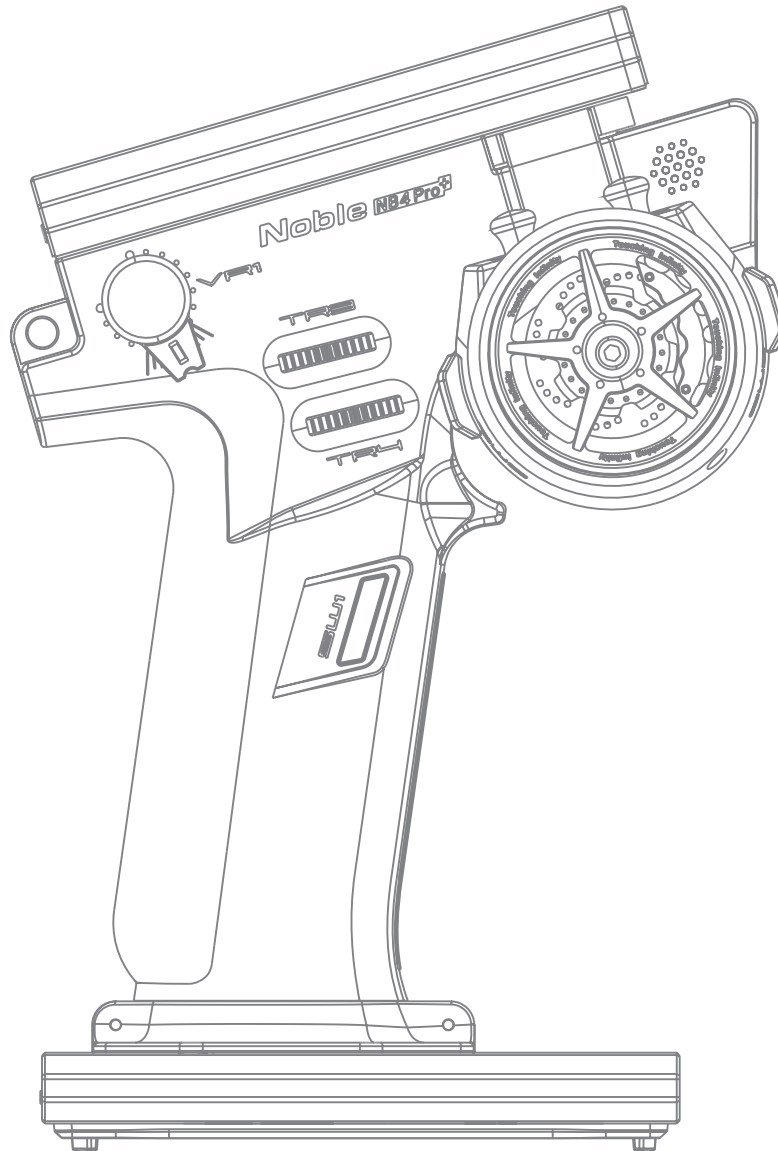


Noble NB4 Pro+

USER MANUAL

2.4GHz AFHDS 3



FLYSKY

Touching Infinity

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WARNING:
This product is only for 15 years
old or above.



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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

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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.Product Introduction

This product uses 2.4GHz, third generation, automatic frequency hopping digital system, consisting of a Noble NB4 Pro+ (NB4 Pro+ for short) transmitter, FGr8B receiver, and FGr4B receiver. It supports output in 18 channels. In addition, the product implements extreme-speed output on 2 channels. It is also compatible with model cars, boats, and etc. It supports a USB simulator function (enabled by default).

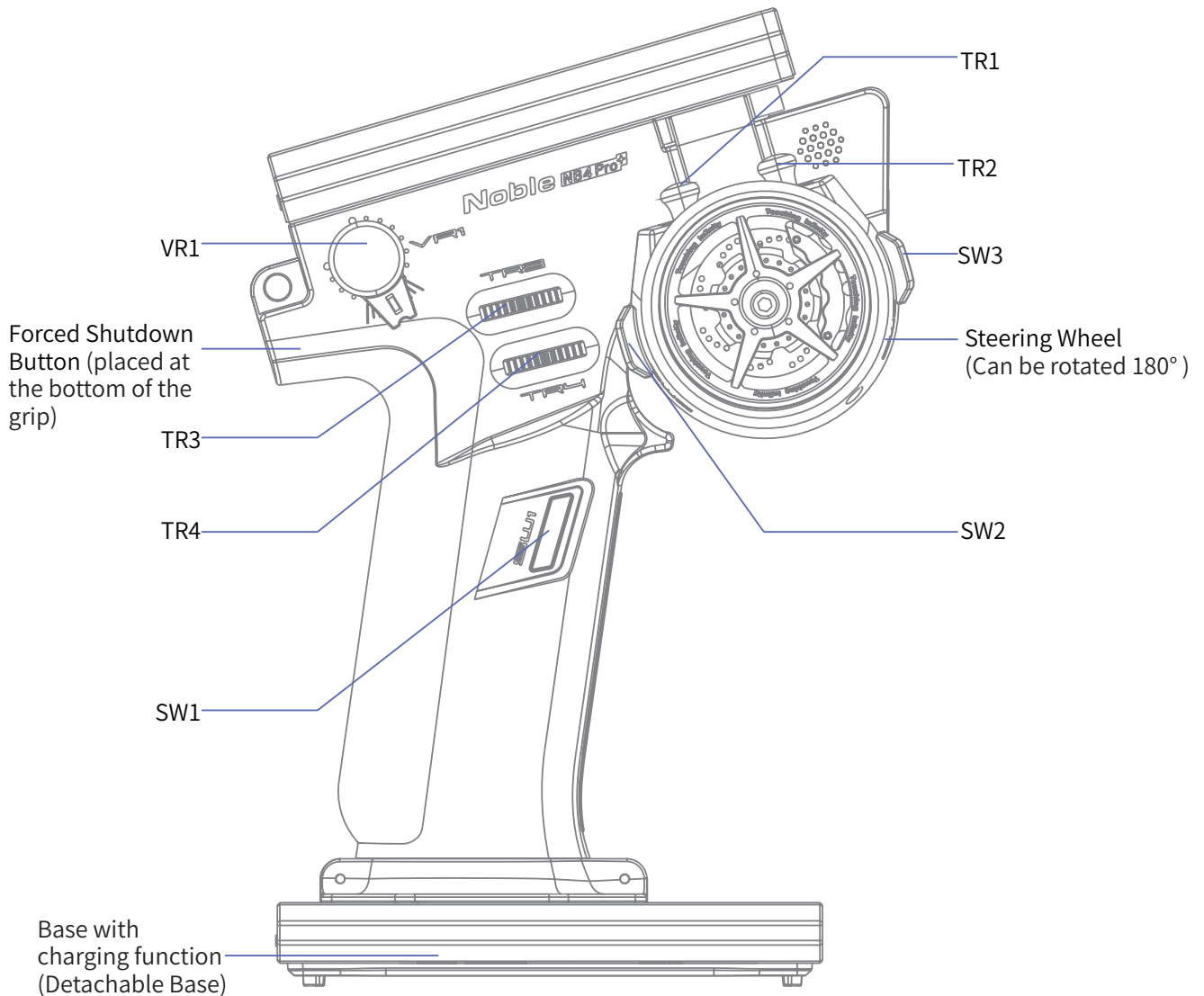
2.1 System Features

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 system supports one-way and two-way connections. When the transmitter is working in one-way transmission way, the receiver can receive data from the transmitter. When the transmitter is working in two-way transmission way. The receiver can receive data from the transmitter and the transmitter can also receive data from the receiver, as well as the information cross from the temperature and speed sensor modules.
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 ISM to 2.480GHz. Intelligent RF configuration according to the needs of RF configuration, through the different RF configuration, different power-on time, different frequency hopping law and different use of frequency points to actively avoid the same frequency interference.
Unique ID Recognition System	Each transmitter and receiver has it's own unique ID. Once the transmitter and receiver have been bound, the ID will be saved. When the syetem is working,if the IDs are matched, the connection will be connect, otherwise, there is no connection between transmitter and receiver. This unique ID recognition syetem resists the interference so as to make the system stabler and more reliable.
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.



2.2 Transmitter Overview



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 apart the hand glue placed at the top of transmitter's grip or take off the whole handle glue. Use a relatively slender tool, insert the tool into the round hole on the right side of the grip(direction as shown in the figure above), 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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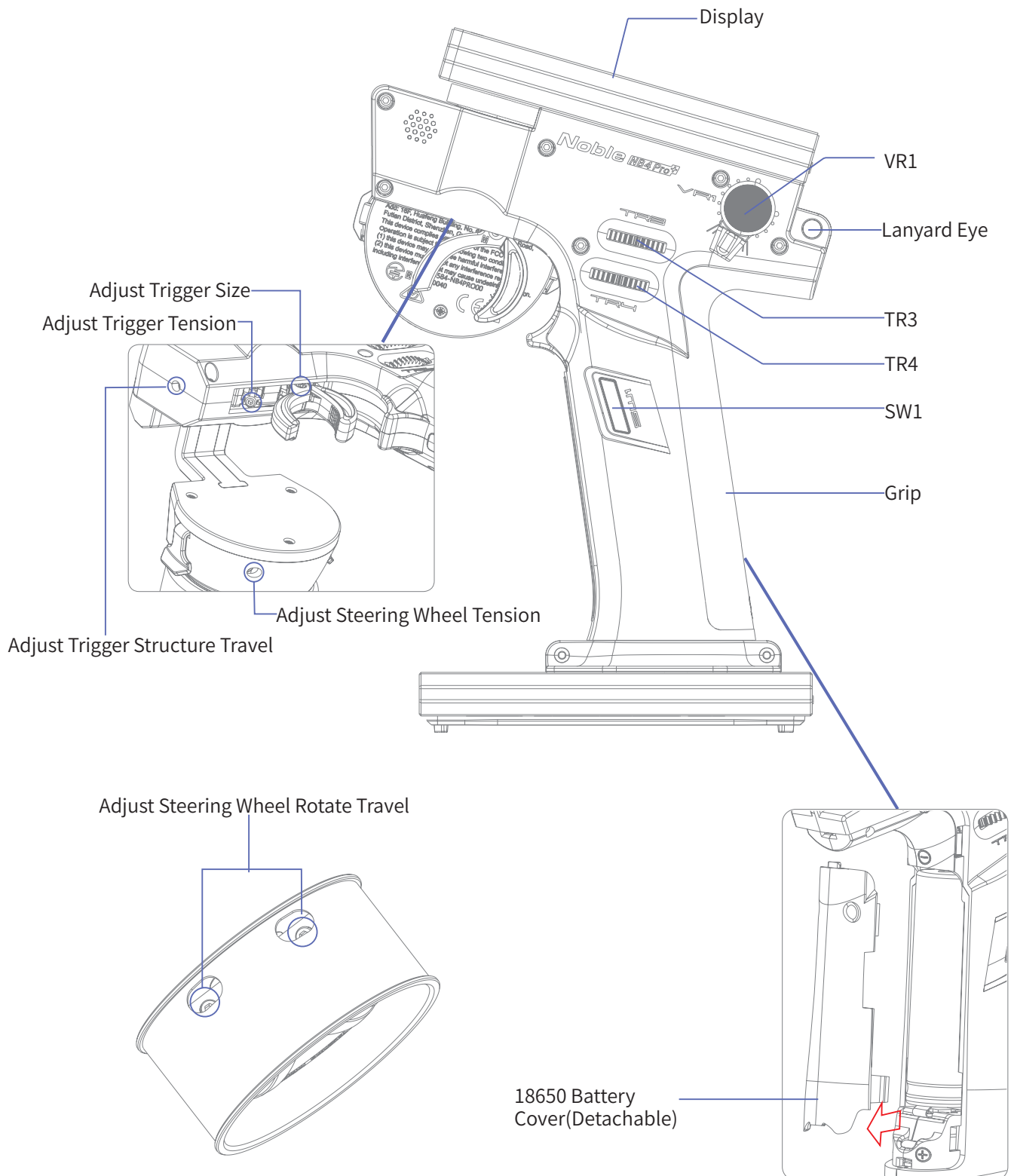
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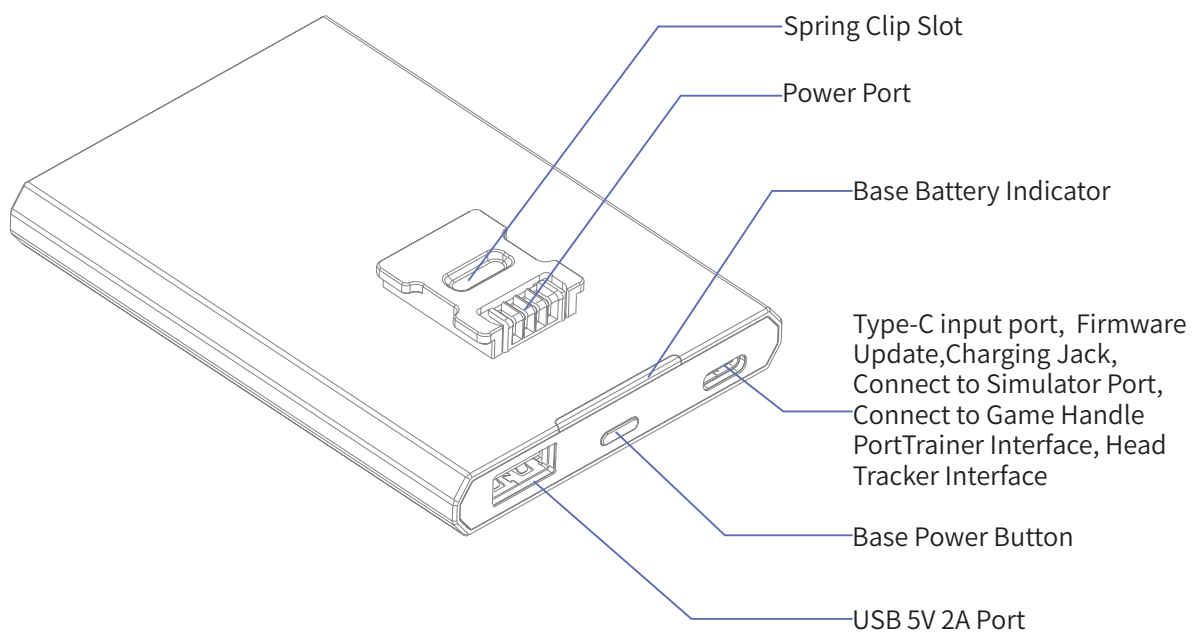
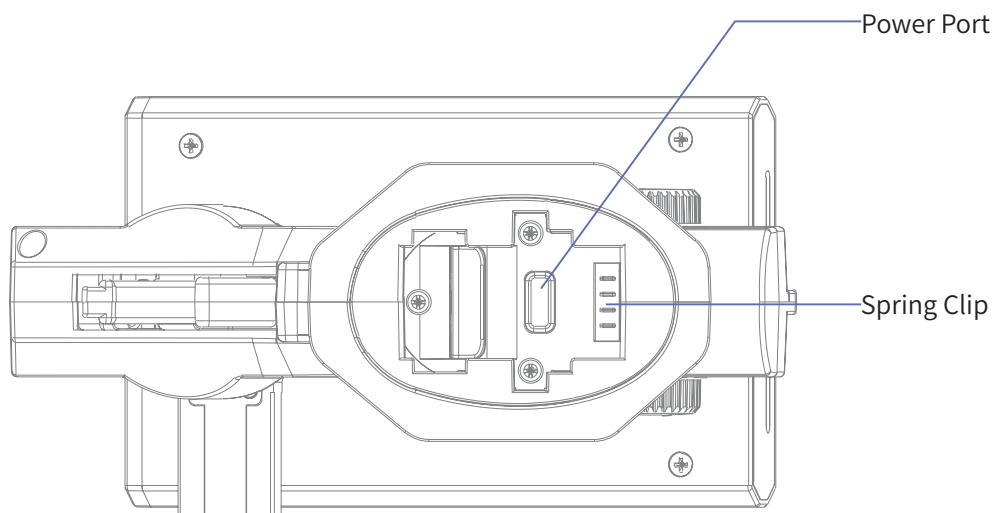
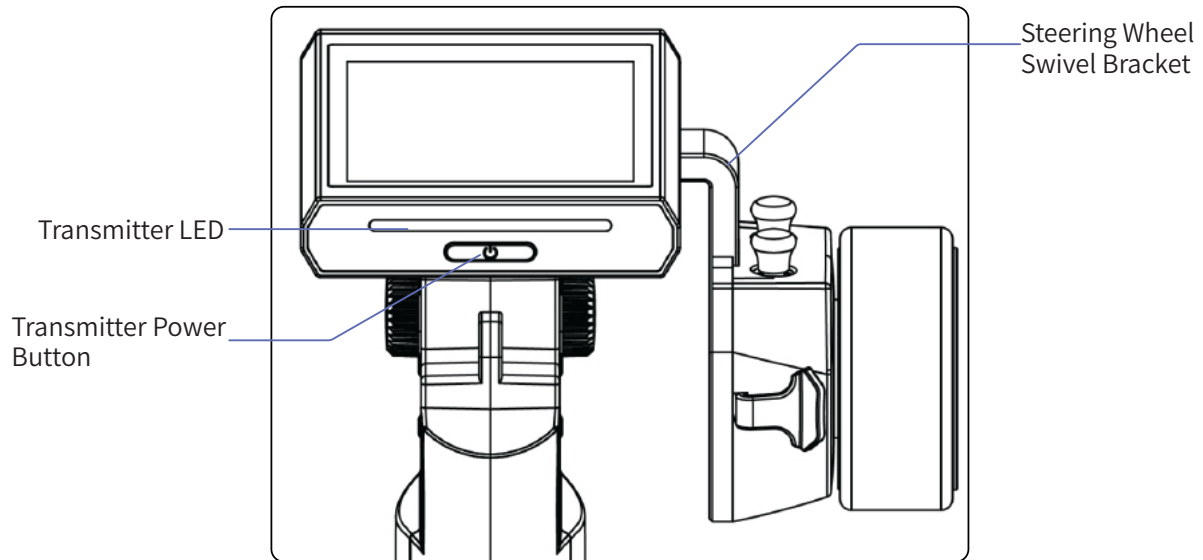


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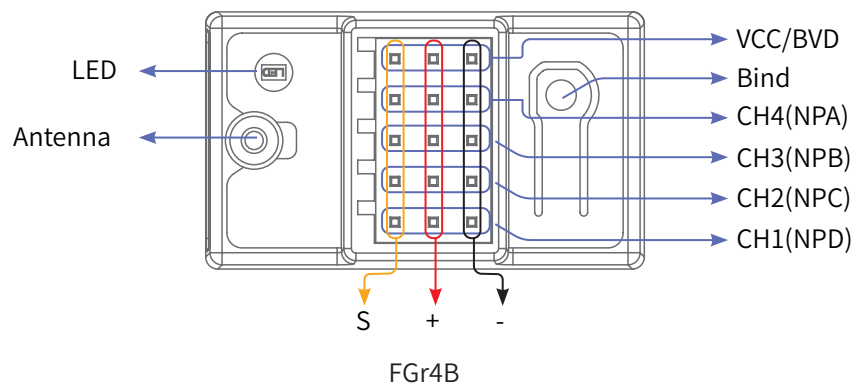
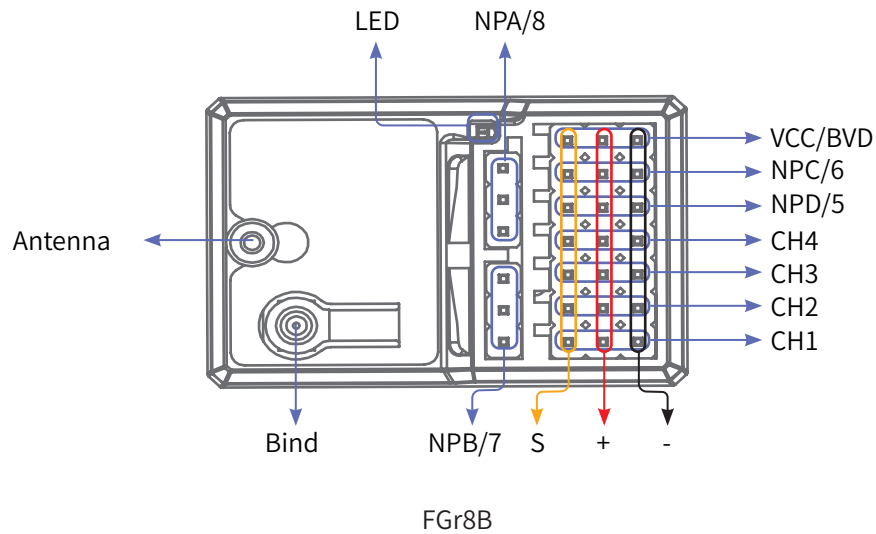


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2.3 Receiver Overview



For best signal quality, it is recommended to keep the receiver antenna up and away from metal when installing the FGr8B or FGr4B receivers.

2.4 Status Indicator

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

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



3. Getting Started

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

3.1 Transmitter Battery Installation

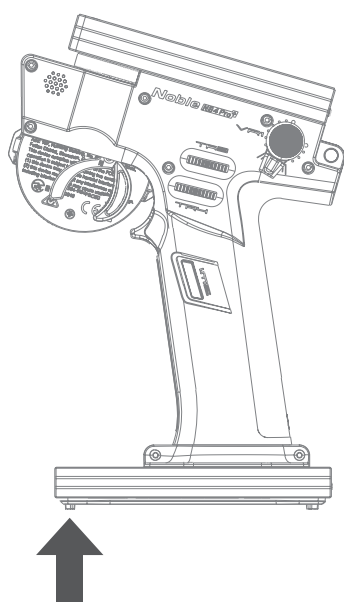
 Danger	• Only use included batteries .
 Danger	• Do not open, disassemble, or attempt to repair the battery.
 Danger	• Do not crush/puncture the battery, or short the external contacts.
 Danger	• Do not expose to excessive heat or liquids.
 Danger	• Do not drop the battery or expose to strong shocks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

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

To attach the base:

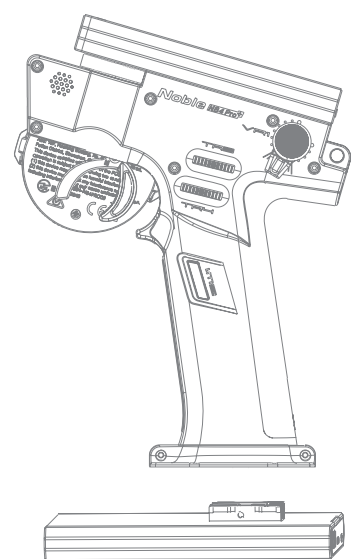
1. Line up the base so that the transmitter handle has a slight over hang on the back.
2. Carefully insert the base contacts into the hole in the bottom of the handle.
3. Hold the handle firmly and pull the battery backwards. When it is secure you should hear a click.

Steps to disassemble the base:



① Lift the base up

② Push the base forward



③ Remove the base



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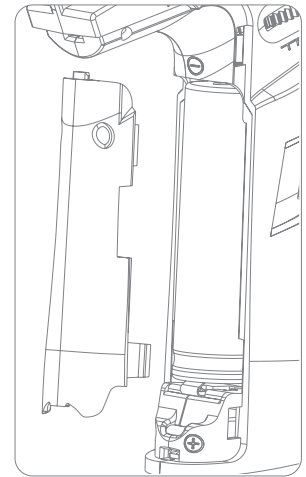
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Steps for replacing the built-in battery of the handle:

1. Remove the grip first, and then remove the handle battery cover (18650 battery cover) ;
2. Remove the 18650 battery to be replaced, align the negative end of the fully charged 18650 battery with the end of the battery compartment with spring, press the spring and install the battery ;
3. Close the handle battery cover (18650 battery cover), install the grip, switch it on, and test whether the transmitter works normally.

Notes:

- Before replacing the handle built-in battery, make sure the transmitter is powered off and disconnected!
- When placing the handle built-in battery, pay attention to the positive and negative poles of the battery.
- To prevent the grip from being damaged during removal or assembly, pay attention to the control force during operations, and refer to [11.2 Remove the grip] and [11.3 Assemble the grip].



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.

 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

The transmitter and receiver have been pre-bound before delivery.

If you are using another transmitter or receiver, follow the steps below to bind the transmitter and receiver:

1. Press the Bind button on the receiver for seconds, and then connect the power cord to any interface on the receiver. At this time, the receiver will flash quickly.
 - Please make sure your transmitter is not connected to other receivers before binding.
2. Turn on the transmitter, click  and enter [RX SET], and select [Bind Set] on the menu.
3. Click [Enhanced RX]. Under the [Start Channel] menu, click the corresponding channel as needed, and click  to return to the previous interface.
4. Click [Start Bind]:
 - AFHDS3 2 Way: If binding is successful the status indicator will remain solid and the transmitter will exit bind mode automatically.
 - AFHDS3 1 Way: If binding is successful the status indicator will flash slowly, however bind mode on the transmitter must be exited manually by touching the back icon.
5. Once binding is complete, remove the power and bind cable from the receiver.
6. Check to make sure everything functions as expected. If not repeat the steps above.
 - This binding procedure only applies to the Noble NB4 Pro+ transmitter and FGr8B/FGr4B receivers. Different receivers have different binding procedures. Please refer to our official website for more information and relevant user manuals.



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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. Press and 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.

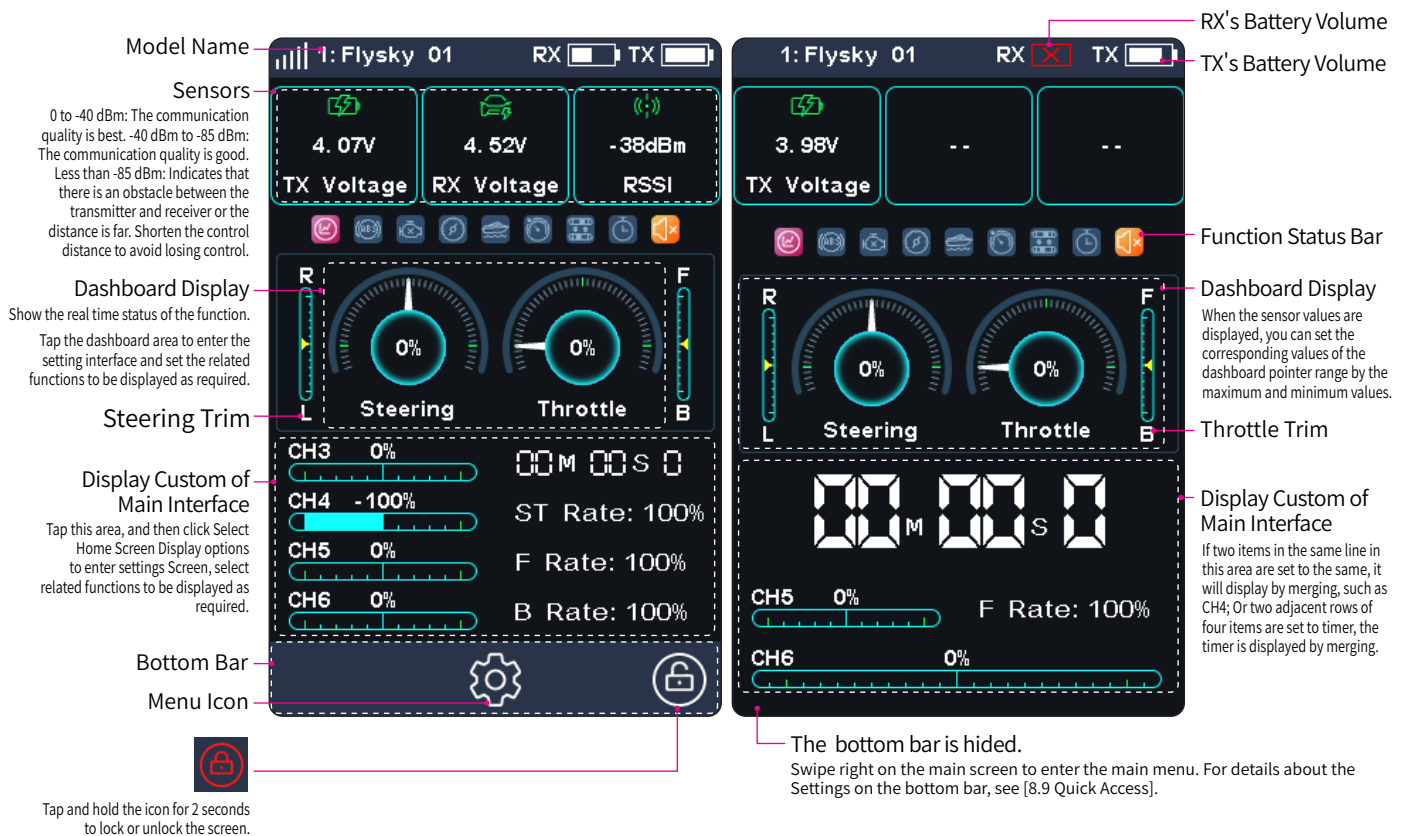


5. System Interface

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

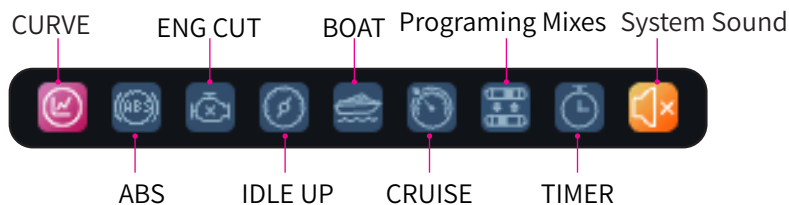
The display on the main interface can be customized as required, including the states and data of the main interface. Up to 8 states and data can be displayed.

Main interface left slide: Channel display; right slide: Failsafe; upward slide: Timer; downward slide: System settings. If you need to change settings, refer to [8.10 Quick Access].



Function Status Bar

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



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.



Reset Icon
Used to reset the setting parameter.



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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.
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. For example, if a steering servo is mounted upside down in order to fit inside a model, when the system's steering wheel is turned, the servo will move in the opposite direction. To fix this, all we need to do is reverse CH1.

The Condition function can be used for REV function, and you can set the REV function for both condition 1 and condition 2 respectively. Namely, you can set different channel directions in different conditions.

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

EPA(End Point Adjust) are the limits of the channels range of movement. There are two endpoints, a low endpoint and a high endpoint.

Setup:

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



6.3 SUBTRIM

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 alignment, 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 D/R

To set the output rates of channel 1 and channel 2, namely, the ST Rate, the Forward Rate, and the Brake Rate.

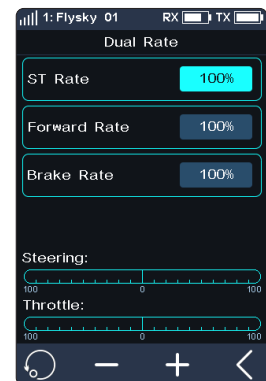
The value range which can be set is from 0 to 100%. The default value is 100%. The steering progress bar and the throttle progress bar which are located at the bottom of the interface display the real-time channel status of this two channels respectively.

The Condition function can be used for D/R function, and you can set the rate parameter for condition 1 and condition 2 respectively.

Assign controls to quickly adjust the function parameters, such as VR/TR controls.

Setup:

1. Touch an option you want to set (When the option is selected, it will be highlighted).
2. Use "+" and "-" to change the percentage as needed. The rate value increases in case of clicking "+", and decreases by clicking "-".
3. Test to make sure everything is working as expected.



6.5 CURVE

It is used to set the data change rate of channel 1 and channel 2, that is, the Steering Curve, the Forward Curve, and the Brake Curve.

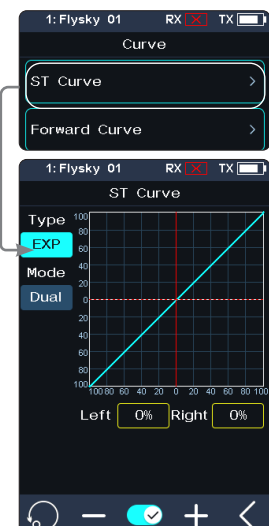
This function is enabled by default. Click to disable this function. When this function is disabled, the icon will change to . Assign controls to quickly enable or disable the function, such as SW control.

The Condition function can be used for D/R function, and you can set the curve parameter for condition 1 and condition 2 respectively.

ST Curve

To set the data change rate of channel 1.

[Type]: Set the curve change form. You can set it to exponential [EXP] (smooth curve) or



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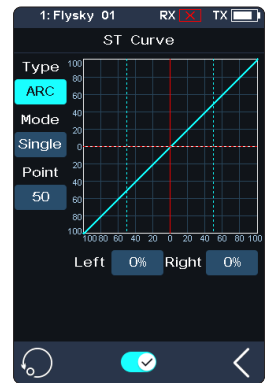
ARC (bend position adjustable). By default, it is EXP.

[Mode]: Set the adjustment mode of the curve, which can be set as "Dual" (synchronous adjustment of left and right sides) or "Single" (independent adjustment of left and right sides).

[Left]: Left rate, which can be adjusted when the mode is set to Single. It is used to independently adjust the left turn curve of channel 1.

[Right]: Right rate, which can be adjusted when the mode is set to Single. It is used to independently adjust the right turn curve of channel 1.

[Point]: It can be adjusted when the type is set to ARC, and used to set the turning point position of the polyline.



Setup:

1. Touch [ST Curve] to enter.
2. Touch [Type] or [Mode] to set the corresponding type and mode.
3. Use "+" and "-" to raise or lower the percentage as needed.
4. Test to make sure everything is working as expected.

Additionally, assign controls to quickly adjust the rates, such as VR/TR controls.

Forward Curve

To set the data change rate of channel 2.

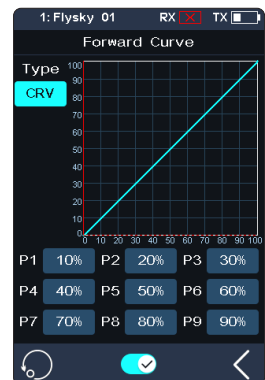
[Type]: Set the curve change form. You can set it to exponential [EXP] (smooth curve), ARC (bend position adjustable) or multi-fold CRV (fixed fold position, 9 points in total). By default, it is EXP.

[Point]: It can be adjusted when the type is set to ARC, and used to set the turning point position of the polyline.

[Rate]: To set rate for the curve.

Refer to the previous description [ST Curve] for the function setting steps.

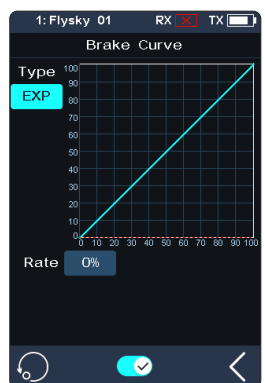
Additionally, assign controls to quickly adjust the rates, such as VR/TR controls.



Brake Curve

To set the data change rate of channel 2 in case of brake or backward.

Refer to the previous description [ST Curve] for the function setting steps and parameters descriptions.



6.6 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 timer features three different modes of timer:

Up Timer

Start the clock from zero.

Click [Up Timer], then click [Start] to start the timer. Click [Stop] to stop the timer. Click [Reset] to reset the single timer function to its default value.

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

Lap Timer

Record the length of each lap.

Once triggered the on icon will become the lap icon. After clicking Lap, the system starts the next lap timer immediately. The timer voice prompts the number of the last lap timer. The timer interface stops for 3 seconds and displays the time of the last lap. All previous lap times 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.

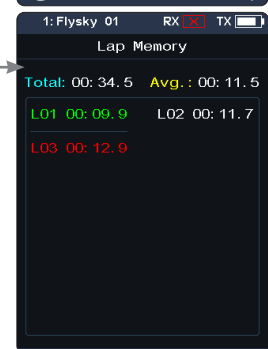
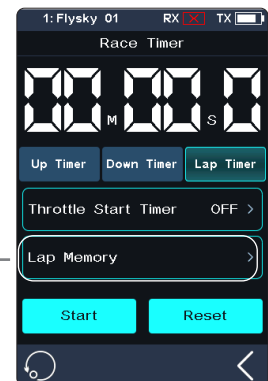
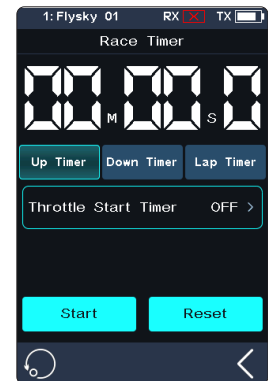
Click [Lap Memory] to enter, the total time and average timing time will be displayed in the menu. Click  to return to the previous interface. The longest lap in the list is shown in red, while the shortest lap is shown in green.

Throttle Start Timer

To start the timer by a set throttle value. Click  to activate this function.

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 1 to 100. You can stop the timer by clicking [TH Stop], and use "+" or "-" to change the throttle stop value, and the level range is -100 to 100. Note that the throttle stop value should be less than the throttle start value.

In addition, the timer can be quickly enabled and disabled by an assigned control through [ASSIGN], such as SW controls which button type is set to S DIR. Press the control for seconds to reset the timer.



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6.7 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.

A control can be assigned to control multiple functions or auxiliary channels at the same time, after assigned, in case of managing the control, a pop-up window will appear, prompting the real-time value or state.

Note: The number of channels is subject to the [Channel Number Definition]. Further more, a auxiliary channel can be assigned a control via [AUX]function.

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 function parameters. Set to S DIR (single direction) or 2 DIR (two directions) through [Button Type].

When the TR control is set to S DIR, you can quickly enable, disable, or switch the assigned functions and channel functions.

If the TR control is set to 2 DIR, when [Type] is set to Normal, functions can be assigned for quick adjustment of function parameters; when [Type] is set to 2 POS(2-position), functions and auxiliary channels can be assigned to quickly enable or disable functions or switch channel states (2-position); When [Type] is set to 3 POS(3-position), auxiliary channels can be assigned to quickly switch the channel states (3-position).

[Type]: Used to set the control to normal, 2 POS or 3 POS.

[Function] and [Function2]: Assign functions to this key or knob.

[Direction]: Used to set the NOR(normal) or REV(reverse) of this button or knob.

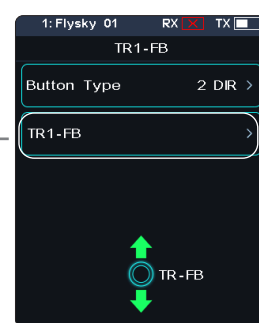
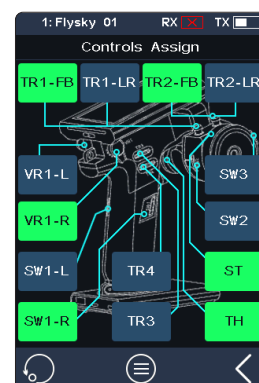
[Mode]: When "Trigger" is selected, channel data will change once through key triggering. Channel data will return to the state before key operation when the key is released. When "TURN" is selected, channel data remains in effect at the time of trigger if the button is rebounded.

[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 [TR1-FB] or any of the other button icons. 2 DIR is the default setting.
[Button Type S DIR]: Means the key or knob can control enabling, disabling, or switching from one direction separately.
[Button Type 2 DIR]: 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. When Type is set to Normal, touch [Function] or [Function2] to enter the next menu, after selecting the function, click  to return to the previous interface.
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.
5. Click[Step], then use "+" or "-" to change the value.

When Type is set to [2 POS] or [3 POS], the step can be adjusted.

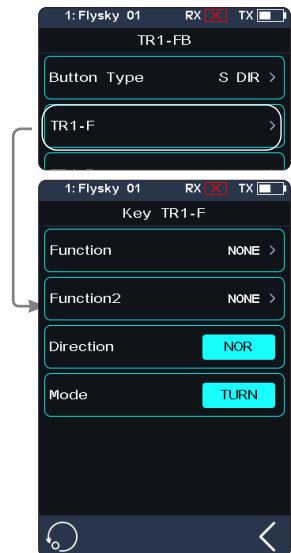


When Type is set to [3 POS], you can set the mode to Trigger or TURN.

6. Test to make sure everything is working as expected.

Switching to Single Direction

1. Click [TR1-FB] or other key icon to enter the submenu; then click [Button Type 2 DIR]. The system will prompt "Switch button type may cause current key setting to be lost, confirm and switch?", click [Yes] to switch [S DIR].
2. Click [TR1-F] or [TR1-B] to display the function setting interface.
3. Click the [Function] or [Function2] icon, then click the corresponding function. Click  to return to the previous level interface.
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.
5. Click [Mode], then set the mode to Trigger or TURN.
6. Test to make sure everything is working as expected.



VR Controls

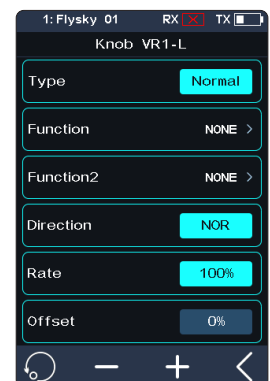
The VR1-L and VR1-R knobs functions are similar to TR controls when TR control is set to 2 DIR. However, the step of VR control cannot be adjusted.

When the VR knob [Type] is set to Normal, functions can be assigned to quickly adjust function parameters. When [Type] is set to 2 POS or 3 POS, functions and auxiliary channels can be assigned to quickly enable or disable the function, or switch the channel states (2-position or 3-position).

[Rate]: Used to set the size of the angle.

[Offset]: Used to set the neutral position of the angle

For the meanings and function settings of other parameters, refer to the TR controls above.



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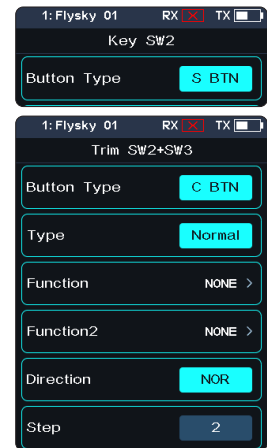
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SW Controls

Functions and auxiliary channels can be assigned to the keys of SW1L, SW1R, SW2 and SW3, quickly to enable or disable functions or switch channel states (2-position).

When SW2 and SW3 are combined as combination switch, the combination switch functions are similar to TR controls when TR control is set to 2 DIR.

Note: The default key type is S BTN(single button). Click the [S BTN] icon on the right side of [Button Type] to switch to the C BTN (combination button).



Steering Wheel And Throttle Trigger

Assign the functions or auxiliary channels to quickly adjust function parameters or channel state.

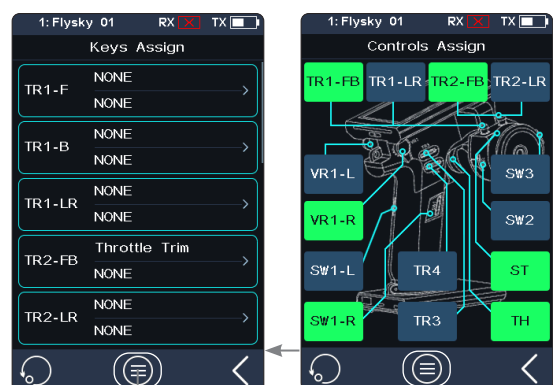
Note: The steering wheel is fixedly assigned with CH1 and the throttle trigger is assigned with CH2, to control the steering and forward/backward movement of the model. When assigning auxiliary channels or functions to the steering wheel and throttle trigger, ensure that the auxiliary channels or functions are assigned correctly to avoid damage to the model or other risk factors caused by misoperation.

Key Assign

To view detailed information about the function assignment of all keys and knobs.

Click  to enter the [Keys Assign].

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



Click to enter Servo View menu.



6.8 AUX

Noble NB4 Pro+ has two fixed channels. Channel 1 outputs steering and channel 2 outputs throttle. If you need to increase the fixed channel, you can use this function.

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

Channel name pre-selection:

1. Click [CH5 NONE] or other channels to enter the interface to set the channel name.
2. Click [Name] and then click the corresponding channel as needed. Click [Back] to return to the previous level interface.
 - The channel will be occupied after selection.

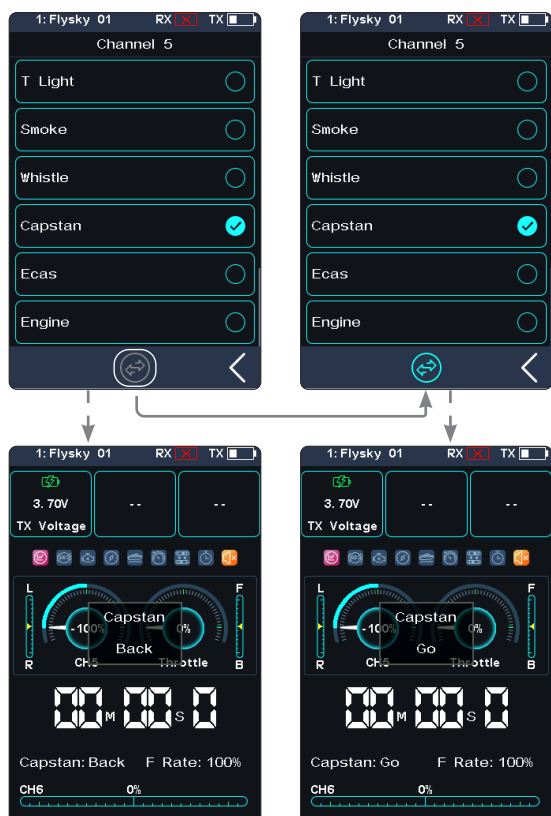
To set the channel name:

Click the [Name] option to set the desired channel name. Press [Enter] for confirmation. Click [Back] to return to the previous level interface.

- A name can be set to any combination of letters, numbers or symbols.

When some functional states are exactly opposite to the model actual state, it can be adjusted by the reverse switch function. After adjustment, the functional state is consistent with the model actual state.

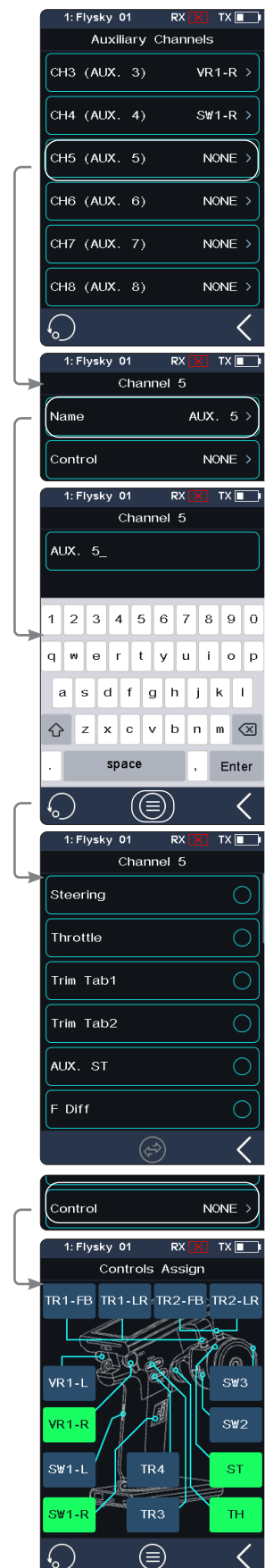
Press [Reverse] to activate reverse function, then you can view the real-time status of functions via the home screen.



Set a control

Sets a control to control the channel. Refer to [ASSIGN] for setting steps.

Click [Menu] 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.



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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 NB4 Pro+ can store up to 25 models.

Select Model

To select a model.

Tap Select Model, then touch a model from the list.

Auto Search Receiver

The model with successful 2-way binding can be switched through the Auto Search Receiver function. Note that the model which is the receiver corresponding to must be in the power-on state.

Click , the system will prompt "Searching for receiver". When the model corresponding to the powered-on receiver is searched, it automatically switches to the model.

Model Name

To name the model.

After clicking [Name: FlySky 01], 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(2~18channels can be selected).

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.

When the lower number of channels is switched to the larger number of channels, model data will not be reset. The system will prompt "After switching you need re-binding, Are you sure?". Click "Yes". Switching is successful.

After choosing [CH2 (Fast)], only two channels for steering and throttle are retained. This makes operations easier and channel delay experiences are richer. It is suitable for new players and players who like different throttle speed experiences.



RF Setup

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

RF Standard

To select RF protocol of the transmitter and receiver.

[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.

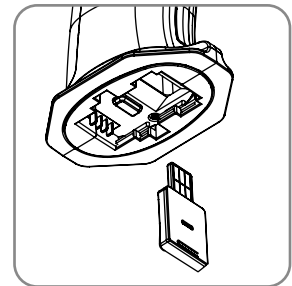
[Mini-Z(EVO)]: It is compatible with Kyosho miniZ EVO receiver. The number of channels is fixed (two channels: steering and throttle).

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

FS-RM005 RF module supports a Noble NB4 Pro+ transmitter. It is only compatible with Kyosho Mini-Z (FHSS) cars.

Bind steps when using FS-RM005 RF module:

1. Remove the transmitter base's mobile power supply and insert the RF module into the transmitter base correctly (as shown in the figure on the right).
2. Click [MODEL]. Select the RF Setup 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 flashes quickly.
 - Operation modes vary with receivers in case of their binding 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], and select [Bind Set]. After the receiver LED state turns to slow flashing, the transmitter will automatically exit the bind 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

1. Click [RF Std.] to enter the submenu.
2. Click the corresponding function as needed. Select "Yes" after the prompt box pops up and click  to return to the previous interface.
 - If you switch the RF standard, the model will be reset and a binding is required again.

Update RF

The update RF function can be used to update the built-in RF module firmware. After the firmware of the transmitter is updated, you need to update the RF module firmware 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, then the update is completed. The transmitter will automatically exit the update interface.

If the transmitter cannot enter the update RF status, there may be no RF module or the RF module is faulty.



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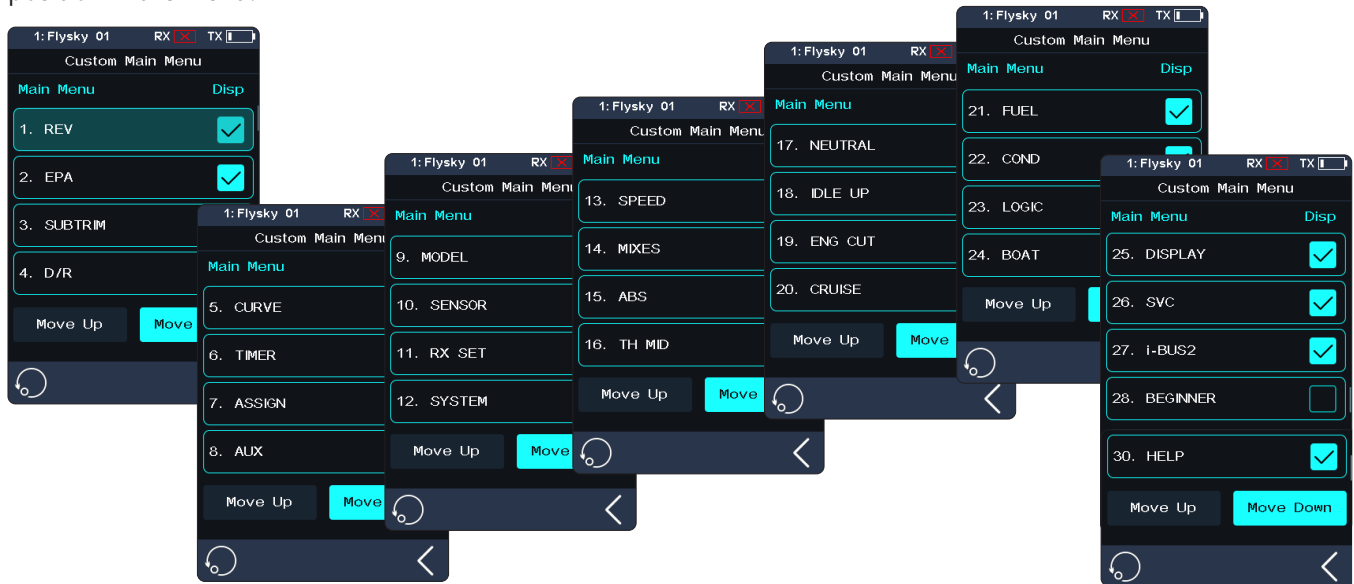


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Custom Main Menu

You can customize the main menus sorting of and visibility of functions.

Click the small box, to select (show it in the menu) or deselect (hide from menu). If you need to adjust the menu order, select the menu you want to move (highlight is selected), then touch [Move up] or [Move down] to change its position in the menu.



Model Reset

To reset a model.

Click Model Reset, then select "Yes" after the prompt box pops up to complete model reset.

Copy Model

To duplicate a model.

Click 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. Then click Yes after the prompt box pops up.

Save As Default Data

To set the current model data to user default data.

Click [Save As Default Data], then click "Yes" after the prompt box pops up. Note After operation [Factory reset], the data will be restored to the factory default data.

Reset To Default Data

To set the current model data to user default data.

Click [Reset To Default Data], then click "Yes" after the prompt box pops up to reset.

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)!



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 available when the receiver is bound to the transmitter using the AFHDS 3 2 Way protocol.



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.

Sensor Limit Value: Displays the extreme value information of the connected sensor. Click  to enter the submenu which displays the limit value.

[Type]: To show the sensor type.

[Polarity]: To display the polarity to be recorded by the corresponding sensor, maximum, minimum, or "/".

[Value]: Record and display the actual limit value of the corresponding sensor.

To clear all records by clicking .

Type	ID	Value
TX Voltage	0	3.94V
RX Voltage	0	4.68V
Signal	0	100
RSSI	0	-25dBm
SNR	0	78dB
Noise	0	-103dBm
BVD Voltage	0	0.05V

Type	Polarity	Value
TX Voltage	Min	3.91V
RX Voltage	Min	4.62V
Signal	Min	100
RSSI	Min	-37dBm
SNR	Min	60dB
Noise	Max	-101dBm
BVD Voltage	/	0.05V

Note: "/" Indicates that the extreme value is not recorded.



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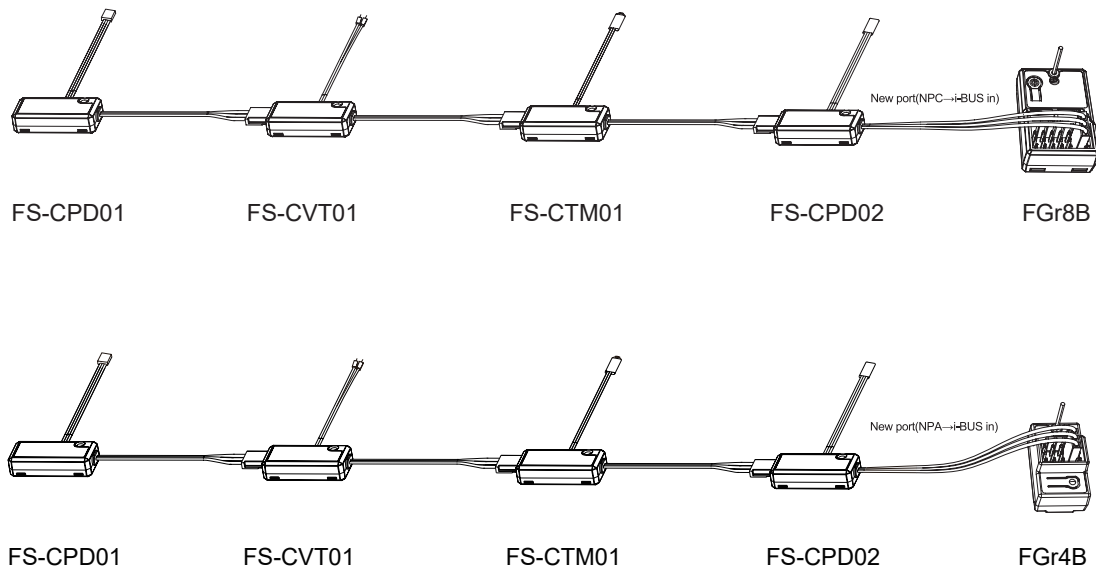


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i-BUS series sensor connection diagram



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.

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 sensor to the receiver or other sensors connected to the receiver using the same method as shown above.
2. Use a spongy double-sided tape to firmly stick the temperature probe to the part you wish to monitor (such as motor, battery).
3. Turn on the transmitter, enter [SENSOR]> [Display Sensors]. If the "Type" column displays "Temperature" and the "Value" column displays a temperature data, 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-CVT01 sensor to the receiver or other sensors using the same method as shown 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]. If the "Type" column displays "External Voltage" and the "Value" column displays a voltage data, then the installation was successful, otherwise repeat the above steps.

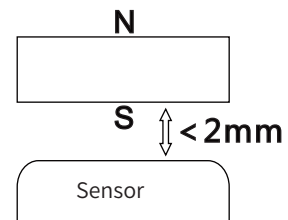
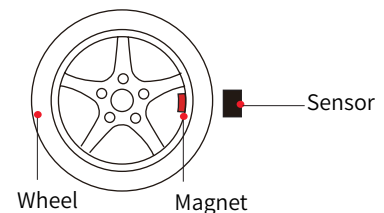
Speed Sensor (FS-CPD01, FS-CPD02)

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.

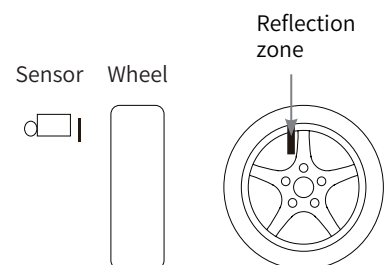
Magnetic Induction Speed Sensor (FS-CPD01)

1. Connect the FS-CPD01 sensor to the receiver or other sensors 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 Sensors]. Turn the wheel. 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.



Light induction Speed Sensor (FS-CPD02)

1. Connect the FS-CPD02 sensor to the receiver or other sensors using the same method as shown 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 Sensors]. Turn the wheel. 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.



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i-BUS2 series sensor connection diagram



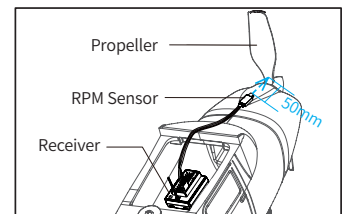
Notes:

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 element perpendicular 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).



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.



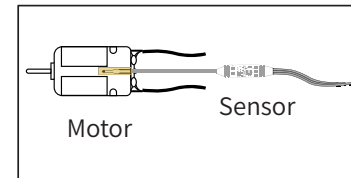
- Turn on the transmitter, enter [SENSOR] , then select [Display Sensors] menu. When the "Type" column shows Air Pressure, Height, Altitude and their values in "Value" column. It indicates that installation is successful. Otherwise, repeat the above steps.

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.

- 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.
- Use soft glue to stick the temperature detecting element on the parts to be detected, for example, motor, ESC or engine.
- Connect the sensor to the receiver using the same method as shown above.
- 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.

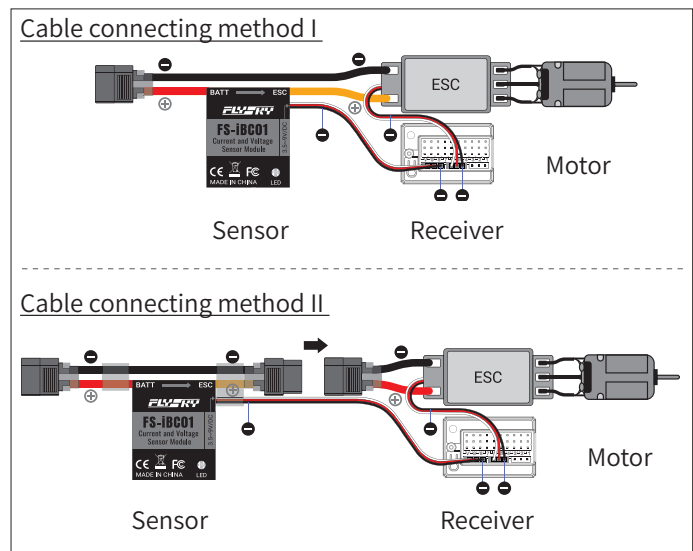


Note: Please refer to the FS-iBT01 manual for more details.

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.

- 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.
- Finish cable connecting according to the cable connecting diagrams as shown. Make sure the cables are connected correctly.
- 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.



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.



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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 multiful sensor function settings under this function, such as [TX Voltage], [RX Voltage], [Signal Strength] and [RSSI], for setting high and low alarm values of the corresponding sensor. During the operating process of the transmitter, we cannot always pay attention to whether the power state of the receiver is sufficient. When the voltage of the receiver is too low, it may cause the power of the receiver to run out by continuing to use. Therefore, the low voltage alarm of the receiver can be set according to the demand to remind the player that the power is too low and pay attention to charging.

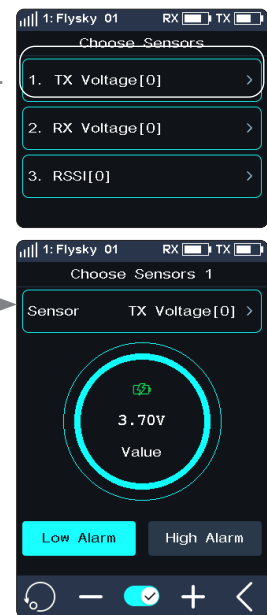
For example , the Signal Strength Indication (RSSI). It refers to the distance between the transmitter and the model determined by received signal strength. A low signal strength indicates a weaker signal received by the receiver. This may cause the model to lose signals. A high signal strength indicates 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. Enter this menu, then touch  to enable this function. When this function is enabled, the icon will change to .
2. Click [Low Alarm] to select. [Value] is the corresponding status low alarm value. Touch "+" or "-" to change the trigger value. The setting of [Hight Alaram] is the same.

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



Data Record

Note: Before using this function, note that [RF Standard] needs to be set to [AFHDS3 2 Way].

This function is used to display and set data-record information.

To set the sensor to be recorded. Click to enter the setting interface.

To select the sensor to be viewed after clicking here, then the relevant data will be displayed in the upper coordinate.

Reset icon
Click to clear all recorded data.
It can also assign controls to reset data via [ASSIGN].

To display the actual page number of the coordinate diagram.
The start/stop/reset of Data Record can be controlled by an assigned control via [ASSIGN]. When a control is assigned, click the control to pause the data record, and hold the control for 2S to reset the record.

When the function is paused, swap the screen left or right to turn the page and view the related records.

To display data for the selected sensor. The horizontal axis represents the time, and the vertical axis represents the sensor value.

To disable or enable the function.



You can set the sensor to be recorded through Data Record Set.

[Record Duration]: Selects the maximum duration of a data record.

[Curve1~4]: Selects the function displayed the curve(Refer to the following table for the function which can be set). Four curves can be set.

[Max Value]: Sets the maximum value corresponding to the function, that is, the value corresponding to the top of the vertical axis in the coordinate. If function of curve is set to Non-channel, this function item appears.

[Min Value]: Sets the value corresponding to the bottom of the vertical axis in the coordinate. If function of curve is set to Non-channel, this function item appears.

Setup:

1. Click [Data Record], then touch  to enable this function. When this function is enabled, the icon will change to .
2. Click  to enter data record set menu.
3. Click the curve to enter, then select an appropriate function as your desired. Click  to return.
4. Click[Max Value], then touch "+" or "-" to change the value. The setting of [Min Value] is the same.



Supported Devices, Default Values and Setting Ranges of Data Record

Devices	Type	Default Value		Related Items for Setting		
		Min Value	Max Value	Setting Range	Step	Unit
Transmitter	Voltage	3	5	0~10	1	V
Receiver	Voltage	4	6	0~10	1	V
	BVD Voltage	5	10	0~100	1	V
Voltage Sensor	External Voltage	5	10	0~100	1	V
Temperature Sensor	Temperature	0	80	-100~200	10	°C
Altitude Sensor	Altitude	0	100	-1000~1000	10	m
RPM Sensor	Rotational Speed	0	5000	0~99900	100	rpm
	Speed	0	60	0~300	10	km/h
GPS	Speed	0	60	0~300	10	km/h
	Altitude	0	100	-1000~1000	10	m
	Acceleration	0	10	-20~20	1	m/s ²
MKS Servo	Angle	-80	80	-100~100	10	°
	Angular Velocity	-200	200	-1000~1000	10	°/s
	Voltage	4	6	0~10	1	V
	Current	0	10	0~100	1	A
	Temperature	0	80	-100~200	10	°C
PowerHD Servo	Voltage	4	6	0~20	1	V
	Temperature	0	80	-100~200	10	°C
	PWM Duty Cycle	0	100	0~100	10	/
HW ESC	Voltage	5	10	0~100	1	V
	Current	0	10	0~1000	1	A
	Rotational Speed	0	5000	0~99900	100	rpm
	Electricity Consumed	0	5000	0~99900	100	mAh
	ESC Temperature	0	80	-100~200	10	°C
	Motor Temperature	0	80	-100~200	10	°C



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Speed And Distance

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

[Speed Sensor]: Select the target sensor. If the sensor and receiver are connected, the sensor 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 length.

[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, that is, it is the cumulative distance.



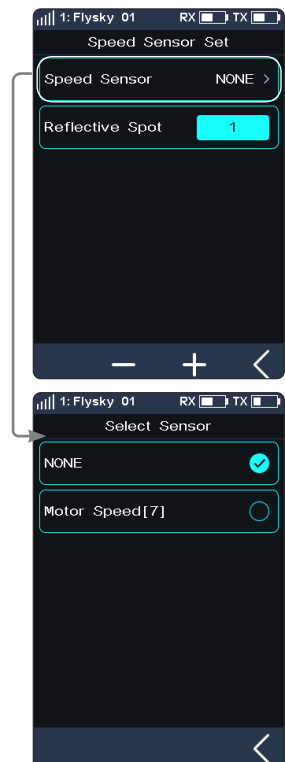
i-BUS2 Speed Sensor Set

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.



Altitude Zero Set

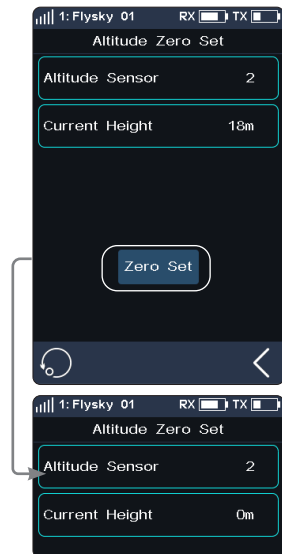
This function is used to set the current height to 0 m base height.

[Altitude 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.



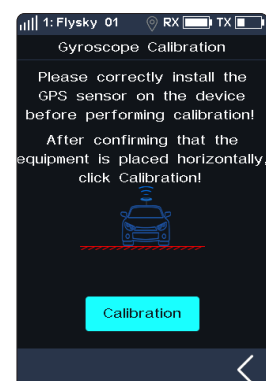
GPS Set

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. The positioning icon  will appear in the top bar of the menu.

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



[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.



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[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 date and time in 24-hour clock.

Model data displaying area

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

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

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

GPS Status Icon



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.

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

1. 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°.
2. The azimuth angle can be displayed in the home dashboard area through customization.

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.

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

2. The attitude angle can be displayed in the home dashboard area through customization.



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.

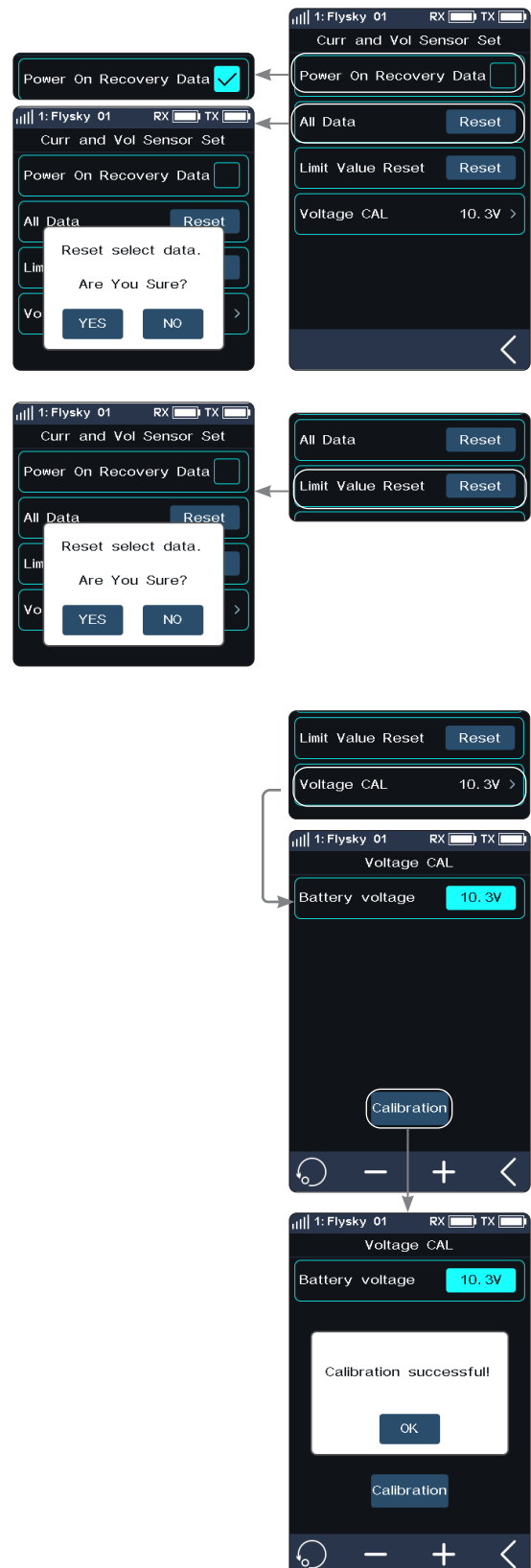
[Limit Value Reset]: Resets all extreme value which includes the maximum/minimum voltage and the maximum current.

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.



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6.11 SPEED

This function allows you to set the steering speed, forward speed, brake speed and response speeds of CH3 to CH18.

The Condition function can be used for SPEED function, and you can set the rate parameter for both condition 1 and condition 1 respectively.

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.

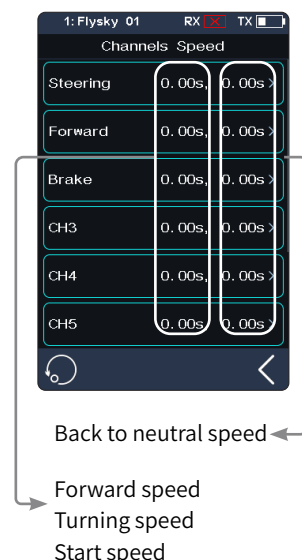
This function can be used for adjustment when the vehicle is operated with fast steering, which may cause the vehicle to lose control or when the vehicle structure cannot withstand a too fast steering speed.

[Forward]: 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], [Forward] and [Brake] can be adjusted by assigned controls via the [ASSIGN] function, such as VR/TR controls.



Channel Speed - Steering

Setup:

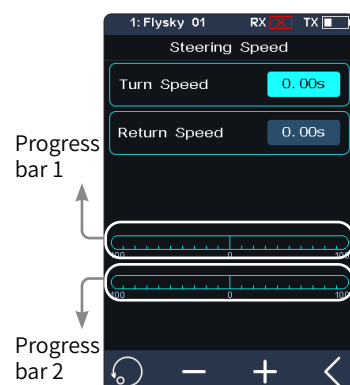
[Turn Speed]: Slows down channel output speed when the steering wheel is moving from the neutral position to maximum travel.

[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: Show the channel output speed after the delay (as shown on the right).

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



Channel Speed-Brake

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

Setup:

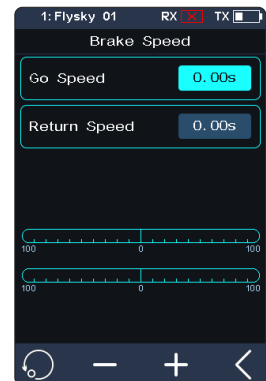
[Go Speed]: Sets the speed of the throttle brake.

[Return speed]: Set 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 "+" or "-" to change the response duration as needed.
3. Verify that settings are normal as expected.

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

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



Channel Speed - Forward

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.

[Point P1]: Means the division point between the first forward travel and the second forward travel. The default point is 30%, and adjustable range is 0-99%.

[Point P2]: Means the division point between the second forward travel and the third forward travel. The default point is 60%, and the adjustable range is 1-100%.

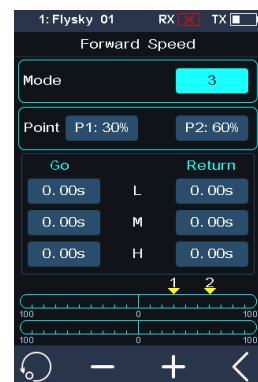
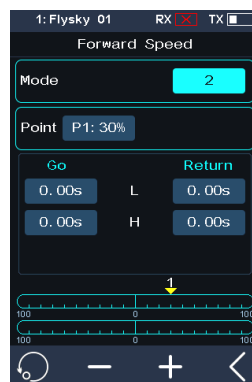
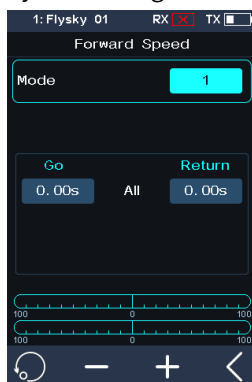
[L]: The first travel.

[M]: The second travel. It can be set under the menu of mode 2 and mode 3.

[H]: The third travel. It can be set under the menu of mode 3.

Setup:

1. Tap the icon next to the mode, then use "+" or "-" to select the mode.
2. Click the option that needs to be set. This item is highlighted when selected.
3. Click "+" or "-" to change the response time or the percentage of the corresponding point as required. Then tap "+" or "-" to accelerate adjustment of the corresponding value.
 - The percentage of point P1 differs from the percentage of point P2 by at least 1%. The lower the percentage, the slower the throttle channel responding to the throttle trigger operation.
4. Verify the settings are normal as expected.



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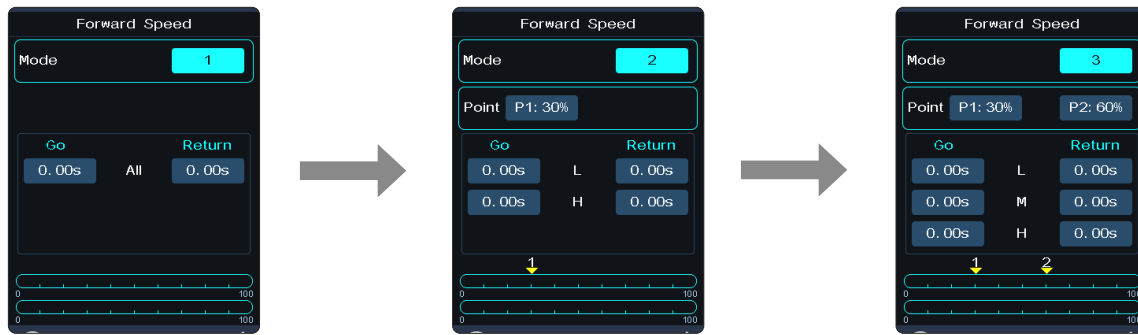


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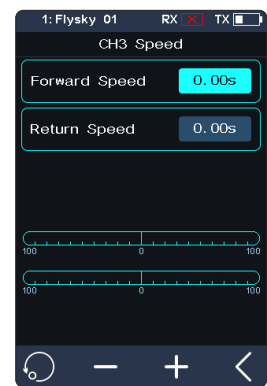
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When the Boat mode is enabled, the related menus are as below.



Channel Speed - CH3-CH8

This function is used to set the delay time of CH3-CH18 forward and return-to-neutral.



6.12 MIXES

This function allows you to set 5 mixing functions, that is, [4WS Mixing], [Track Mix], [Drive Mix], [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.

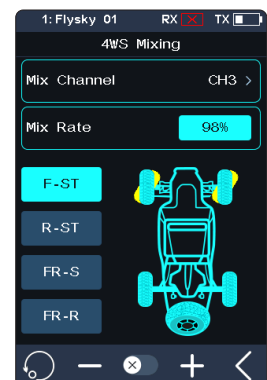
By default, the front wheel steering is used in this function.

By default, the function is disabled.

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

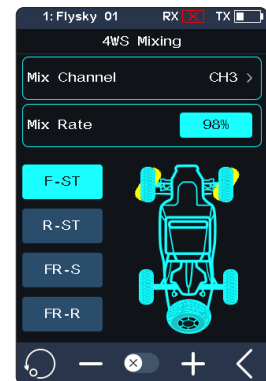
Setup:

1. Click [CH3] on the right side of [Mix Channel]. Then click the corresponding channel. After selection, the channel will be occupied. 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.
- Click "+" or "-" to change the ratio as required.
 - Click  to enter Controls Assign menu, then select the steering type as required. You can select [Steering Mix Mode] in the [Assign] function, and control or switch, such as SW keys. Alternatively, you can select [Steering Mix Rear], [Steering Mix Same] or [Steering Mix Reverse], to assign a control to disable or enable, such as SW controls. Click  to return, after this function is enabled, the icon will change to .
 - You can select [4WS Mixing Rate] in [ASSIGN], then assign a control to adjust, such as VR/TR controls.
 - Verify the settings are normal as expected.



Track Mix

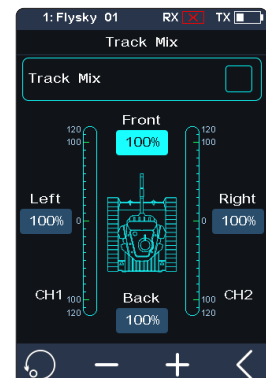
This function is applicable to models such as tracked vehicles and tanks, and allows one trigger or steering wheel to control the left and right tracks to move forward or steering differently at the same time.

This function allows you to set the rates of forward, backward, left and right separately. The rate adjustment range is 0-100% and the adjustment step is 1%.

The left progress bar shows the channel value of CH1 left track. The right progress bar shows the channel value of CH2 right track. The figure on the right indicates the state of operating the throttle forward separately.

Setup:

- Select the check box on the right side of [Track Mixing] to enable this function. After the function is enabled, the icon will be change .
- Click the rate you want to set. The selected option is highlighted.
- Click "+" or "-" to change the ratio as required.
 - The rate can be adjusted by selecting [Track Mixing Forward], [Track Mixing Backward], [Track Mixing Left] or [Track Mixing Right] in the [ASSIGN] function, with assigning a control for adjustment, such as VR/TR controls.



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Drive Mix

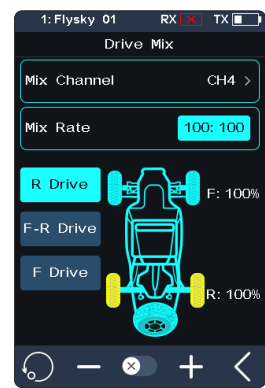
Drive mix is used to set the way to control the vehicle engine drive, including three drive modes: rear drive, front and rear hybrid drive, and front drive. By default, rear drive is used.

Front drive has a shorter braking distance, which is suitable for emergency braking. In Rear drive, the front wheels can focus on steering, which is more suitable for vehicle drift. The F-R Drive (front and rear hybrid drive) is to drive the vehicle by starting all four wheels together, which can provide more traction to improve power of the vehicle in acceleration, hill climbing, and other roads.

[Mixing rate]: Include front rate (F) and rear rate (R) (100:100=F100%:R100%). The rate is only used when front and rear drive are mixed. The adjustment range of both front and rear rate is 0-100%, and the adjustment step is 1%.

Setup:

1. Click [CH4] on the right side of [Mixing Channel]. Click the corresponding channel as required. 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.
2. Click "+" or "-" to change the rate as required.
 - When the mixing ratio is 100%:100%, the ratio of [R] decreases when you click "+", and the ratio of [F] decreases when you click "-". In any state, the percentage of [F] and [R] is kept at 100%.
3. Select the drive mode as needed. The figure on the right indicates the state of rear drive mode.
4. Click  to enter Controls assign menu. You can select [drive mix rate] under the function of [ASSIGN], and assign a control for adjustment, such VR/TR controls. Click  to return, 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:

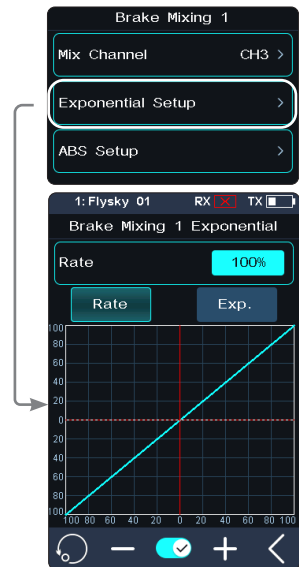
1. Click [Brake Mixing 1 Off] option to enter the submenu.
2. Click [CH3] on the right side of [Mix Channel]. Then click the corresponding channel as needed. This channel will be occupied after selection. Click  to return to the previous level interface.
 - Each channel can only be assigned one mixing 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 under the [ASSIGN] function, and assign a control for adjustment, such as VR/TR controls. A pop-up window will appear in the adjustment by pressing the key, prompting the realtime value. Select [Brake Mixing 1 EXP Setting], [Brake Mixing 1 A.B.S.] or [Brake Mixing 2 EXP Setting], [Brake Mixing 2 A.B.S.] to assign SW keys to achieve two sets of brake mixing functions to enable/disable quickly.



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 [Mixing 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 master channel from the list. The master channel will affect the slave channel.
4. Click [Slave Channel] and select a slave channel from the list.
5. Select [Low Side Mixing] or [High Side Mixing] as needed. Click "+" or "-" to change the percentage to adjust the amount of low end or high end mixing. Click to return to the previous 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 a control in the [ASSIGN] function to adjust 8 groups of programmed mixing controls of [Low Side Mix], [High Side Mix] and [Offset] rates, such as VR/TR controls.

In addition, it is possible to quickly enable or disable Mix 1 to Mix 8 functions by a control, such as SW controls.



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6.13 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.

The Condition function can be used for ABS function, and you can set the ABS parameter for both condition 1 and condition 1 respectively.

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 indicating 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 green line on the graph.

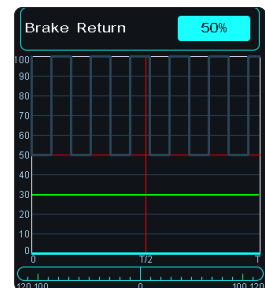
Below the graph is a bar that shows the real-time braking position. When this function is active and the brake is applied, the green bar will oscillate in real time showing the A.B.S. in action.

The function is disabled by default. Click  to enter Controls Assign menu. Assign a control to enable or disable the function. When this function is enabled, the icon will change to .



Brake Return

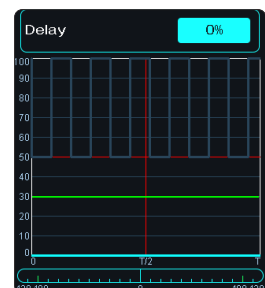
Control the reduction of braking during each pulse. Can be set to any value between 0% and 100%. By default it is set to 50%. If set to 60%, when the brakes are active; the system will remove 60% of the brakes strength on each pulse.



Delay

Determine 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 the value is 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

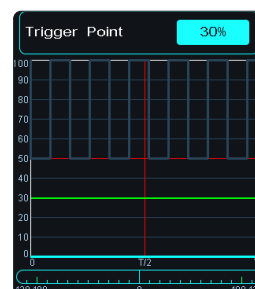
Increase or decrease the time between pulses. It can be set to any value between 20% and 100%. By default it is set to 50%. The higher the value, the longer the pulse. The maximum setting of 100% will result in a cycle length of 0.5 seconds.



Trigger Point

Configure the point at which the A.B.S. starts to function. It can be set to any value between 20% and 100%. By default it is set to 30%. The higher the percentage, the closer the trigger position of the A.B.S. is to the full braking position.

0%-100% represents the entire braking travel movement of the throttle trigger.



Duty Cycle

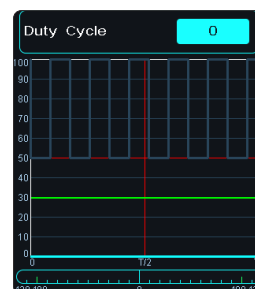
Change the length of each pulse and the gap between them. Adjustment range is from -4 to +4 cycles. By default it is 0. When the value is changed, the peak and trough lengths of the brake pulse's square wave change accordingly.

Adjusting the brake to release rate.

When the duty cycle is set to "0", the rate is 1: 1;

When the duty cycle is set to "1", the rate is 1: 2;

When the duty cycle is set to "-1", the rate is 2: 1.



Steering Mix

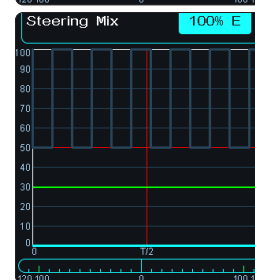
A.B.S. can be enabled or disabled automatically while turning when mixed with steering wheel.

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.



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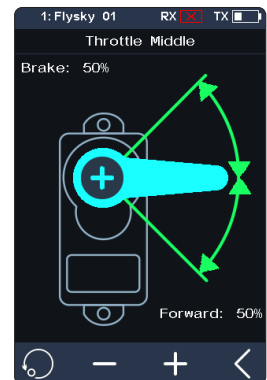
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6.14 TH MID

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.



6.15 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.

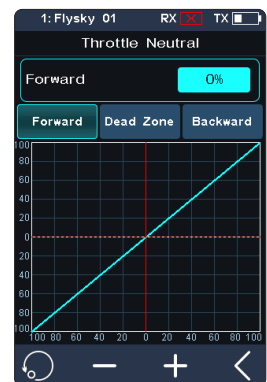
[Forward]: When it exceeds the dead zone, the throttle channel will output this value directly to accelerate forwards.

[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 change the percentage as needed.
3. Repeat with other settings as needed.
4. Test to make sure everything works as expected.



6.16 IDLE UP

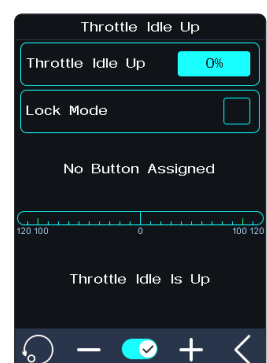
The Throttle Idle Up function is used to set the engine idle for gas-powered car when the trigger is in the neutral position. After setting the Idle Up function. Idle Up function makes sure that the engine always has some throttle in order to keep it from stalling.

This function is disabled by default.

[Lock Mode]: When the lock mode is disabled, the channel data continues to decrease when the trigger is pulled back. When lock mode is enabled, pull back the trigger, and the channel data locks to the set value.

Setup:

1. Click  to enter Controls Assign menu. Assign a control to enable or disable the function. When this function is enabled, the icon will change to .
2. Click "+" or "-" to change the percentage as needed.
3. Test to make sure everything works as expected.

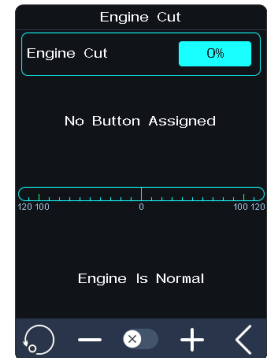


6.17 ENG CUT

After the function is enabled, the throttle servo will remain in the predefined position, and the throttle trigger cannot control the throttle output.

Setup:

1. Click  to enter Controls Assign menu. Assign a control to enable or disable the function. When this function is enabled, the icon will change to .
2. Click "+" or "-" to change the percentage as needed.
3. Test to make sure everything works as expected.



6.18 CRUISE

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. The vehicle can continue to travel at the same speed after it is enabled, but also manually increase the speed.

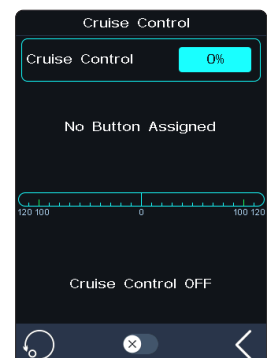
[Manua Acceleration]: When this function is enabled, pulling the trigger can increase the throttle amount in the cruise state, and the vehicle accelerates. When the trigger is released, the vehicle can continue to travel at the previous speed.

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

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

Setup:

1. Click  to enter Controls Assign menu. Assign a control to enable or disable the function. When this function is enabled, the icon will change to .
2. Click "+" or "-" to change the percentage as needed.
 - The percentage cannot be adjusted when cruise function is not enabled.
3. Click [Manua Acceleration], increase the throttle as needed.
 - The throttle capacity can be increased through the trigger. After releasing the trigger, the throttle will return to the set value.



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6.19 FUEL

The fuel consumption function is applicable to fuel vehicles, displaying the real-time fuel consumption. After this function is enabled, the  will be displayed in the status bar at the top of the main interface.

[Remaining Fuel]: Displays the actual remaining fuel quantity of the model vehicle in percentage.

[Tank Capacity]: Sets the capacity of the fuel tank of the model vehicle.

[Min Fuel C](Min fuel consumption): Sets the fuel consumption corresponding to the minimum throttle of the model vehicle.

[Max Fuel C](Max fuel consumption): Sets the fuel consumption corresponding to the maximum throttle of the model vehicle.

[Fuel Exp](Fuel consumption Exponential): Sets the rate of throttle trigger action to fuel consumption.

[Alarm Fuel]: Sets the fuel alarm. When the fuel is smaller than the set value, the transmitter will send an alarm.

Setup:

1. Click  to enable the function. When this function is enabled, the icon will change to .
2. Click "+" or "-" to change the percentage as needed.
3. Test to make sure everything works as expected.



6.20 COND

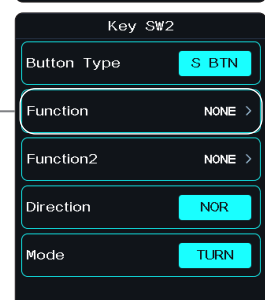
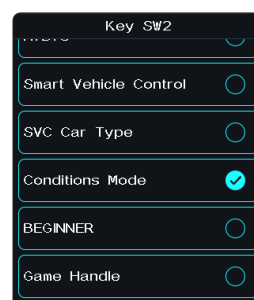
You can set some functions and enable the condition mode. It supports two groups of condition mode in total(C1 and C2). You can set the condition mode in six functions, that is, [Dual rate], [Curve], [Channel Speed], [ABS], [Trims], and [Reverse]. When the condition mode is enabled, the control must be set by [Key setting] to switch the condition mode. The default condition mode is C1.

When the function is enabled, the condition mode icon ( or ) is displayed in the status bar at the top of the main interface.

In practice, the setting parameters of the functions are different for the same function when a model vehicle runs on different roads. In this case, the condition mode can be switched to invoke different setting parameters.

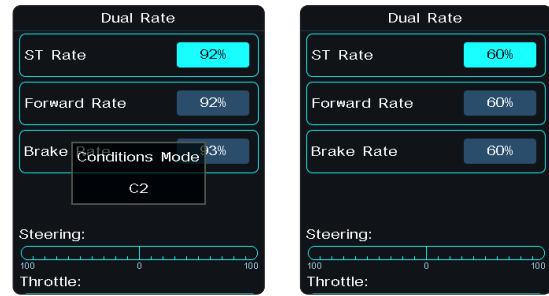
Setup:

1. Tap the function you want to set condition, such as Dual rate.
2. Click  to enable the function. When this function is enabled, the icon will change to .
3. Set a control via ASSIGN function to switch between two conditions.
4. Access D/R function, then set the related parameters of



D/R under condition 1.

- Switch to condition 2, then set the related parameters of D/R under condition 2.



6.21 LOGIC

A logic switch is a virtual switch consisted of 2 switches.

If there is any mathematical logic relationship between certain switch controls and the other two switch controls, this function can be used to express this logic and use it as a logic switch in control.

The system supports to set two groups of logic switches in total. There are three logic difinations between two switches: AND, OR and XOR. [AND] If switch 1 and switch 2 are active, then the logic switch will be on. If either switch 1 or switch 2 is off, or switch 1 and switch 2 are both off, the logic switch is off. [OR] If either switch 1 or switch 2 is active, or switch 1 and switch 2 are both on, then the logic switch will be on. If switch 1 and switch 2 are both off, the logic switch will be off.[XOR] If either switch 1 or switch 2 is active, then the logic switch will be on, but if switch 1 and switch 2 are both active or off, the logic switch will be off.

[Logic Switch 1 or 2]: Sets the logic switch.

Click to enter the setting menu.

[Switch 1 or 2]: Sets a switch of the logic switch.

Click to enter the setting menu. then select an appropriate switch, click to return to the previous menu.

[Logic Relationship]: Sets the logic relationship.

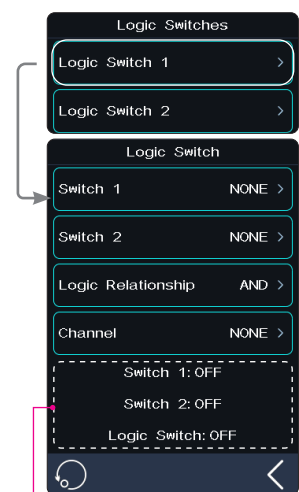
Click to enter the setting menu. then select an appropriate logic relationship , click to return to the previous menu.

[Channel]: Sets a channel corresponding to the logic switch.

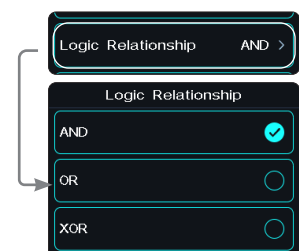
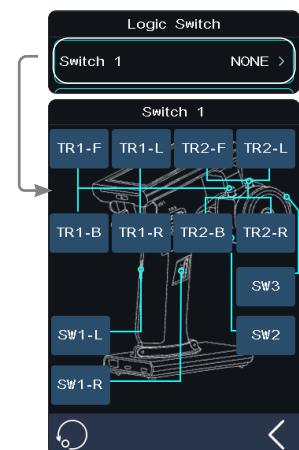
Click to enter the setting menu.

The logical relationship between logical switches are as following.

Switch	Logic Relationship											
	AND				OR				XOR			
Switch1	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON
Switch2	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON
Logic Switch	OFF	OFF	OFF	ON	OFF	ON	ON	ON	OFF	ON	ON	OFF



Status display: Displays the status of the two switches and the status of the logical switch after logical operation.



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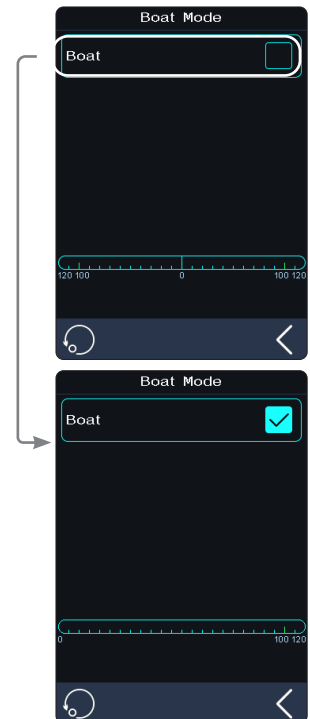


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6.22 BOAT

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.



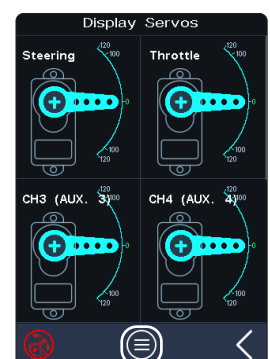
6.23 DISPLAY

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 through 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.
--	--

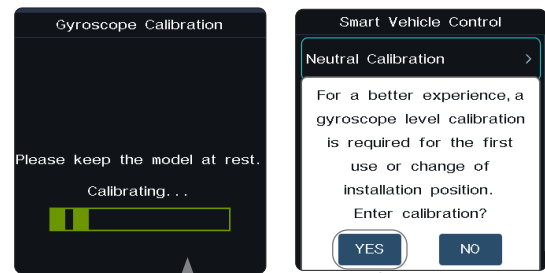
Click to enter the channel display interface. In this list, you can view the data progress bar of all channels and the percentage data of channels.



6.24 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 gyroscope 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 controls to quickly enable or disable the intelligent vehicle control functions, such as SW control.

Assign controls to quickly adjust steering sensitivity, throttle sensitivity, priority, and advanced functions such as steering wheel sensitivity, damping range, damping setting, and vibration filter parameters. such as R/TR controls.

Assign controls to quickly switch between model vehicle types. such as SW controls.

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.

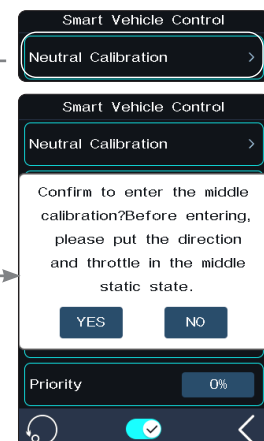
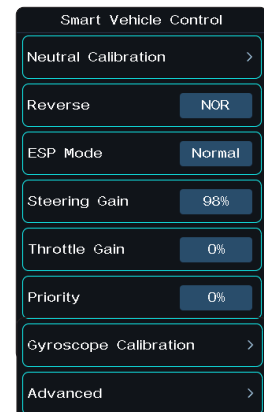
[Lock]: If the steering wheel is return-to-center, the gyroscope will control the servo in the opposite direction according to the yaw angle when the vehicle is yawing, to make it go back to the expected direction (if the steering wheel is not return-to-center in the "Lock mode", it will be the same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



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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 INr4-GYB receiver.)

Advanced

To adapt 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.

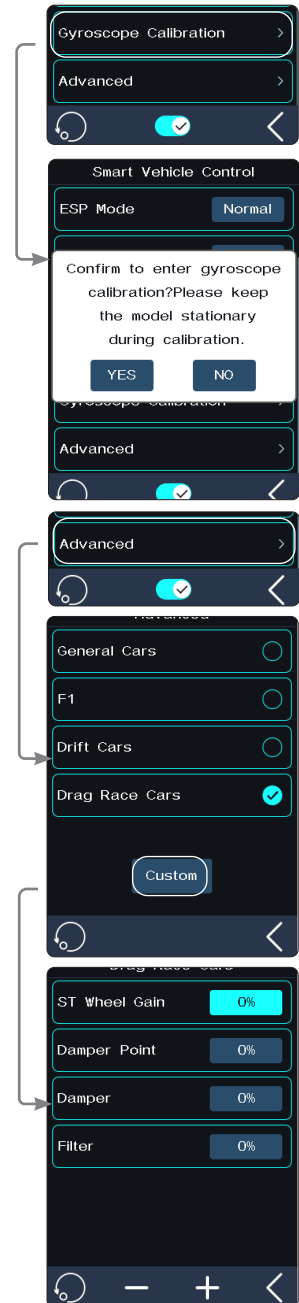
[Damper Point]: Adjusts the servo to the damper point in front of the target angle position. In the damping interval, the servo oscillation speed will be slowed down. The higher the value, the larger the interval in which the servo speed is slowed down.

[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.



- 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.
- 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.

6.25 TRAINER

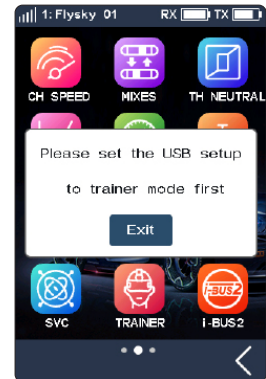
Noble NB4 Pro+ supports three function modes: Trainer, Student and H Track. Transmitters set to Trainer or H Track Mode accept external signals to control the model, that is, the trainer interface or head tracker interface has the ability to recognize external PPM signal input. Transmitters set to Student Mode only output PPM signals and do not recognize the input signals.

Two transmitters (one for Trainer mode and one for Student mode) can be connected via a double-ended Type-C cable to realize the trainer function.

One transmitter (H Track mode) can be connected to the headset via head tracker cable to realize the head tracker function.

Setup:

- Find this function in the menu and click  to enable this function. When this function is turned on, the icon will change to .
 - You can assign a control in the [ASSIGN] interface to enable or disable this function.
- Click Mode (it is Trainer by default) to switch to Student and H Track.
- Perform the test to ensure that the settings work as intended.



Trainer

When the Trainer Mode is set to Trainer, the transmitter only supports Trainer function at this time.

Setup:

- Click to enter [Trainer].
- Click [Trainer Mode Setup] to select to turn on [Steering], [Throttle], [CH 3-18].
 - The number of channels displayed is based on [Channel Number Definition] in [MODEL].
- Perform the test to ensure that the settings work as intended.

Click  to reset the Trainer Mode function. If you select [Yes] in the pop-up window, all settings are restored to the default values. If you select [No], the pop-up window closes directly.



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Student

When the Trainer Mode is set to Student, the transmitter only supports Student function at this time.

[Signal Polarity]: High level is valid by default positive. Some devices may recognize low level as valid signal. At this time, set the signal polarity to negative, that is, low level is valid.

[Number of Channels]: set the number of channels in a PPM signal. By default, a PPM signal contains 8 channels. The setting range is 4-18, and the step is 1.

[Period]: Refer to the time of transmitting a PPM signal. The standard 8-channel PPM signal period is 20ms. The range is 12.5 - 45ms, and the step is 0.5ms.

- When fewer channels are used, a shorter period can be set to shorten the time required to send a signal to reduce latency. However, the setting of the period can only shorten the idle period, instead of effective signal duration. Therefore, the setting of the period will not reduce the number of signal channels. When the number of channels increases and the effective signal sending time is greater than the period, the system will process the signal in the minimum idle mode, and the interface setting value will not be changed accordingly.

[Starting Level]: The start mark time identifies the PPM signal. Default value is 400us. The range is 100 - 700us, and the step is 50 us.

Setup:

- Click to enter [Student].
- Click [Signal Polarity] to switch to negative low level is valid.
 - Some devices may recognize a low level as a valid signal, and at this time [Signal Polarity] should be switched to negative.
- Click [Number of Channels], [Period] or [Starting Level]. When selected, this item is in high-luminance state.
- Click "+" or "-" to change the number of channels, period or starting level as needed. Long press "+" or "-" to accelerate the adjustment of the corresponding values.
- Perform the test to ensure that the settings work as intended.

Click  to reset the Student Mode function. If you select [Yes] in the pop-up window, all settings are restored to the default values. If you select [No], the pop-up window closes directly.

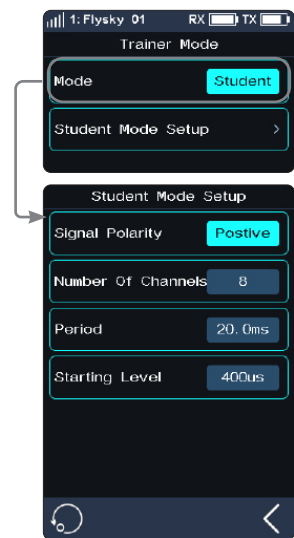
H Track

When the Trainer Mode is set to H Track, the transmitter only supports Head Tracker function at this time.

Setup:

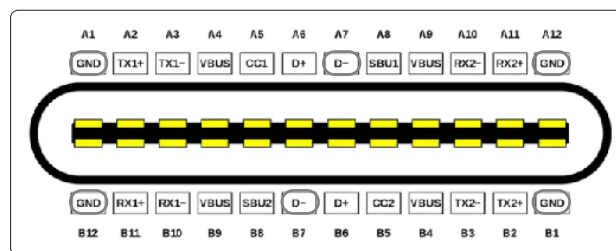
- Click to enter [H Track].
- Click the corresponding channel in the list to assign (by default, it is unassigned). You can assign CH1-CH8 as the control channels.
 - The number of channels displayed is based on [Channel Number Definition] in [MODEL].
- Perform the test to ensure that the settings work as intended.

Click  to reset the Head Tracker Mode function. If you select [Yes] in the pop-up window, all settings are restored to the default values. If you select [No], the pop-up window closes directly.



Notes:

- Users need to prepare the cable for the Trainer function (dual-ended Type-C cable) and the cable for the Head Tracker function (Type-C port on one end and audio port on the other end in advance).
 - If users do not have a suitable head tracker cable, the FS-XC201 Type-C cable can be used to change the cable according to the definition of Type-C cable sequence, retaining the Type-C connector of the Type-C cable. Use a plier and other tools to cut off the other end of the Type-C cable, and lead out the wire cores wrapped by the Type-C cable. The user confirms which two wires are the ground line (GND) and the signal line (PPM). Generally, the black wire core is the ground line and the white wire core is the signal line. It is subject to the actual measurement of the wire sequence.
 - Take the S-terminal of the head tracker interface as an example. Before rewiring, you need to confirm the pin definition of the S-terminal, so as to lead out the earth wire (GND) and signal wire (PPM) wrapped in the head tracker cable. The steps are similar to those of rewiring FS-XC201 Type-C cable. Keep the S-terminal connector of the head tracker cable, cut off the other end with a plier and other tools, and lead out the cores wrapped in the head tracker cable, and then connect the two cores of the FS-XC201 Type-C cable with the two cores of the head tracker cable. Then you can use the head tracker function normally (the GND line connects to the GND line, and the Signal line connects to the signal line).
 - Take the 3.5mm head tracker interface as an example. Choose 3.5mm Type-C cable to change to 3.5 mm audio port adapter cable. You need to confirm in advance whether the audio port of the FPV glass outputs PPM signals (For details, check FPV glasses manual.). Meanwhile, make sure that the signal line (PPM) of the Type-C cable connects to the PPM signal line of the audio port. If the connection is not established, the transmitter will not be able to correctly identify the PPM signal output from the headset, and will not control the headset.



Type-C Wire Sequence

Type-C wire sequence definition:

Noble NB4 Pro+ transmitter base Type-C interface uses GND, USB_DM (D-pins) , where the D- pin is used to transmit and receive PPM signals.

- Before enabling this function, you need to select Trainer Mode by choosing [System] >[USB Setup].
- To enable the Trainer function, short press the power button of both transmitter bases to make sure that the bases of both transmitters are activated. Meanwhile, make sure that the two transmitters are connected correctly. To realize the head tracker function, short press the power button of one transmitter base to make sure that the base of the transmitter is activated, and make sure that the headset is connected correctly.
- Noble NB4 Pro+ Trainer Interface of transmitter can adaptively identify the input PPM signals. Most of the devices that support PPM output can be used as the external input signal source of the Trainer Mode. However, some of the devices may not support this function, and you can set up the PPM output of the Trainer Interface to match the external devices that have the special requirement of identifying the PPM signal.
- When the Trainer transmitter does not detect the Student transmitter , for example, Student switching transmitter turn-off and cable disconnection of Student transmitter, the control right is automatically returned to the Trainer transmitter.



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6.26 BEGINNER

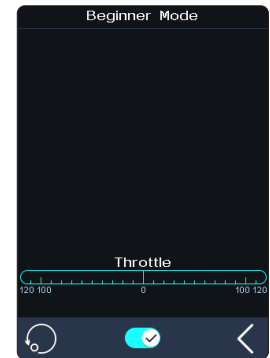
The beginner mode is suitable for entry level players to improve the safety of operations by limiting the amount of throttle servo.

This function is hidden by default. You need to enable it manually via [MODEL]>[Custom Main Menu].

Setup:

1. Go to the [Custom Main Menu] menu under the [MODEL] menu, 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 type buttons to enable/disable the beginner function.



6.27 i-BUS2

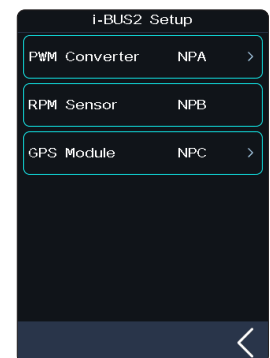
The i-BUS2 device settings function is used to set up the i-BUS2 devices, such as FS-iBH07 Hub or i-BUS2 protocol servo.

- 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.

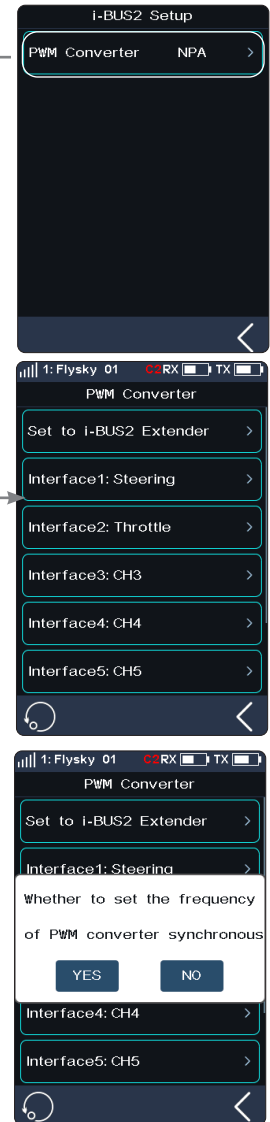


FS-iBH07 Extender

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.

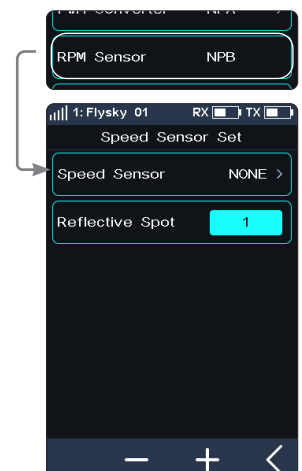
Setup:

1. Click [i-BUS2 Setup] to enter the setting menu.
2. Tap [i-BH07 Extender NPA], then click [Set to PWM converter]. After click [OK] in the pop-up window, tap [PWM Converter NPA].
3. 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.
4. Tap  to return, a prompt 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.



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.



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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. You can view the relevant information.

You can also tap  to enter the Data Record interface.

Channel

Assigns the corresponding channel to control this servo.

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



i-BUS2 SERVOS (Power HD)

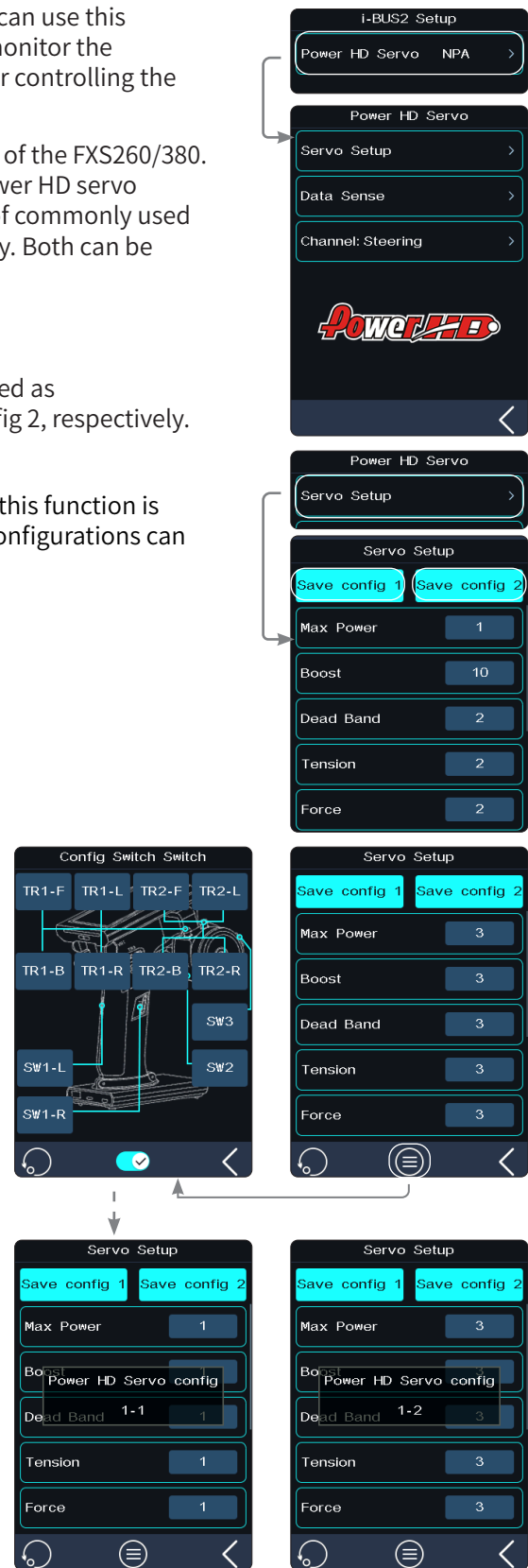
When the transmitter detects an i-BUS2 servo (Power HD), you can use this function to set the relevant function parameters of the servo, monitor the information returned from the servo, and assign the channel for controlling the servo.

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 tapping 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 switched 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.



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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.

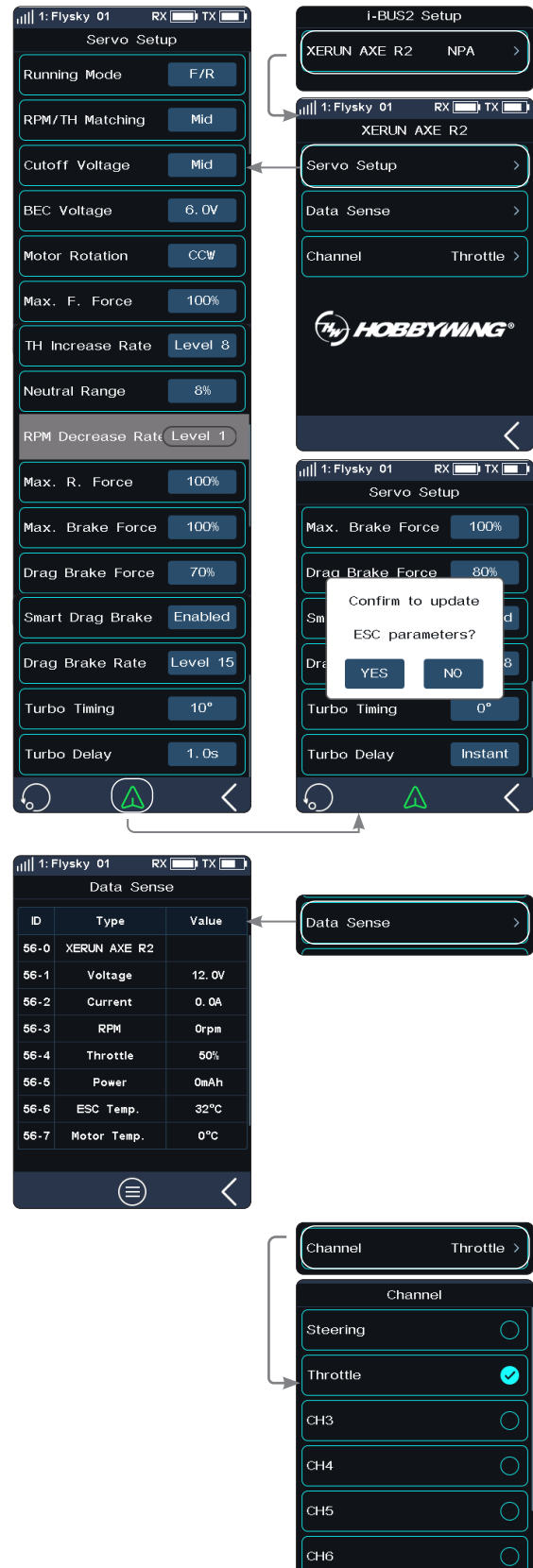
You can also tap  to enter the Data Record interface.

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.



6.28 HANDLE

It is used to assign and monitor the controls of the external USB devices of the base. To replace the transmitter controls with external USB device controls to control the transmitter's channels or functions, use the[HANDLE](gamepad) function.

Assign Control

Used to assign a channel or function to the selected control.



Sticks

Assigns the channel or function for joystick control , to allow users to set relevant functions.

[Function] : Sets the function of the selected control.

[Direction]: Sets the data direction of the selected control. It can be set to NOR or REV.

[Dead Zone]: Sets the neutral dead zone value of the automatic self-centering joystick.

Setup:

Tap the stick to enter, then click "+" or "-" to change the percentage or select the option.

Tap to enter the Display Control interface, to allow users to monitor all control information, such as name and status.



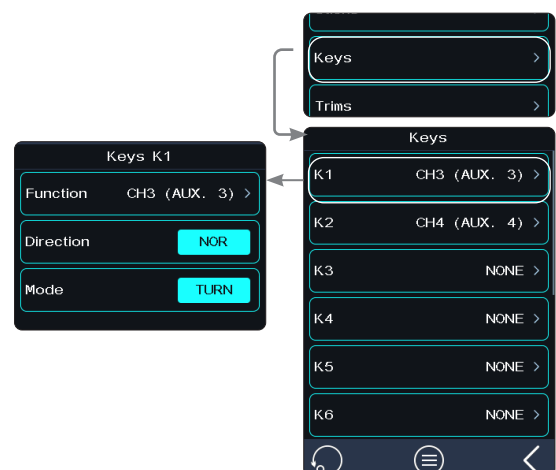
Keys

Assigns the channel or function for button control, to allow users to set relevant functions.

[Mode] : Sets the effective button mode. It can be set to Turn or Trigger, and the Trigger mode is the default mode.

For the [Function] and [direction] descriptions, refer to the descriptions of Sticks.

The settings of Keys are similar to those of the Sticks, refer to the description of the Sticks.



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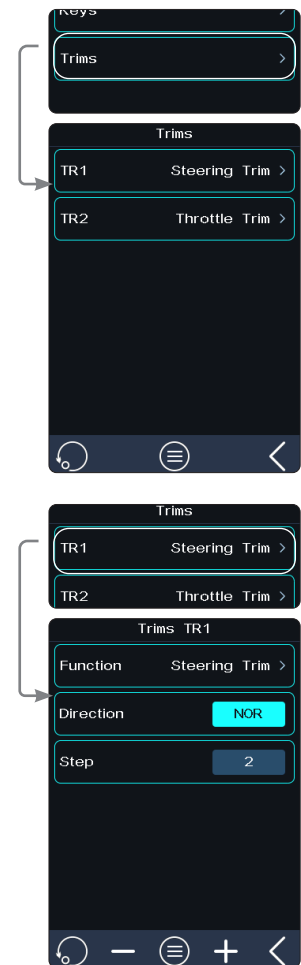
Trims

Assigns the channel or function for trim control , to allow users to set relevant functions.

[Step] : Sets the valid value for each operation of the trim control.

For the [Function] and [direction] descriptions, refer to the descriptions of Sticks.

The settings of Trims are similar to those of the Sticks, refer to the description of the Sticks.

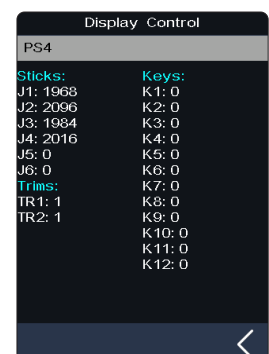


Display Control

Displays the raw data and assignment status of all controls.

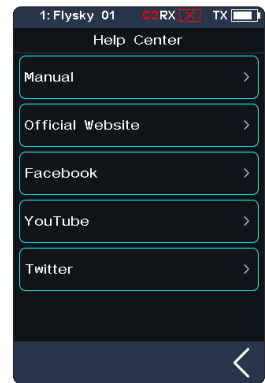
Setup:

Tap [Display Control] to enter. Then you can view the related information.



6.29 HELP

To obtain the user manual via this function. Users can contact us through social accounts listed on the interface. Users can call up the QR code and scan the code according to their needs.



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7 RX SET

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

7.1 Bind Set

This function is used to adjust the transmitter to the binding state so that it can bind with the receiver.

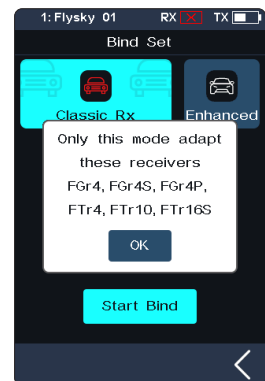
Noble NB4 Pro+ supports a dual-receiver mode. The ex-factory bind settings of the transmitter and receiver are completed successfully.

If you need to re-bind, please follow the following steps for the bind between the transmitter and receiver.

Classic Version (Take FGr4P as an example)

Classic version receiver mode is only applicable to adaptations between the transmitter and receivers such as FGr4, FGr4S, FGr4P, FTr4, FTr10 and FTr16S.

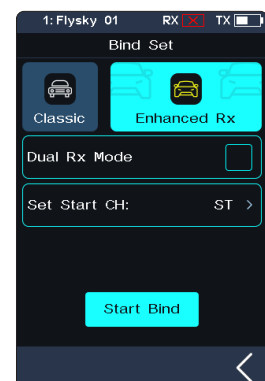
1. Insert the bind cable into the receiver's Bind port, and plug the power cable into any other port. At this time, the receiver LED will flash quickly.
2. Turn on the transmitter. Click  and enter the [RX SET], and select [Bind Set] in the menu.
3. Click [Classic RX]. Then click [Start Bind]:
 - When the RF standard selection is AFHDS 3 2 way, the receiver LED is solid on, indicating the binding is successful. The transmitter will automatically exit the binding interface.
 - When the RF standard selection is AFHDS 3 1 way, the receiver LED flashes slowly, after the receiver LED becomes slow flashing, then put the transmitter to exit the binding state. At this time, the receiver LED is solid on indicating the binding is successful.
4. The binding is successful. Take off the binding cable and power cord from the receiver.
5. Reconnect the power cord to the receiver. Check whether the servo is working properly. If a binding is required again, repeat the above steps.



Enhanced Version (Take FGr8B as an example)

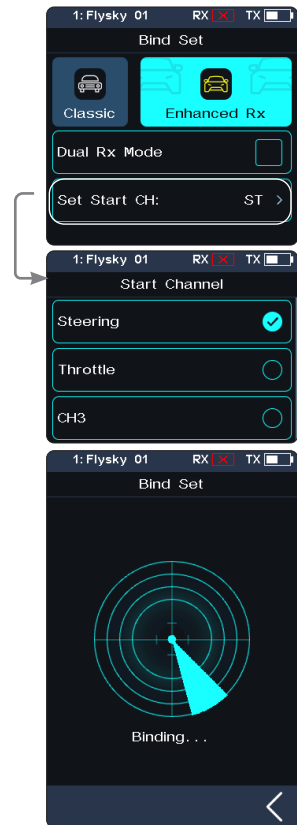
In the use of an enhanced version receiver, if one receiver cannot meet the demand, you can use the dual-receiver mode.

1. Press the Bind button on the receiver for seconds, and then connect the power cord to any interface on the receiver. At this time, the receiver LED will flash quickly.
 - Please make sure your transmitter is not connected to other receivers before binding.
2. Turn on the transmitter. Click  and enter the [RX SET], and select [Bind Set] in the menu.
3. Click [Enhanced RX]. The system prompts "After switching you need re-binding,



Are you sure?". Then click [Yes].

4. Click [Set Start CH]. And click the corresponding channel. After selection, this channel will become the first channel to receive transmitter signals. Click  to return to the previous level interface.
5. Click [Start Bind]:
 - When the RF standard selection is AFHDS 3 2 way, the receiver LED is solid on, indicating the binding is successful. The transmitter will automatically exit the binding interface.
 - When the RF standard selection is AFHDS 3 1 way, the receiver LED flashes slowly, after the receiver LED becomes slow flashing, then put the transmitter to exit the binding state. At this time, the receiver LED is solid on indicating the binding is successful.
6. The binding is successful. Take off the power cord from the receiver.
7. Reconnect the power cord to the receiver. Check whether the servo is working properly. If a bind is required again, repeat the above steps.
 - If you want to use the dual receiver mode, click the check box on the right side of [Dual Receiver Mode]. The icon will change to  and then the transmitter will enter dual receiver mode. After selection, bind the transmitter with the primary receiver and the secondary receiver in turn.



• This binding procedure only applies to the Noble NB4 Pro+ transmitter and FGr4P/FGr8B receivers. Different receivers have different binding procedures. Please refer to our official website for more information and relevant user manuals.

• Our products are updated regularly, check on website for the latest updates and features.

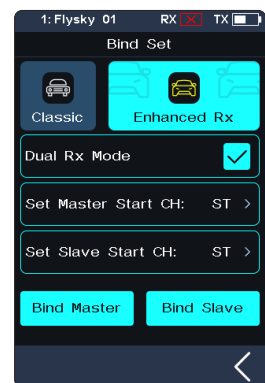
Two Receivers Mode

For a standard car and boat model, the FGr8B receiver with 8 channels can satisfy the requirements.

This function can be used when you have two models that you want to control with the same transmitter.

For some models with more complex functions, such as excavators (loaders) with extended fuel lines, dump trucks with hydraulic booms, etc., the FGr8B receiver with 8 channels is not enough. It needs to be determined according to the number of functions. You can assign two receivers to the vehicle base function and the boom base function, and then switch between them with Noble NB4 Pro+'s [Dual Rx Mode] function. Noble NB4 Pro+ has only 18 output channels. When the number of combined dual receiver channels exceeds the number of channels pre-selected by the transmitter, extra channels cannot be used.

- Disconnecting one receiver in dual receiver mode does not affect the connection of the other receiver.



Note: When there is a stable AFHDS3 2 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.



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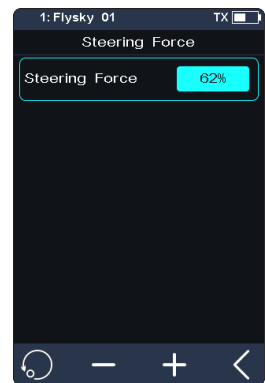
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7.2 Steering Force

This function is used to adjust the amount of steering force when the servo is steered. This function can be set when the transmitter RF Setting is set to [Mini-Z(FHSS)]. It will be 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 [ASSIGN] function.

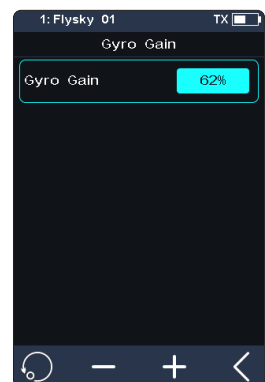


7.3 Gyro Gain

This function is used to adjust the gain of the gyroscope on the receiver. This function can be set when the transmitter RF Setting is set to [Mini-Z(FHSS)]. It will be hidden when the RF is set to other standards.

Setup:

Click "+" or "-" to change the percentage of gyroscope gain. 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 [ASSIGN] function.



7.4 RX Interface Protocol

This function is used to set the receiver output mode.

Classic Edition Receiver Interface Protocol

When the adapted receiver is FGr4, FGr4S, FGr4P, FTr4, FTr10 and FTr16S, The output protocols of [CH1 interface] and [Serial] can be set respectively. [CH1 Interface] can be set to PWM or PPM. [Serial] can be set to i-BUS or S.BUS (please refer to [7.8 i-BUS Setting] for specific i-BUS setting).

CH1 Interface

Sets the output protocol of CH1.

Setup:

1. Click [CH1 Interface].



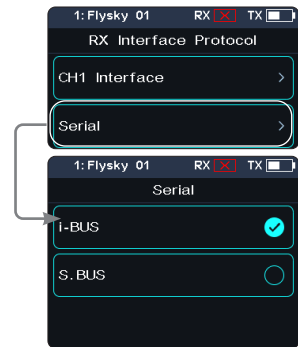
2. Tap the corresponding protocol. Click  to return to the previous level interface.

Serial

Sets the output protocol of serial interface.

Setup:

1. Click [Serial].
2. Tap the corresponding protocol. 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.

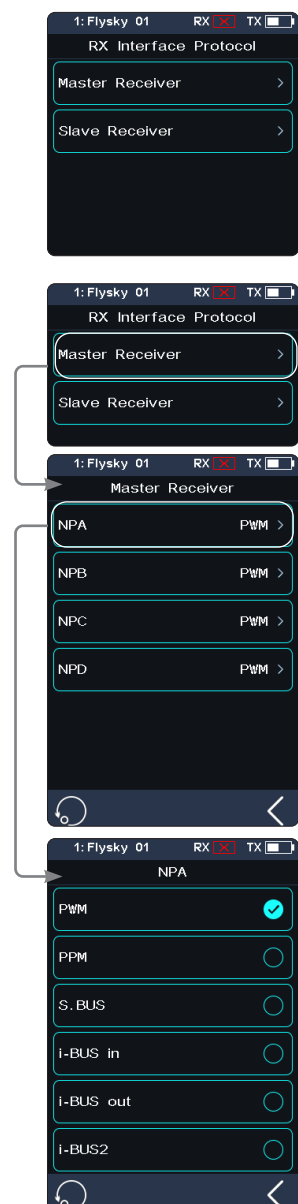
[i-BUS in]: Connects to i-BUS sensor.

[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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