutral calibration? Put the steering and throttle in the neutral stationary state before entering". Click "Yes". The transmitter enters the calibration state. The system prompts successful calibration with sound reminder.

3. If you want to change the direction of action, please click [Reverse]. If the function is set to reverse, it will show "Reverse";

   • The method of replacing EPS is the same as above.

4. Under this function, you can also set the percentages of [Steering Gain], [Throttle Gain], and [Priority]. The adjustable percentages range is 0% to 100%. After selecting the option, click "+" or "-" to change the percentage.

5. Click [Gyroscope calibration]. A pop-up box will appear, indicating"Are you sure you want to start the calibration". The system prompts successful calibration with sound reminder.

   • When calibrating the gyroscope, please make sure the model is in a stable and stationary state.

6. Tap [Advanced], then select a type for the model car. After clicking [Custom], tap an item you want to set among [ST Wheel Gain], [Damper Point], [Damper] and [Filter]. Afterwards, click "+" or "-" to set to the desired value.
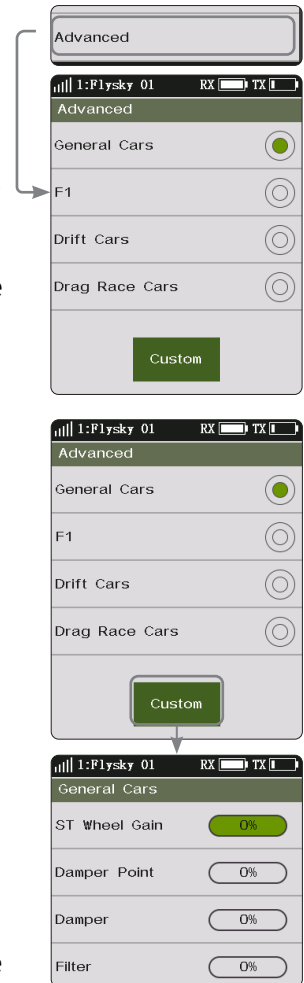
6.23 i-BUS2   Note: This function is available for version 2.0.101 or later.

The i-BUS2 device settings function is used to set up the i-BUS2 devices, such as FS-iBH07 Hub or i-BUS2 protocol servo.

- At the transmitter side, you firstly need to set the receiver interface to be connected to the iBUS2 device as i-BUS2 via [RX interface protocol] function.

If the transmitter is normally connected to the i-BUS2 HUB, you can set it as PWM converter.

If the transmitter is normally connected to the i-BUS2 sensor type device, you can access the sensor setting interface through this function.

If the transmitter is normally connected to the i-BUS2 type servo or ESC, you can set the relevant function parameters, monitor data, and assign channels for controlling devices.

FS-iBH07 Extender

When the transmitter detects the i-BUS2 HUB device, the i-BUS2 HUB device can be set as a PWM converter or reset it back to the i-BUS2 HUB device via this function.

Setup:

1. Click [i-BUS2 Setup] to enter the setting menu.
2. Tap [i-BH07 Extender   NPA].
3. Click [Set to PWM converter]. After click [OK] in the pop-up window, tap [PWM Coverter   NPA].
4. Tap [Set to i-BUS2 Extender] to set it back to HUB. And tap one interface to enter, then click a channel to set as the output channel of the converter.
5. Tap ◁ to return, a propmt pop-up window comes along with it "Whether to set the frequency of PWM converter synchronous", then click [YES] or [NO] to exit. If you select YES, it will be synchronous, otherwise, it's in the contrary.
   - The voltage returned from the extender can be displayed in real time in the [Sensor] menu.
   - When a servo is connected to the interface set to i-BUS2 protocol, it will display the servo type and the interface in [i-BUS2 Setup] menu.

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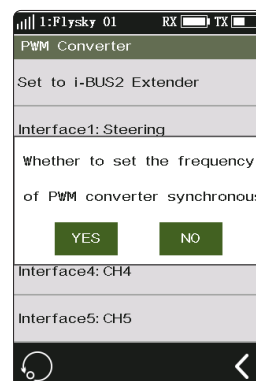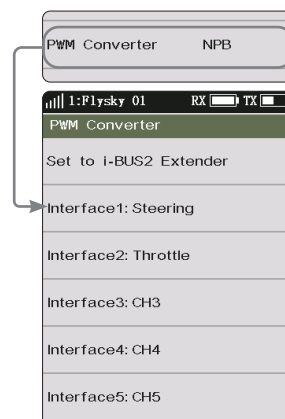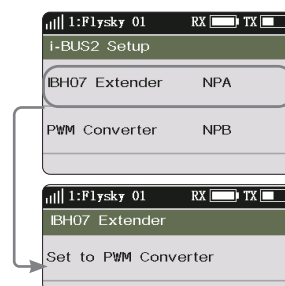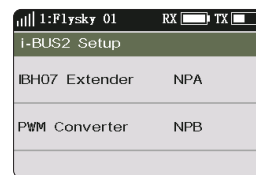
i-BUS2 SENSOR

When the transmitter detects an i-BUS2 sensor, you can set the function parameters of the sensor in this function. Refer to 6.10 SENSOR for more details.

i-BUS2 SERVOS（FXS260/380)

When the transmitter detects the i-BUS2 FXS260/380 servo, you can use this function to set the relevant function parameters of the servo, monitor the information returned from the servo, and assign the channel for controlling the servo.

Servo Setup

Sets the function parameters to adjust the corresponding servo.

[Soft Start]: Sets the response speed of the servo instant startup.

[Thermal Protection]: Enables/disables the thermal protection function of the servo.

[Power]: Sets the output power of the servo when it is working.

[Boost]: Sets the voltage of the servo instant startup, so as to change the startup strength of the servo.

Setup:

Select the function item, then click "+" or "-" to change the percentage or the option.
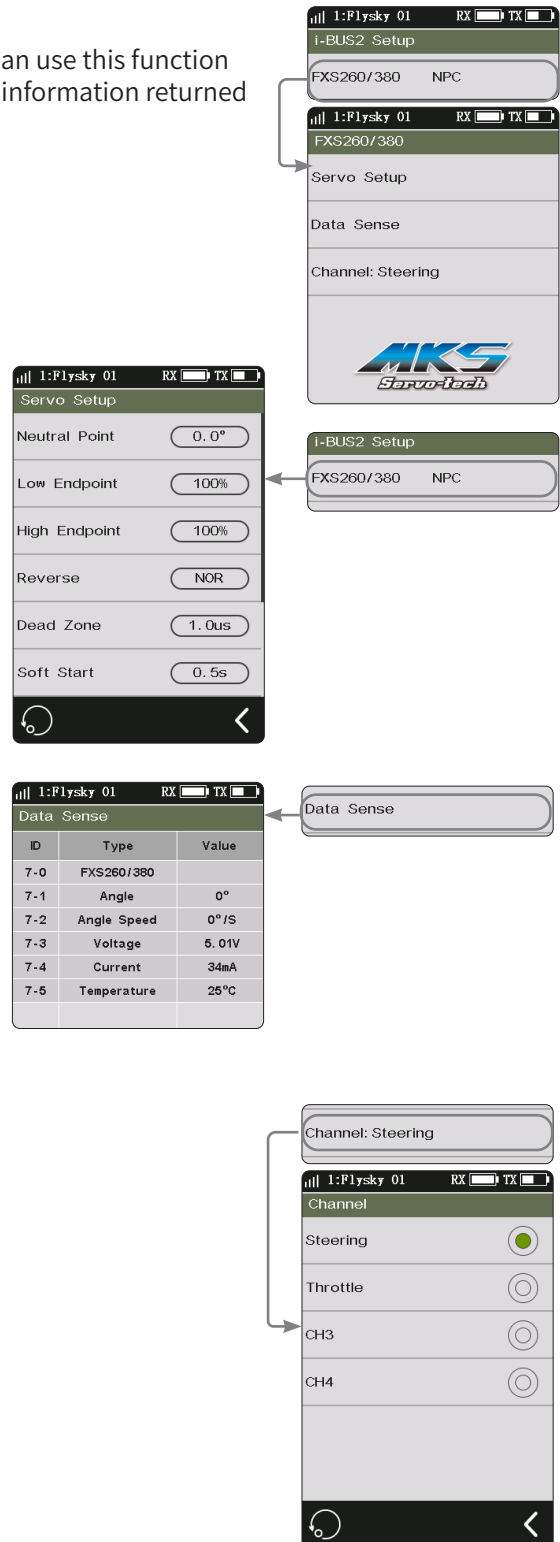
Data Sense

Monitors the return information from the corresponding servo.

Tap [Data Sense]to enter the Data Sense interface.

Channel

Assigns the corresponding channel to control this servo.

Tap [Channel: Steering] to enter, then tap an appropriate channel. Afterwards, click ◀ to return to the previous interface.
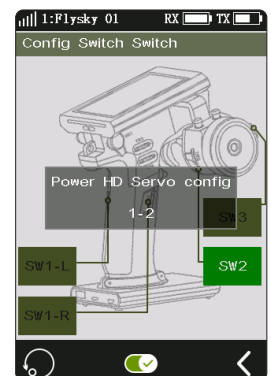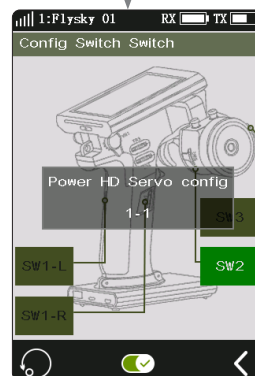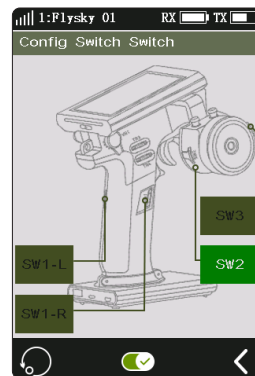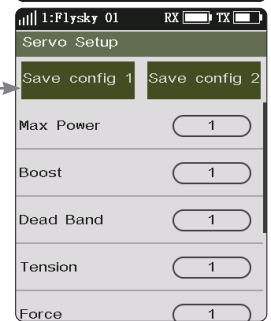
i-BUS2 SERVOS （Power HD）

When the transmitter detects an i-BUS2 servo (Power HD), you can use this function to set the relevant function parameters of the servo, monitor the information returned from the servo, and assign the channel for controlling the servo.

The settings of Power HD servo parameters are similar to those of the FXS260/380. Refer to the description of FXS260/380 servos. You can save Power HD servo parameters as two sets of configuration parameters. Two sets of commonly used parameters can be saved as Configurations 1 and 2, respectively. Both can be switched by setting a control.

Setup:

1. Two sets of commonly used parameters can be set and saved as Configurations 1 and 2 by taping Save config 1 or Save config 2, respectively.

2. Tap 🔳 to enter Config Switch Switch interface.

3. Select a control, then tap 🔘 to enable this function. When this function is enabled, the icon will change to 🔘 . Then the two sets of configurations can be switch by this control.

Click 🔄 to reset the settings to the default data, that is, data of Configuration 1. If the data of Configuration 1 is not set when you click 🔄 to reset the data. The system prompts to save the data of Configuration 1 first.

About the setting of PowerHD servo on Data Sense and Channel, refer to the description of FXS260/380 servos.

Note: For details about Power HD parameters, see the corresponding manual of Power HD servo.

i-BUS2 ESC （XERUN AXE R2）

When the transmitter detects an i-BUS2 i-BUS2 XERUN AXE R2 ESC, you can use this function to set the relevant function parameters of the ESC.

Servo Setup

Sets the function parameters to adjust the corresponding ESC

Note: To ensure correct operations, you must click ⚠ to confirm the updated parameters after the parameters are set. Then, click ◀ to return. The parameter settings of ESC will take effect (at the same time, the ESC will make an audible prompt).

Setup:

Select the function item, then click "+" or "-" to change the percentage or the option.

Data Sense

Monitors the return information from the corresponding ESC.

Tap [Data Sense]to enter the Data Sense interface. You can view the relevant information.

Channel

Assigns the corresponding channel to control this ESC.

Tap [Channel: Throttle] to enter, then tap an appropriate channel. Afterwards, click ◀ to return to the previous interface.

Note: For details about ESC parameters, see the corresponding manual of ESC.
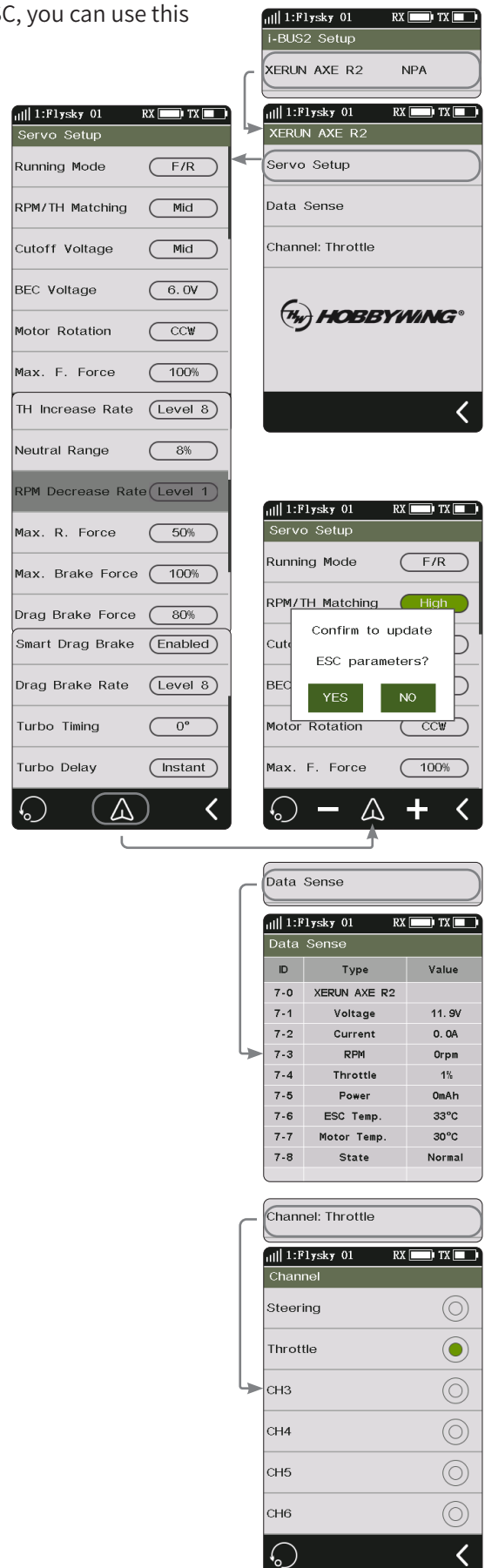
## 6.24 HELP

To obtain the user manual via this function. Users can contact us through social accounts listed on the interface.

Setup:

1. Touch [Help center] to enter.
2. Touch the item you want to view, then the corresponding QR code will display.
3. Scan the QR code to obtain the related information. Then click ◀ to return to the previous interface.

微信公众号   Bilibili   Website   Facebook
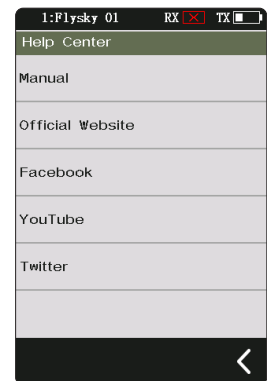
7 RX SET

This section introduces details functions relate to receiver and their use.

7.1 Bind Set

This function is used to put the transmitter into the binding state to bind with the receiver. For specific binding guidelines, see section "4.2 Bind".
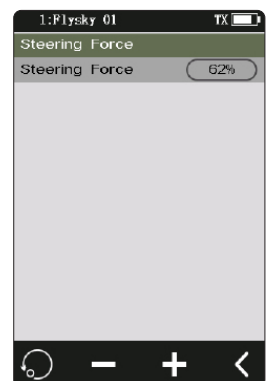
7.2 Steering Force

This function is used to adjust the amount of steering force when the receiver servo is steered.

This function can be set when the transmitter RF Setting is set to [Mini-Z(FHSS)]. It is hidden when the RF is set to other standards.

Setup:

Click "+" or "-" to change the percentage of steering force. The adjustment range is 0-100%, and the adjustment step is 1%. It also can be adjusted by assigning TR/VR key or knob in the [ASSIGN] function.

7.3 Gyro Gain

This function is used to adjust the sensitivity of the gyroscope on the receiver.

This function can be set when the transmitter RF Setting is set to [Mini-Z(FHSS)]. It is hidden when the RF is set to other standards.

Setup:

Click "+" or "-" to change the percentage of gyroscope sensitivity. The adjustment range is 0-100%, and the adjustment step is 1%. It also can be adjusted by assigning TR/VR key or knob in the [ASSIGN] function.
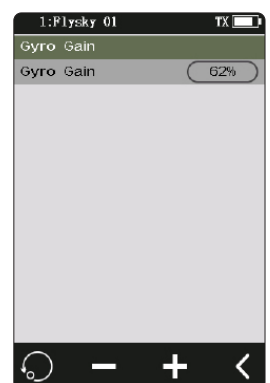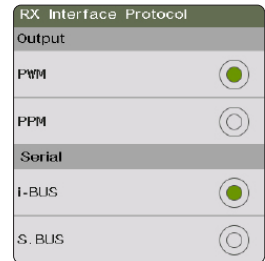
7.4 RX Interface Protocol

This function is used to set the receiver output mode.

Classic Version Receiver Interface Protocol

When the adapted receiver is FGr4, FGr4S, FGr4P, FTr4, FTr10 and FTr16S, [Output] can be set to PWM or PPM. [Serial Protocol] can be set to i-BUS or S.BUS (please refer to [7.8 i-BUS Setting] for specific i-BUS setting).

Setup:
1. Click [Receiver Interface Protocol].
2. Click the corresponding function as desired. Click ◄ to return to the previous level interface.

Enhanced Version Receiver Interface Protocol

When the adapted receiver is another enhanced version receiver, the output protocol of the receiver NPA/NPB/NPC/NPD interface can be set.

In dual receiver mode, the interface protocols of the Master and the Slave receiver can be set respectively.

For the NPA/NPB/NPC/NPD interface of the Master receiver, the output modes include PWM, PPM, S.BUS, i-BUS in, i-BUS out and i-BUS2.

- When the NPA interface is set to PPM output, the other interfaces support PWM, S.BUS, i-BUS in, i-BUS out and i-BUS2 signal output.

The output modes for the Slave receiver NPA/NPB/NPC/NPD interface are PWM, PPM, S.BUS, i-BUS out and i-BUS2.

- When the RX i-BUS 2 HUB simulator function is disabled, you can select only once for PPM, S.BUS, i-BUS in, i-BUS out and i-BUS 2 signals in multiple new ports. For example, if NPA is set to i-BUS out, NPD/NPC/NPB/NPA should not be set to i-BUS out.
- The simultaneous conflict of i-BUS and i-BUS2 transmission information is prohibited. When any new port is set to i-BUS out or i-BUS in, other new ports should not be set to i-BUS2. If any new port is set to i-BUS2, other new ports should not be set to i-BUS out or i-BUS in.
- When the RX i-BUS2 HUB simulator function is enabled, multiple new ports can be set to one type of signal, such as NPA ~ PWM, NPB ~ PWM, NPC ~ i-BUS2, and NPD ~ i-BUS2.

[i-BUS in]: Connects to i-BUS sensor.

[i-BUS out]: Connects to i-BUS extension receiver or other i-BUS signal recognition device.

[i-BUS2]: When the receiver i-BUS2 HUB simulator function is disabled, only 1 i-BUS2 signal output is allowed. When the receiver i-BUS2 HUB simulator function is enabled, 1-4 i-BUS2 signal outputs can be selected.

Setup:
1. Click [Receiver Interface Protocol]. When the bind setting is in dual receiver mode, select the Master receiver or the Slave receiver to enter the submenu.
2. Select [NPA] or other options. Click the corresponding protocol as needed. Then click ◄ to return to the previous level interface.

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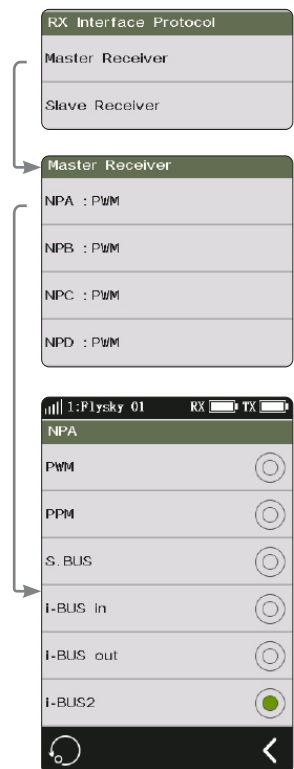
7.5 Failsafe

The Failsafe function can be set in the following three ways:

- Set to disable the signal output of i-BUS-out and PPM protocol interfaces in case of out-of-control, i.e., no output at i-BUS-out & PPM interfaces in case of losing control.

- Set failsafe values channel by channel: Free/Fixed value/Hold.

- [Set all fixed value channels], namely, you can set the output values of all channels controlled by a control to the current value, and this value will be output when the system is losing control.

Failsafe Test Function

Used to simulate the out-of-control case, when the model is out-of-control, the transmitter will shut down the RF, then the model will enter the out-of-control state. All channels will output according to failsafe settings.

Setup:

1. Tap 📶 , a popup window comes along with it as shown. Press and hold 📶 over 1 second, then the system turns off RF. And the receiver output channel value according to failsafe settings.

2. Release 📶 , the RF is on and the connection is restored.
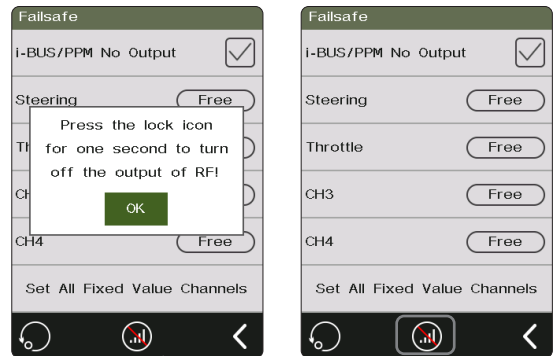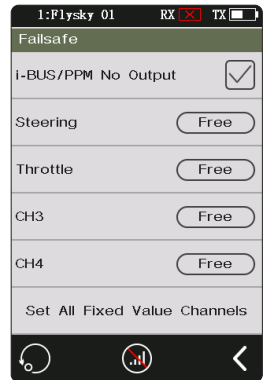
i-BUS&PPM No Output

This function is for i-BUS and PPM signals. After [i-BUS/PPM No Output] is enabled, regardless of the setting of the failsafe, these two types of failsafe signals are always no output. If the function isdisabled, after losing control, you can set by channel: set to fixed value or keep the last output value. By default, this function is enabled.

Tap ☑ at the right side of [[i-BUS/PPM No Output], the check box next to right of the option is not ticked , it indicates that the function is disabled.
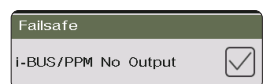
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Setting A Separate Channel

Used to set the output signal states of channels respectively: Free means that there is no output in case of out-of-control; Hold means the last channel value is kept in case of out-of-control; Fixed Value means that you can set the failsafe output value by moving the control, then the value set will output in case of out-of-control.

Setup:

1. Tap the channel you want to set.
2. Click an appropriate option as desired. If the fixed value is selected, move throttle trigger(steering wheel, button or knob)to the desired position and hold it, then click ◀ to finish the settings.

Setting All Fixed Value Channels

Can be used to set the output value of all channels controlled by a control that has been set to a fixed value after out-of-control.

Setup:

Tap this function while moving the control to the desired position and holding, after that a prompt interface comes along with it as shown on right. Click"YES" to finish.
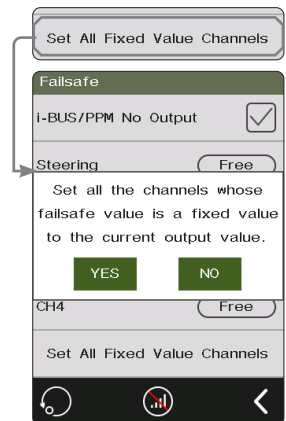
Note: Gas-powered models are slightly different with Battery Powered models when it comes to failsafe setup.

Gas-powered: It is recommended to set failsafe setting as if the vehicle's brake state, that is, set the throttle channel output value of the vehicle when subjected to brake as the failsafe value. The braking effect can be customized accordingly.

Battery Powered:
1. It is recommended that the failsafe is set to Free. In case of out-of-control, it will enter braking state when ESC does not received signals.
2. It is also possible to set the failsafe settingas if the vehicle's brake state. Same as the gas-powerd.

- Some ESCs also use breaking as reverse, make sure to check this with your model.

7.6 Servos Frequency

This function is used to select the frequency of channel data PWM signals. The function includes analog servo (95 Hz), digital servo (380 Hz), and custom frequency. You can select or set the correct output frequency value according to the servo used. By default, the system adopts the digital servo. The custom frequency adjustment range is 50-400 Hz.

The servos frequency varies slightly with the connected receivers.

For the Classic Version Receiver

1. Click [Servos Frequency].
2. Click the corresponding option. Click ◀ to return to the previous level interface.
   - If the transmitter RF Setting is set to [AFHDS 3 1 way], modify the servo response speed and then tap ◀ . The system prompts "It takes effect after bind or re-bind. Are you sure you want to bind?"
3. If you choose [Custom], click "+" or "-" to adjust the frequency.
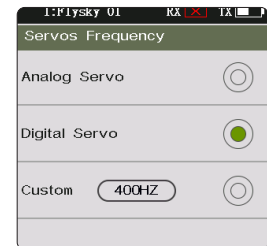
For the Enhanced Version Receiver

[SR]: One of the specifications in the servo frequency (PWM frequency is 833 Hz).

[SFR]: One of the specifications in the servo frequency (PWM frequency is 1000 Hz).

Note: the conventional servo response speed (PWM frequency) is 50-400 Hz. The delay of the whole system will be greatly improved when SR and SFR are selected. Make sure that the adapted servo supports the corresponding frequency. Otherwise, it may cause the servo not to work properly or even damage the servo.

Setting A Channel

Sets PWM frequency for a channel.

[Synchronized with RF]: The digital signal of low frequency is synchronized with the digital signal of radio frequency.

Setup:

1. Click [Steering → Digital Servo] or other options to enter the function setting interface.
2. Click the corresponding servo frequency according to the actual state of the adapted receiver. Click ◀ to return to the previous level interface.
   - Click the check box on the right of [Synchronized with RF]. The icon will change to ☑ . The servo frequency of this function will be synchronized to RF after it is checked.
3. If you choose [Custom], click "+" or "-" to adjust the frequency value.

Setting All Channels

Sets PWM frequency for all channels.

For function Setup, refer to the Setup section of Setting A channel above.
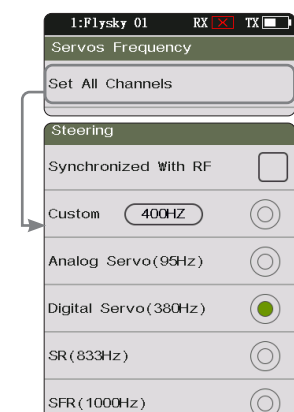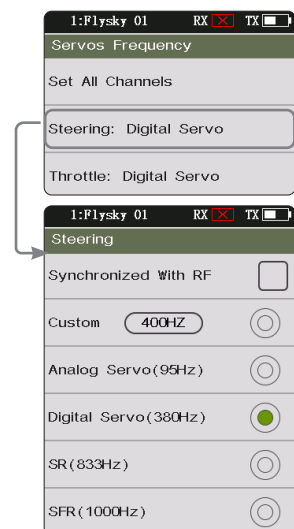
7.7 i-BUS2 Setup   Note: This function is available for version 2.0.101 or later.

This function is used to set up the i-BUS2 devices. For details, see 6.23 i-BUS2 section.

7.8 i-BUS Setup

This function is used to set up the i-BUS expansion module.

The i-BUS function is mainly used for servo expansion. If a cable is too short or the number of servos exceeds the outputs for the receiver, the i-BUS serial bus receiver provides a convenient option for expansion. When using the i-BUS serial bus receiver, make sure that it is powered separately to ensure that servos have sufficient power.

New port(NPA→i-BUS out)

FS-CEV04 Schematic(FGr4B)

Setup:

1. Turn on the transmitter and enter [MODEL], then tap [Channel Number Definition], and select the number of channels to be set (optional 2、4、6、8、10、12、18 channels, the system defaults to 8 channels).

2. Go to [RX SET] and bind the transmitter and receiver.

3. Tap [RX Interface Protocol] and select [i-BUS out].

4. Connect the FS-CEV04 to the FGr8B/FGr4B receivers' [i-BUS out] interfaces.
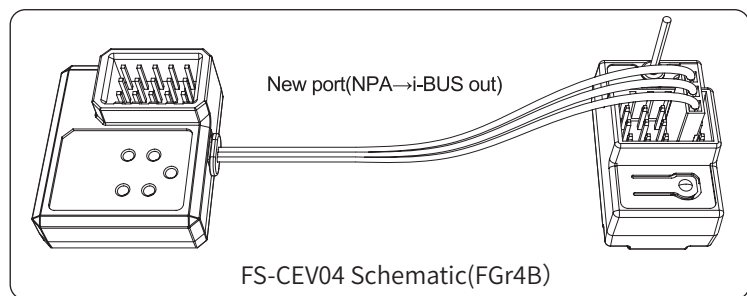
5. Touch [i-BUS Setup] and select the channel to be assigned, (touch "channel X", the system display a "Assigning channel X, Press the corresponding key on the serial BUS receiver to assign"). Use the appropriate tool to press the K1, K2, K3 or K4 button on the FS-CEV04 to assign the selected channel to C1, C2, C3 or C4. If successful, the transmitter will display: "Channel assigned to interface X / Servo X".

6. Connect the servo to the corresponding port and check if it is working as expected.

7. Repeat the above steps as needed.

1:Flysky 01   RX ⊠ TX ▭

i-BUS Setup

Steering

Throttle

CH3

CH4

CH5

CH6

Assigning CH3
Press the corresponding key on the serial BUS receiver to assign.

Cancel

1:Flysky 01   RX ▭ TX ▭

i-BUS Setup

Steering

Throttle

CH3
assigned to interface 2, servo 4.

OK

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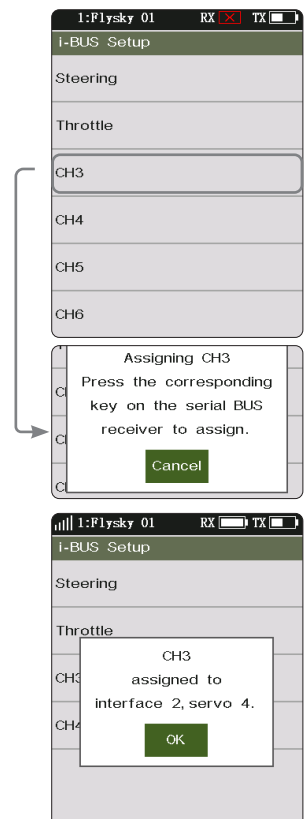
7.9 Config PWM Converter

This function allows you to configure the corresponding receiver to a PWM converter. After the setting is successful, the receiver is used as a PWM converter, and the interfaces output PWM signals.

Note: This function is not available for all receivers. For the classic receiver, only the FGr4 and FTr10 receivers are availabe.

- The receiver which is set as the PWM converter can be converted into a receiver by rebinding the transmitter, and then used normally as a receiver after successfully rebinding the transmitter.

[i-BUS To PWM]: This feature is adapted to classic version or enhanced version receivers to config as PWM converter. For the classic version receivers, after it is set as a PWM converter, its SENS interface is connected to the interface of the receiver outputting i-BUS or i-BUS out. For the enhanced version receivers, after it is set as a PWM converter, its NPA interface is connected.

[i-BUS2 To PWM]: This feature is adapted to enhanced version receivers to config as PWM converter. After it is set as a PWM converter, its NPA interface is connected the interface of the receiver outputting i-BUS2. And you can set related parameters through [i-BUS2], refer to 6.26 i-BUS2 section.

i-BUS To PWM

Setup:

1. Enter the interface of Config PWM Converter and tap [i-BUS To PWM].
2. Tap [Start Channel] to enter the setting interface, then set the start channel for the PWM converter.
    - For example, if the receiver has 4 channels, and since one of channels is used as an extension interface, then the start channel of the PWM converter can be set to "4".
3. Tap [Servos Frequency   Digtal] to enter the setting interface to set the servo frequency for the PWM converter. Then click [Start Config], the configuring interface comes along.
4. Put the receiver to enter the binding state, after the status of the receiver LED changes from fast flash to two-flash-one-off, it indicates the configuration is finished. Then click ◀ to return.

If you set the receiver as a i-BUS2 PWM converter, there are not need to set [Start Channel] and [Servos Frequency].
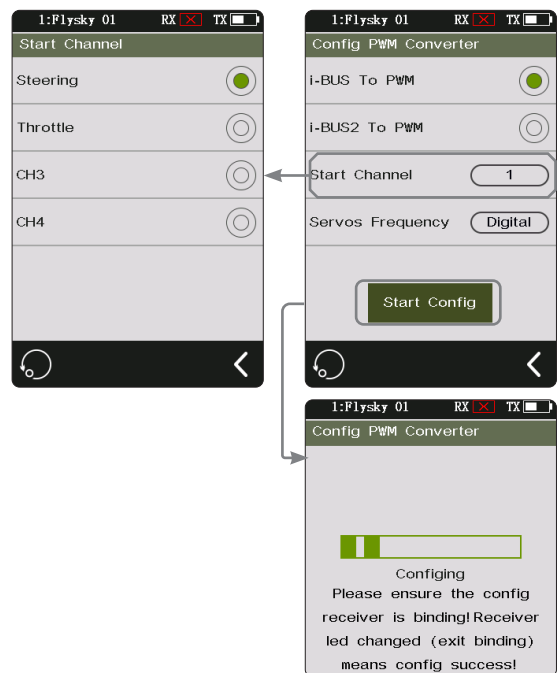
7.10 RSSI Output Setup

Through this function, you can select a channel to output the signal strength value of the receiver. After the function is enabled, the selected channel does not perform the output of transmitter's corresponding channel function, but outputs the receiver's signal strength value. This feature is necessary for FPV players with autopilot.
We recommend you to select the CH14 or any auxiliary channel. You can make corresponding adaptations in the settings to view the RSSI information on FPV glasses.
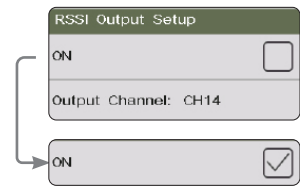
Setup:

1. Tap the check box on the right side of [ON] to enable this function.
2. Click [Output Channel] to enter, and tap the corresponding channel. Click ◀ to return to the previous level interface.

RSSI Output Setup	
ON	☐
Output Channel: CH14	

ON	☑

7.11 RX Battery Monitor

This function is used to detect the voltage status of the receiver or corresponding Sensor battery.
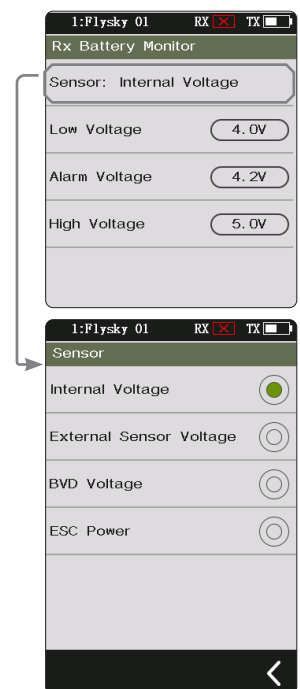
Set the high and low battery voltages according to the actual usage of the receiver battery and the remaining battery level displayed through the icon in the upper right corner of the interface. The transmitter will promptly send an alarm according to battery conditions.

When the receiver or sensor battery voltage is lower than the [Alarm voltage] alarm value, the transmitter will report "The receiver voltage is low" and give a vibrition prompt, refer to [8.4 Sound] and [8.5 Vibration] of [System] for turning on/off the sound/vibrition, as well as setting an approprate level.

[Sensor]: The voltage of the Voltage sensor is used as the voltage of the receiver. [Internal Voltage], [External Sensor Voltage], [BVD Voltage] or [ESC Power]can be selected. After selection, it can be displayed and alarmed through the transmitter.

Setup:

1. Tap [Rx Battery Monitor] to enter the setting interface.
2. Click [Sensor] to enter and select an internal or external sensor.
3. When set the Sensor as the voltage sensor, then set the [Low voltage], [Alarm voltage], and [High Voltage] values; When set the Sensor as the ESC Power, [Alarm Power] and [Full Power] can be set.
   - [Low Voltage]: It is corresponding to receiver battery level which is 0%; [High Voltage]: It is corresponding to receiver battery level which is 100%.
   - [Alarm Power]: It is corresponding to power in case of the alarm; [Full Power]: It is corresponding to ESC battery level which is 100%.

1:Flysky 01	RX ✗ TX ▭
Rx Battery Monitor	
Sensor: Internal Voltage	
Low Voltage	4.0V
Alarm Voltage	4.2V
High Voltage	5.0V

1:Flysky 01	RX ✗ TX ▭
Sensor	
Internal Voltage	◉
External Sensor Voltage	◯
BVD Voltage	◯
ESC Power	◯

Notes:

1. **[ESC Power] is only applicable for Hobbywing XERUN AXE R2 ESC.**
2. **When multiple XERUN AXE R2 ESCs are connected, the setting is for the first ESC connected.**
3. **[Internal Voltage] is corresponding to the voltage of the receiver; [External Sensor Voltage] is corresponding to the voltage detected by the FS-CVT01 sensor; [BVD Voltage] is corresponding to the voltage detected through BVD function; [ESC Power] is corresponding to the power of XERUN AXE R2 ESC.**

7.12 Range Test

This function is used to test whether wireless communication between the transmitter and the receiver is normal.

As the actual remote control distance between transmitter and receiver is far, it is hard to test whether the radio frequency is normal by controlling a distance of several hundred meters between the transmitter and receiver in practice. Theoretically, the remote control distance in this function will be reduced to 30-40 meters. So, you can test whether wireless communication between the transmitter and the receiver is normal at a close distance when the function is enabled. This can save testing time.

Setup:

1. Make sure the transmitter and receiver are bound.

2. Enter the [Range Test] menu and press the SW1-R button.

3. One person stands in place with the model in hand, and the other person holds the transmitter and gradually moves away to 30-40 meters and walks around with this distance as a radius centered on this model.

   - Please make sure the transmitter is installed with phone holder, with use of the standard version firmware.

   - Make sure that the transmitter antenna is unobstructed and that there are no objects or sources of interference between the transmitter and the receiver.

4. Check the RSSI on the transmitter. If the signal strength is high and stable, it means that the radio frequency of this system works normally.
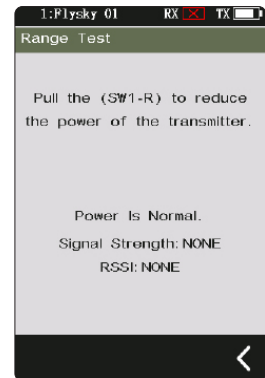
7.13 BVD Voltage Calibration

The BVD voltage is calibrated before delivery from the factory. This function can be used when there is an excessive deviation between the detected and actual voltages. The BVD voltage detection range is from 0 to 100V.

Note: This function is not available for classic version receivers. Pay attention to correctly connect the BVD cable to the anode and cathode terminals of the battery. The connection diagram is as follows.

Setup:

Connect the BVD detection line correctly before setting, and then perform calibration.

Note: please refer to the voltage value of multimeter for calibration.

1. Click [BVD Voltage Calibration] to enter the function setting interface.

2. Click "+" or "-" to change the battery voltage value as needed.

3. Click [Calibration]. After successful calibration, click "YES" in the pop-up window reminder.

Note: When not adjusted, the [Battery voltage] value is displayed the voltage value in realtime, if set, the edited value is displayed.
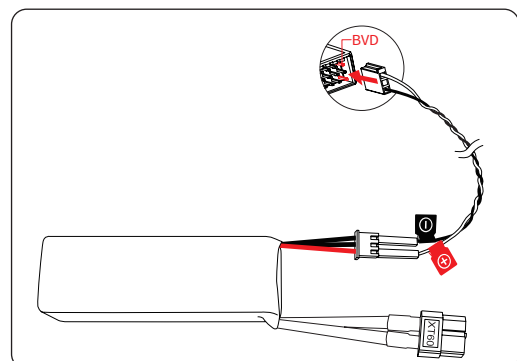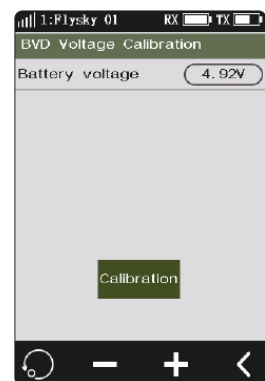
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7.14 Low Signal Alarm

This function is used to enable or disable the Low Signal Alarm function.

[Low Signal Alarm]: If checked, the system will alarm automatically if the signal strength of the receiver is lower than 30.

Low Signal Alarm ☑

7.15 Update Receiver

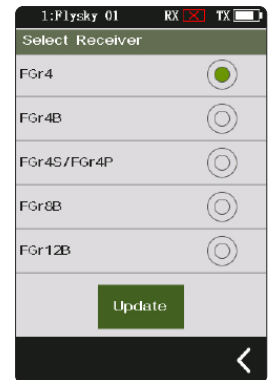After each transmitter update the receiver will need to be updated.

Setup:

Touch [Update Receiver]:

- Some receivers such as GMR and INr4 need to be updated with "Flysky Assistant".

If the transmitter has successfully coded and the connection is established, if the receiver is the latest version, a pop-up prompt will appear [The current version is the new version, no upgrade is required!]. If the transmitter is an old version, a pop-up prompt [Are you sure to update the receiver?]. Click [Yes] to update the receiver;

If the receiver and the transmitter are not connected, then enter the receiver selection interface (FGr8B/FGr4B needs to be placed upright when in use), check the receiver to be connected and pop up a prompt [Please connect XX or enable XX enter the mandatory update mode] Click [OK]!
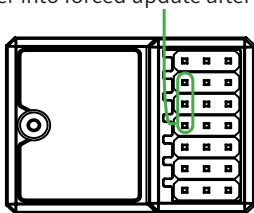
After entering the update, When the progress is 100%, the update is successful.
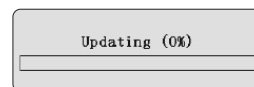
Note: You must update the transmitter firmware before updating the receiver.

Connect these pins by binding cable, so as to make the receiver into forced update after it powered on.

The steps of the forced update of the receiver are as follows:

1. Connect these pins by binding cable as shown abover, so as to make the receiver into forced update after it powered on. The receriver LED works in flash-three-one-off state repeatedly.

2. Power on the transmitter and select [Update Receiver]. Click the corresponding receiver. Select "OK" on the pop-up box. Click [Update] to enter the update state.

3. When the update has finished, the receiver LED flashes slowly.

- **This procedure applies to FGr4P receiver, different receivers may enter the forced update in different ways, please go to the FLYSKY website to query the instructions of the relevant receiver for action.**

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8. SYSTEM

This section introduces details functions relate to system and their use.

8.1 Language

Language function is used to change the language for the user interface.

Setup:

1. Touch [Language] to enter the menu.
2. Select a language from the list.
3. Touch ◀ to return to the previous menu.

8.2 Units

Choose what units to use for length and temperature.

[Length]: Select between metric and imperial system. The default is Metric.

[Temperature] : It can be selected in Celsius and Fahrenheit. The default is Celsius.

The box in highlighted is the currently selected setting.

Setup:

1. Touch [unit] to enter the menu.
2. Select a unit from the list.
3. Touch ◀ to return to the previous menu and save the setting.
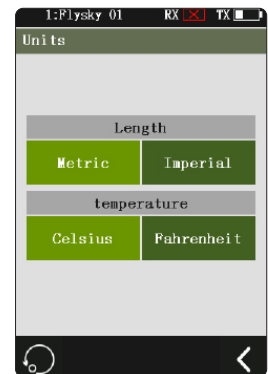
8.3 Backlight Adjustment

This function controls the backlight brightness.

Note: Turning the brightness up will use more power and as such, the longer the Backlight timeout, the more power consumption, the shorter the battery using time.

[Backlight Timeout]: Select the delay time. That is, when there is no action, the screen is reduced to a minimum brightness state after the corresponding backlight delay time, with options of 5 seconds, 10 seconds, 30 seconds, 1 minute, 2 minutes, 5 minutes, 10 minutes of backlight delay and normal light.

Tap[Backlight Timeout]to enter, and select an approprate item as needed. Then, click ◄ to return to save.

[Max Backlight]: The backlight state of the transmitter display when the backlight is strongest. The adjustment range is 10%-100%.

Tap[Max Backlight]to enter, and click "+" or "-" to change the percentage as required. Then, click ◄ to return to save.

[Mini Backlight]: The backlight state of the transmitter display when the backlight is weakest. The adjustment range is 0%-50% (the screen is not bright at 0%).

The adjustment method is the same as above.
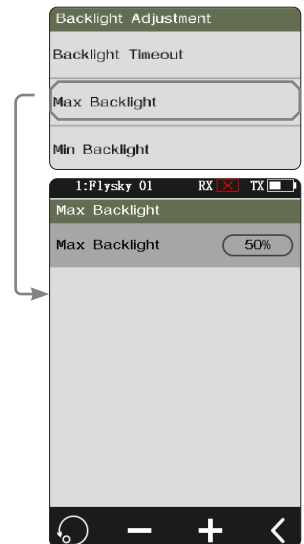
8.4 Sound

This function is used to turn on or off sound of different function and the adjustment of volume, including system sound, alarm sound, power-on/power-off sounds, and etc.

[Volume]: To set the volume.
Tap [Volume] , then select the desired volume from the list. Touch ◄ to return to the previous menu, and save it.

[System Sound]: To turn on or off system sound.

Click the option box on the right side of the interface. The icon will change to ☑ , indicating that the system sound is enabled.

[Alarm Sound]: To turn on or off alarm sound.

[Power On/Off Sound]: To turn on or off power-on/off sound.
Click the option box on the right side of the interface to enable. After it is enabled, the system will sound "Welcome to Noble" when turned on, and the system will sound "Shutting down" when turned off.

[Trim Sound]: To turn on or off power on/off sound.

[Timer Sound]: To turn on or off timer related prompt sound.

[Sensor Sound]: To turn on or off sensor alarm related prompt sound.

[Menu Operation Sound]: To turn on or off prompt sound when a touch screen operation takes effect.
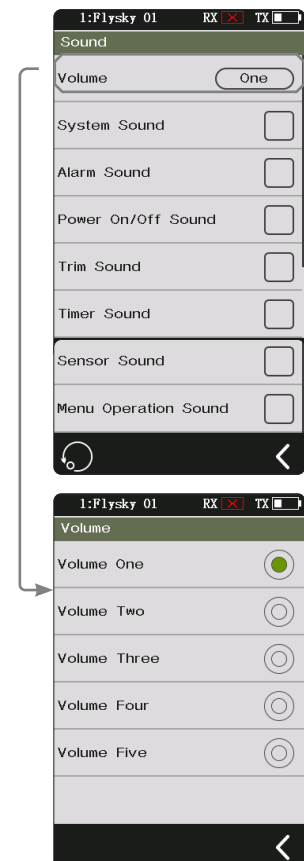
Note: For details about how to set other functions, refer to system sound settings.

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8.5 Vibration

This function is used to enable or disable the vibration of different function and and the adjustment of vibration levels, including system vibration, alarm vibration, etc.

[Vibrate Level]: To set the intensity of vibration level.
Tap [Vibrate Level], then select the desired level from the list. Touch ◀ to save.

[System Vibrate]: To turn on or off system vibration.
Tap the box at the right of "System Vibrate". If there is a check in the box, indicating the function is enabled.

[Alarm Vibrate]: To turn on or off alarm vibration.

[Power on/off Vibrate]: To turn on or off power on/off vibration.

[Trim Vibrate]: To turn on or off the trim operation of the prompt vibration.

[Timer Vibrate]: To turn on or off timer related prompt vibrations.

[Sensor Vibrate]: To turn on or off sensor alarm related prompt vibrations.

[Menu Operation Vibrate]:To turn on or off prompt vibration when a touch screen operation takes effect.

Note: For details about how to set other functions, refer to system vibration settings.
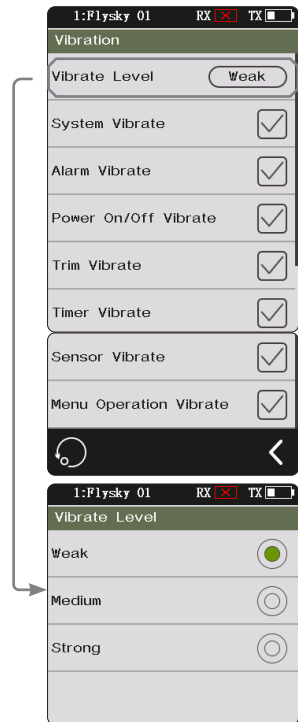
8.6 LED

The LED function can change the color of the LED strip which is located above the power button of the transmitter, as well as the brightness adjustment of the LED strip. And it can also be set as the power capacity indication.

Type Selection

To set the color of the LED, or to turn on or off the LED.

Setup:
1. You can choose to turn off the LED.
2. LED can be used for power capacity indication (displaying different colors according to current battery voltage);
    *   High-green
    *   Medium-yellow
    *   Low-red
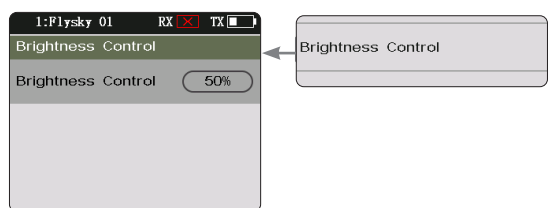3. Select a color from the list.
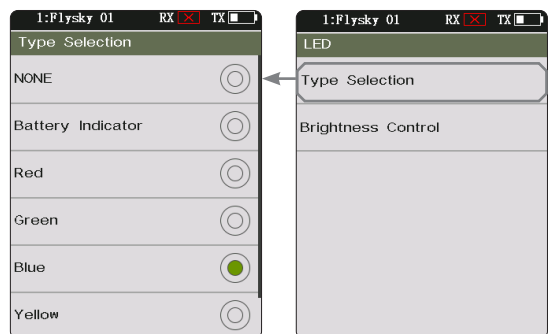
Brightness Control

To set the LED brightness.
Touch "+" or "-" to adjust the LED brightness.

After setting, tap ◀ to save and exit.

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8.7 Home-Screen Quick Access

This function is used to set up the Up, Down, Left and Right quick sliding screen functions of the main interface. Users can customize the sliding screen interface according to their needs.

The [Home-Screen Quick Access] can help users find setting interfaces quickly. For example, when users want to check the lap counting time after the function is enabled in the model operations, users can use this function to enter the timer interface quickly.

Setup:

1. Enter in the function interface, click the corresponding function option to choose it.

2. Tap an appropate option as needed.

3. Click ◀ so you can save the settings.

Note: In case of sliding the screen, it recomends as close to the edge of home screen as possible to slide.

8.8 Mian Screen Lock Setup

This function is used to set the state of the transmitter after the main interface is locked.

[Touch Screen]: It can prevent the transmitter screen from being touched by mistake, because this may change the parameters that have been set.

[Touch Screen + Set]: Only channels are controllable after selection. This can avoid changing the set parameters when someone else perform operations or accidentally toggles a switch for personal reasons.

[Touch Screen + Set + CH]: After locking, all knobs, keys, or trims are unavailable. This can prevent others from modifying channel data when operating on behalf of others or changing setting parameters by accidentally toggling a switch for personal reasons.

You can click the corresponding function according to your needs. If it becomes ◉ , indicating the function is enabled.
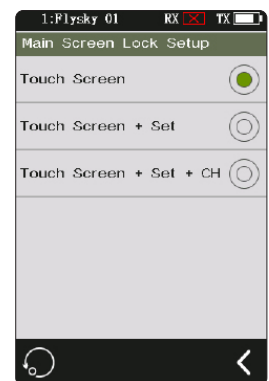
8.9 Standby Timeout

This function is used to set Standby Timeout intervals or no standby timeout alarm. 5 options: [NONE], [3 Minutes], [5 Minutes], [10 Minutes] and [20 Minutes]. [NONE] means no standby timeout alarm. The time to alarm can be selected as desired. The default is 3 minutes.

Click [Standby Timeout] to enter setting menu, and click the option as required. For example, if you set the alarm time to 3 minutes, the system will give a vibration and audio alarm when the transmitter is idle for 3 minutes. You can set the on/off and volume of the sound, and the on/off and level of the vibration in [8.4 Sound] and [8.5 Vibration] in [System Settings].

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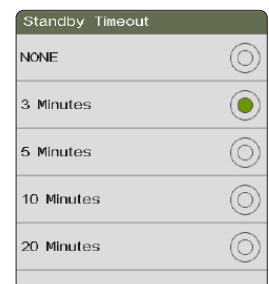
8.10 Auto Power Off

If the transmitter is powered on for a long time, the transmitter battery may be used up. If the system detects that the transmitter is not used for a long time, it will be automatically shut down.

If no operation is detected within five minutes, the system starts playing no operation sound, Auto Power Off will turn off the transmitter if no receiver is connected .

To toggle Auto Power Off, touch the box to the right of the setting. If there is a check ☑ in the box, indicating that the function is active.
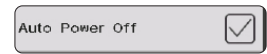
8.11 Stick Calibration

Use this function to correct for the mechanical deviation of the throttle trigger and steering wheel, for example, deviation occurred in the self-centering or maximum/minimum travel.

The blue bar is the channels current position and the calibrated range will be the same color like the background.

Setup:

1. Move the steering wheel and throttle trigger as far as they can go in each direction. Then release them to make them back to netrual position.

2. Touch ◀ to save and return to the previous menu.
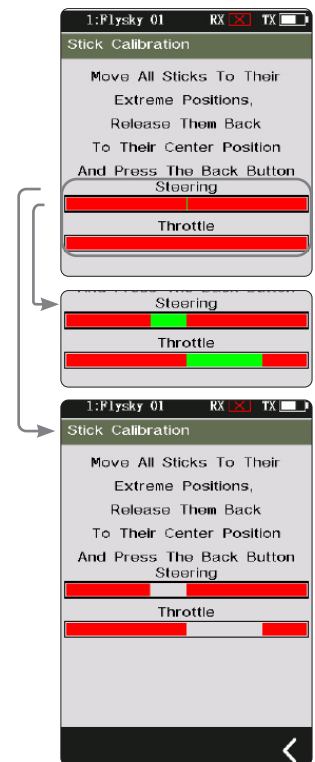
8.12 Firmware Update

In case of updating the firmware of the transmitter, use this function to put the transmitter to enter updating mode first, then upgrade the transmitter's firmware.

| ⚠ WARNING	• **Use the micro USB cable shipped with the transmitter.** • **Do not unplug the micro USB cable while the firmware is updating.**

Setup:

1. Download and open the newest official software.
2. Connect a transmitter with a computer by micro USB cable.
3. Touch [Firmware Update], after which "Updating the transmitter firmware may cause model data to be restored to factory default values. Are you sure?" will be displayed. Touch "YES", to enter update mode.
4. After completing the above steps, click [Update] in the software on your computer to start the update.
5. The tranmitter will power on again when the updating process is completed. Then remove the USB cable and close the firmware.

Note: The model data will be reset after the firmware update. Back up the mode data before you perform firmware updating.
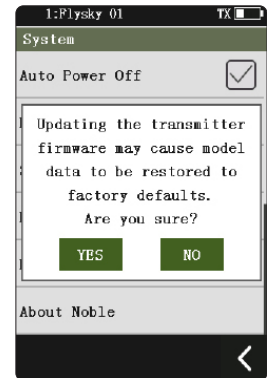
8.13 Factory Reset

Factory Reset function resets all of the transmitter settings and functions back to their factory default state/data.

Setup:
Touch "Factory Reset", then touch "YES" when prompted.

Note: To avoid errors, do not use this function during operation.
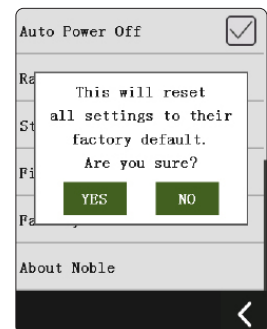
8.14 About Noble

This function contains basic information such as product name, firmware version, version date, hardware and RF library version.

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9. Transmitter Specifications

This chapter includes specifications for NB4 transmitter and FGr4P receiver

9.1 Transmitter Specifications (NB4)

Product model	NB4
Product name	Nobel
Channels	Optional: 4, 6 or 8
Adaptive Models	Car, Boat
RF	2.4GHz ISM
Maximum Power	< 20 dBm (e.i.r.p.) (EU)
2.4GHz Protocol	AFHDS 3
Channel Resolution	4096
Charging Interface	Micro USB
Low Voltage Warning	< 3.65V
Antenna Type	Single Built-in Antenna
Display	HVGA 3.5 inch TFT, 320 * 480
Language	Chinese, English or Japanese
Data Interface	Micro USB
Temperature Range	-10℃ ~ +60℃
Humidity Range	20% ~ 95%
Online Update	Yes
Color	Black
Dimensions	129*114*190 mm
Weight	520g
Certifications	CE, FCC ID：N4ZFG400, MIC, RCM

9.2 Receiver Specifications (FGr4P)

Product Model	FGr4P
PWM Channels	4
RF	2.4GHz ISM
2.4GHz Protocol	AFHDS 3
Antenna Type	Single Antenna（150mm）
Input Power	3.5~8.4V/DC
Data Output	PWM/PPM/i-BUS/S.BUS
Temperature range	-10℃ ~ +60℃
Humidity Range	20% ~ 95%
Online Update	Yes
Dimensions	29*22*16.2mm
Weight	8g
Certifications	CE, FCC ID: N4ZFGR4P00

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10. Package Contents

NB4*1
FGr4P*1
Quick Start Guide *1
USB Cable*1
Grip (L) *1
Spring（N=14T Soft)*1
Spring（N=13T Hard)*1

11. Certification

11.1 DoC Declaration

Hereby, [Flysky Technology co., ltd] declares that the Radio Equipment [Noble(NB4), FG4] is in compliance with RED 2014/53/EU.

The full text of the EU DoC is available at the following internet address: www.flyskytech.com/info_detail/10.html

11.2 CE Warning

The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other transmitter. End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance

11.3 Environmentally friendly disposal

Old electrical appliances must not be disposed of together with the residual waste, but have to be disposed of separately. The disposal at the communal collecting point via private persons is for free. The owner of old appliances is responsible to bring the appliances to these collecting points or to similar collection points. With this little personal effort, you contribute to recycle valuable raw materials and the treatment of toxic substances.

CAUTION
RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS

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11.4 FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or televison reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

Caution!

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user authority to operate the equipment.

1. Move all your channels to the desired position.

2. Select [All channels] and then [Yes] in the confirmation box.

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