



**X4**



**2.4GHz**



**Instruction Manual**

**WFLY**®

ShenZhen WFLY Technology Development Co.,Ltd.  
[www.wflysz.com](http://www.wflysz.com)



**Before using ,  
please make sure you must understand the following information.**

When opening the package, please confirm the following items are complete.

Match the different parts of the assembly the article is also different, please confirm it according to the following chart.

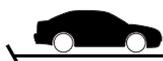
If mixed with the counterfeit product which result in damage, the company shall not be responsible for it .

Please use this book or catalogue which have recorded the products.

●Transmitter (X4)	x1
●Receiver (WFR04H)	x1
●Battery Box For The Transmitter	x1
●Instruction Manual	x1
●Foam Box	x1
●Package Box	x1

If there is insufficient or unclear point for the packaging content, please refer to the model shop for more information.





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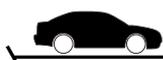
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## Product Features

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- \ Model Memory For 40 Models
- \ Large Car Brake Mixing
- \ Anti-Lock Brake System(A.B.S)
- \ Throttle Acceleration
- \ Steering Speed
- \ Throttle Speed
- \ Timer
- \ Trim / Switch Function Select



## Function Map

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## Function Description

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**Function Description**

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- PR MIX(Programmable Mixing) ..... 42
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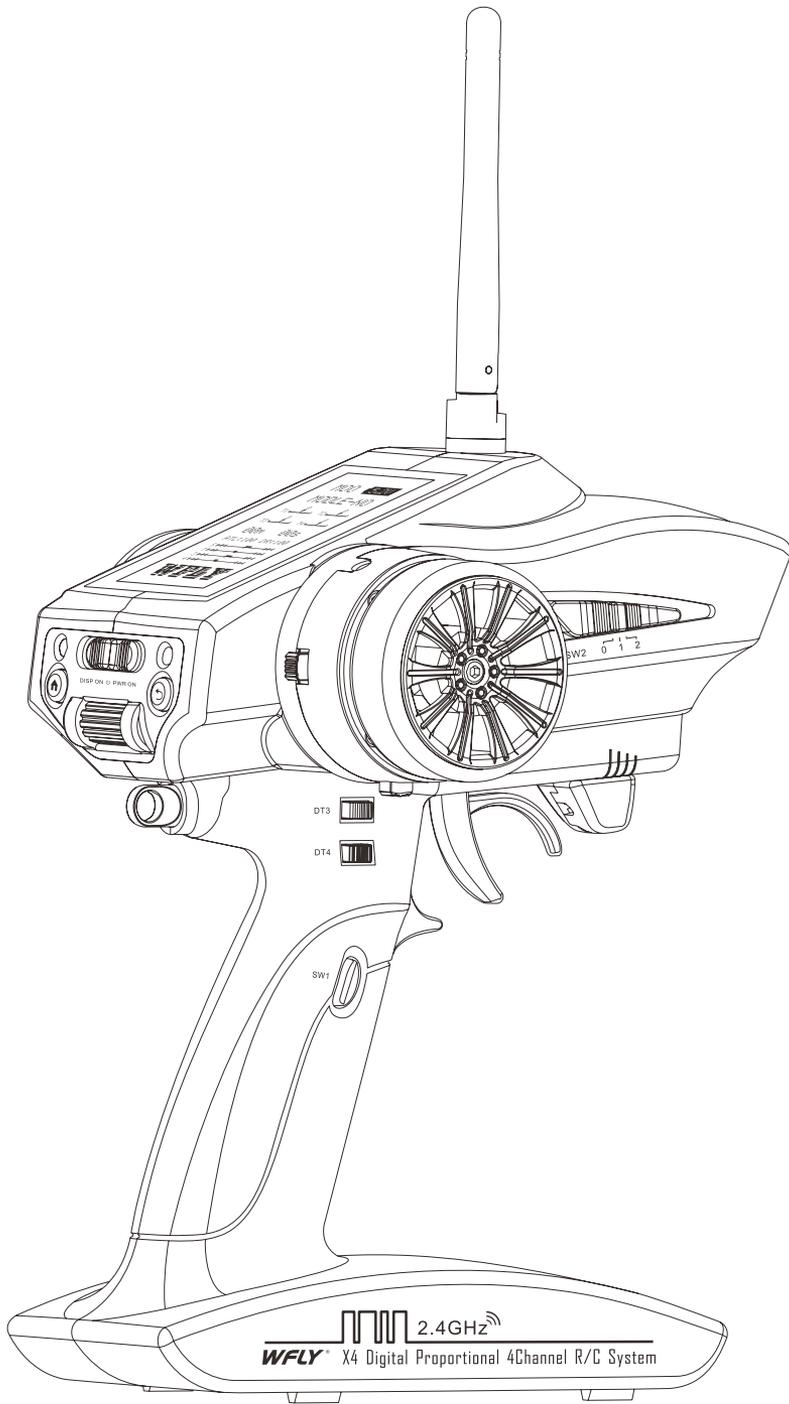
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**Reference**

**Specifications**

- Transmitter
- Receiver



In order to ensure the safety of yourself and others, when using this product, please pay attention to the following matters.

## Symbol Meaning

The following symbol appears in the book, indicate the safety consideration, please pay special attention to.



Ignorance of this symbol may lead to death and risk of injury .



Ignorance of this symbol may lead to death and risk of injury, or made a risk of minor injury or possibility of damage to the goods.



Ignorance of this symbol and misoperation may not cause serious injury, but still may injured or damage to the goods .

Circular logo:  Prohibited

 Mandatory

## Attention Point For 2.4GHz System

 May be influenced by other 2.4GHz systems that may influence transmitting. If such things happen , please stop using.

 Be safe .Please set the fail safe function.

## Attention Point For High Speed Mode

 When using the high speed mode, please use the digital servo.

 When using the normal mode, please use the analog servo.

## Attention Point For The Driving

### Warning

-  Driving is forbidden during the Rainy day, strong wind and night .  
The transmitter cannot operate ,control , or lost its way after dropping it into the water .
  
-  No driving in the following places.
  - Near the crowded people .
  - Near the high voltage electricity or base station.
  - Whenever the interference of radio, obstacles or transmitter, or the vehicle fault cause model out of control, it may cause other people death.
  
-  Do not drive when you are tired, ailing or drunken, unable to correctly judge the easy operation error, tend to danger.
  
-  Before driving you must test transfer system and power, status of the transmitter.  
Regardless of exception of the transmitter or any part of the model may cause out of control.

#### **Simple test :**

Please hold the model car by the assistance or fix it on the platform, try to operate all the site , confirm whether action and command is consistent. If you can't control or the abnormal movement, it can't drive!

### Caution

-  Using it or after using do not immediately touch the engine, motor and ESC. The high temperature may cause burned.
  
-  **When power on:**  
Throttle trigger of transmitter maintained at the neutral point.
  - 1, turn on the transmitter power first
  - 2, then turn on the receiver powerThe opposite operation, may cause the body out of control, and danger.
  
-  **When power off:**  
After stopping the engine or motor
  - 1, turn off the receiver power first
  - 2, then turn off the transmitter powerThe opposite operation, may cause the body short burst, and danger!
  
-  Stop the engine before the adjustment of transmitter (motor power off).  
If you don't stop the engine, the body burst danger may occur .

 **Caution**



Please check the fail safe function is normal before driving

Confirmation:

- 1, Turn on the transmitter first and then turn on the receiver power;
- 2, Set the fail safe function (39 pages);
- 3, Turn off the transmitter;
- 4, Confirm the throttle and the other channels can work in the expected position.

Fail safe is a auxiliary function that let the servo move to the expected position to make the hurt to the lowest , when the receiver can not receive the signal But if the position set in advance is a dangerous position, it will cause the contrary effect.

Case: the throttle setting is safe in the netural position.

## Attention Point For The Battery

Using Ni-Cd/Ni-MH battery

Ni-MH

Ni-Cd

 **Warning**



Do not use wet hand to plug the charger to avoid the risk of electric shock.



Before driving, charge the transmitter battery to full.  
If power is insufficient , it may cause out of control.

When the Ni-Cd battery of the transmitter is charging, please be sure to use the dedicated charger.

Charging exceeds the specified value will be tend to abnormal heating , burst , electrolyte leakage .Injury, fire damage, blindness may happen .

 **Caution**



Avoid Ni-Cd battery short circuited.  
If the short circuit will be on fire, abnormal heat, will cause burn or fire.

# Important Notes

-  Avoid Ni-Cd battery falling from a high place may cause strongly hit. Strongly hit may cause short circuit, abnormal heat, electrolyte leakage Cause burn or chemical damage.
-  Be sure the battery disconnected when the model does not drive. Do not plug in the socket, when the charger is not charging ! Avoid abnormal heating accident.

## Attention Point For The Saved And Wasted Battery

### Warning

-  Do not put the transmitter ,receiver model on the place that the children easily touch. Children touch the transmitters or body which may cause the injure of the body , or playing the battery causing chemical Substance intoxication.
-  Do not put the batteries into fire or heat, nor decompose or transform it . If the battery burst , abnormal heat or leakage of battery electrolyte may cause burns or blindness.
-  <Ni-Cd, Ni-MH battery electrolyte>  
The electrolyte is strongly alkaline, if they fall into the eyes it can cause blindness. If flow into the eyes by accident you should immediately wash with the clean water before seeing the doctor . In addition, the electrolyte will damage the skin, if the electrolyte dip on the skin or cloth , you should immediately wash with clean water. (Except Li-Ion)

### Caution

-  The transmitter can not be stored in the following locations.
  - extremely hot places (above 40 ) - a very cold place (- less 10 )
  - direct sunlight and high humidity place                      •dusty place
  - vibration place, steam spaceIf stored in the above areas, it will likely to cause deformation or fault.

## Attention Point For Others

-  Do not let the plastic parts directly contact to the fuel, oil, exhaust, etc. If the Plastic part contact fuel and other substances may be corrosion which will cause the damage.
-  Transmitter, receiver, servo, ESC, Ni-Cd battery and other devices must match the standard product to use.

## Attention Point For Servo Mode

 Warning

If you want to use the X4 high speed mode, you must meet the following conditions:

Servo: digital servo, 6V.

Receiver power: 6V Ni-Cd battery .

Transmitter speed mode setting: high speed mode(refer to page 53).



**When using the analog servo, be sure to transform the high speed mode into the normal mode .**

If you use the normal mode, you must meet the following conditions:

Servo: analog servo, 6V.

Receiver power: 6V Ni-Cd battery .

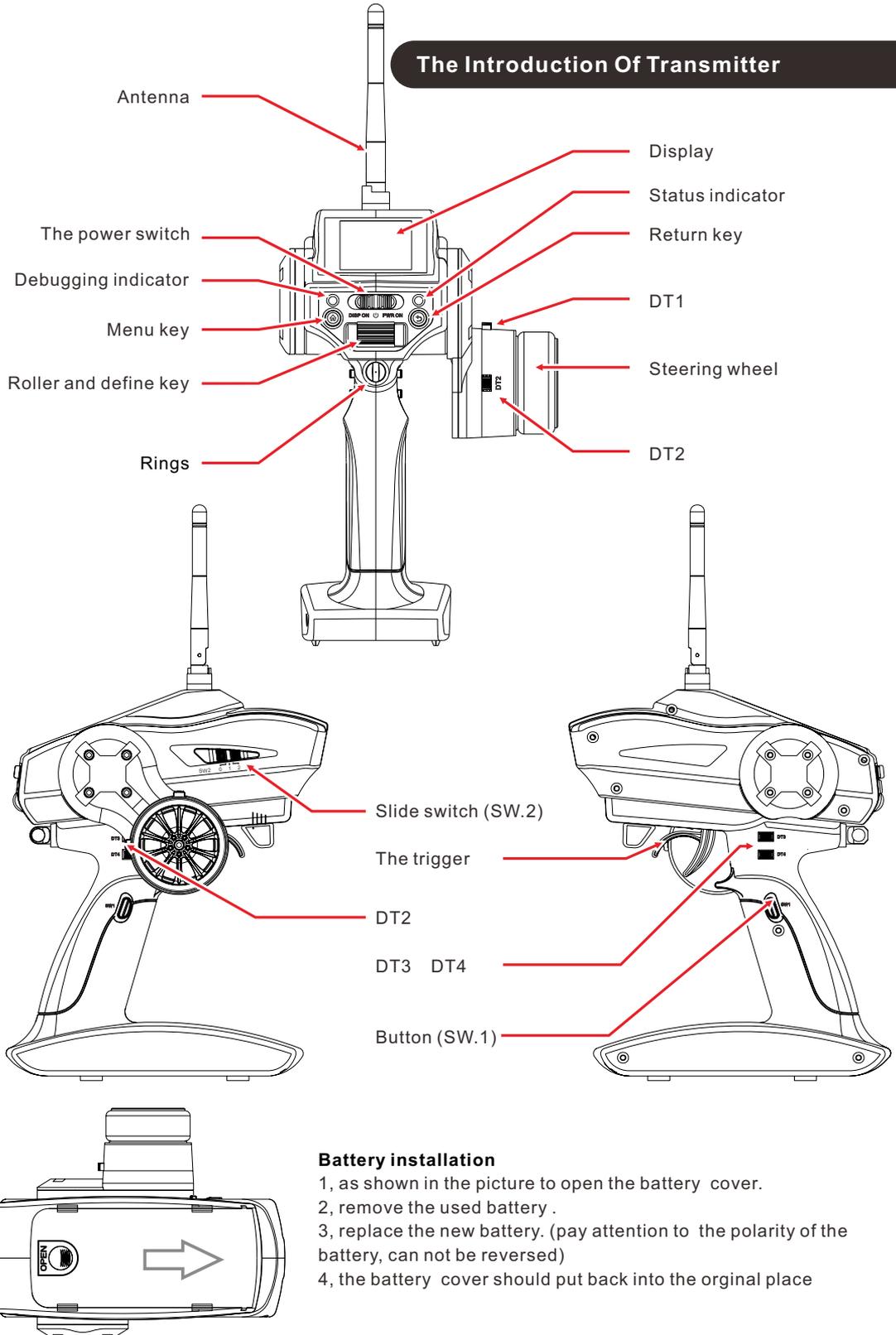
Transmitter speed mode setting: normal speed mode (refer to page 53).

**Analog servo can not normally operate when using the high speed mode ,and the servo connected to the receiver and other parts may happen fault .**

**In normal mode, digital servos also can normally work ..**

Introduction

The Introduction Of Transmitter



**Battery installation**

- 1, as shown in the picture to open the battery cover.
- 2, remove the used battery .
- 3, replace the new battery. (pay attention to the polarity of the battery, can not be reversed)
- 4, the battery cover should put back into the original place



When you close the battery cover, please don't nip the connected line .  
If the cable is clamped which cause a short circuit, will be on fire,  
abnormal heat, cause burn or fire.



Caution

### The Power Switch And RF Switch

DISP ON		PWR ON
Power on with RF off modify the transmitter setting	POWER OFF	Power on
LED(red)		LED(blue)

### Low Voltage Alarm



When the battery voltage of the transmitter is lower than the usable range then the alarm sounds, and the two indicator lights.

Li-Ion battery, Ni-MH, Ni-Cd, dry cell has the different power supply scheme , so it must be set in **SYSTEM** to use the correct scheme .

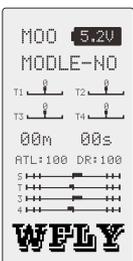


If the battery is out of power during the driving, which cause the model out of control, so when the alarm sounds , please immediately stop running, receive the model.



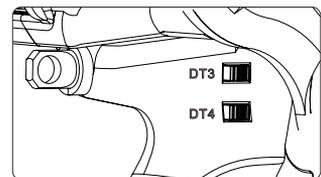
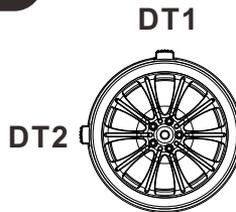
Caution

### Digital Trim Operation

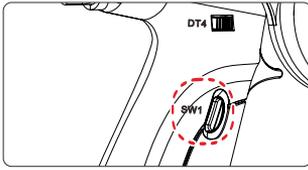


**Factory setting:**

- DT1: default steering trim;
- DT2: default throttle trim;
- DT3: default channel 3;
- DT4: default D/R.



Press the trim to adjust the action.  
LCD will show the value of trim, D/R and ATL.



## Grip Lever Operation

**Sw1** default setting is the timer button.

Operation modes :

- 1, standard: button down is active, button up is inactive;
- 2, switch: each press will switch the state of ON/OFF .

## Mechanical ATL Adjustment

In accordance with the user's operation feeling, when you want to reduce / enlarge the trigger. ATL, please adjust this place.

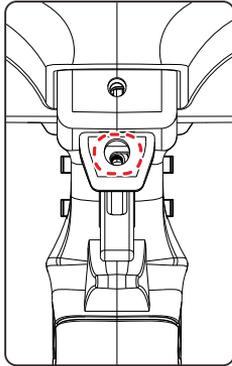
Adjustment method:

Adjust the ATL showed on the picture by 2.5mm hexagon screwdriver,

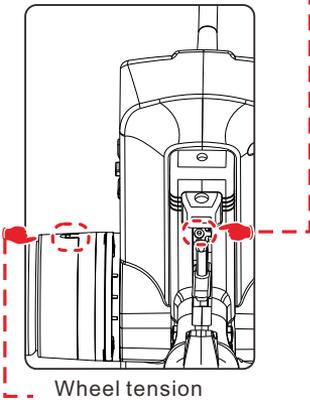
Clockwise rotating screw, ATL becomes small, please observe when adjusting .

**Attention:**

After Adjusting the mechanical ATL, you must calibrate throttle ( ADJUSTE ). (see page 52)



Trigger tension adjusting screw



Wheel tension adjusting screw

## Wheel & Trigger Tension Adjustment

Adjust the strength of steering wheel and the trigger spring, to change the steering wheel and trigger tightness.

Adjustment method:

Adjust the steering wheel showed on the picture by 1.5mm hexagon screwdriver rotate the screw ,and the spring strength to pull the trigger.

Clockwise rotating screw, the traction force will be stronger .

**Attention:**

When the anti clockwise rotate beyond the limit , screw will be fall off.

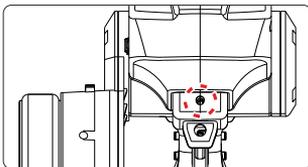
## Trigger Slide Adjustment

You can move the trigger position.

**Adjustment method:**

Adjust the trigger position showed on the picture by 2.5mm hexagon screwdriver rotating the screw.

Clockwise rotating screw is away from the handle.



## Method For Switching The Left And Right Hand

In order to meet different users, we design different ways of switch for different operation habit !

Tools: 2.5 hexagon screwdriver



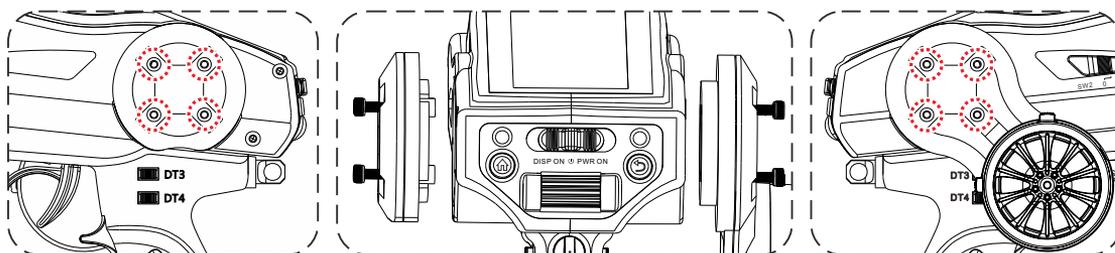
### Methods

I

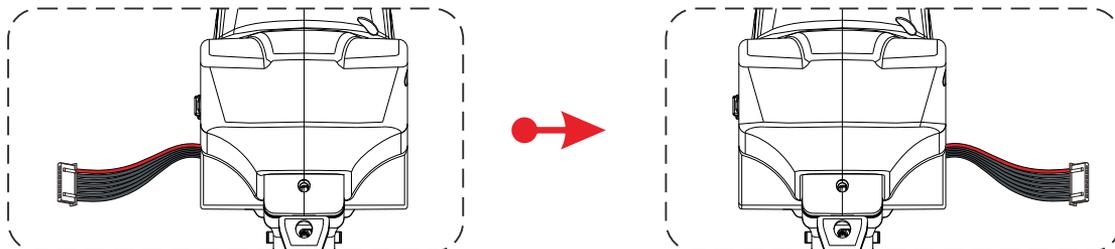
### Steering Rocker Hand Replacement



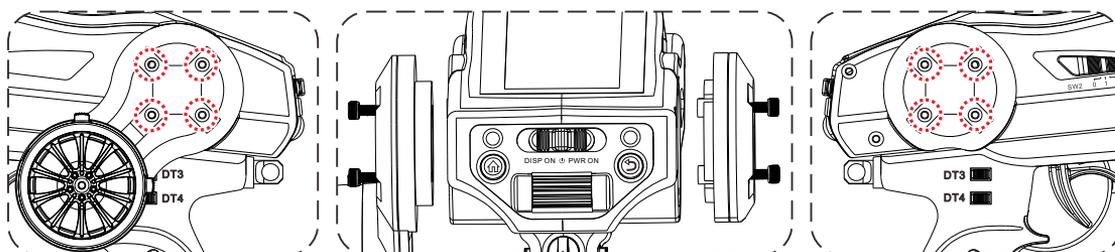
Remove screws on the other side of the circle ;



Remove the steering wheel arm and the round cover; make the cable through the gap .



Trade the position between the steering wheel arm and round cap ,plug cable , install the screw.

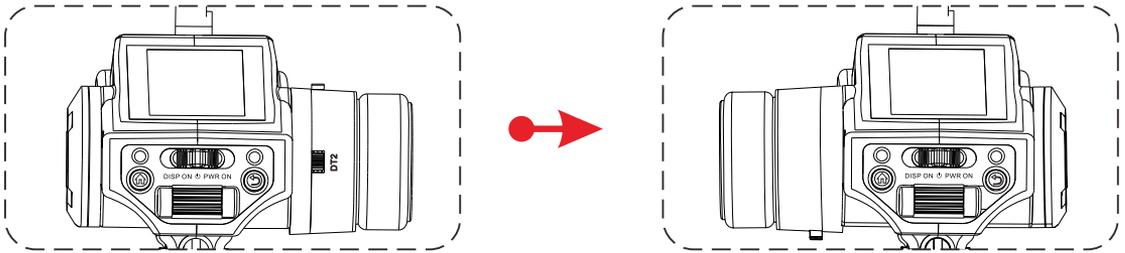


## Methods

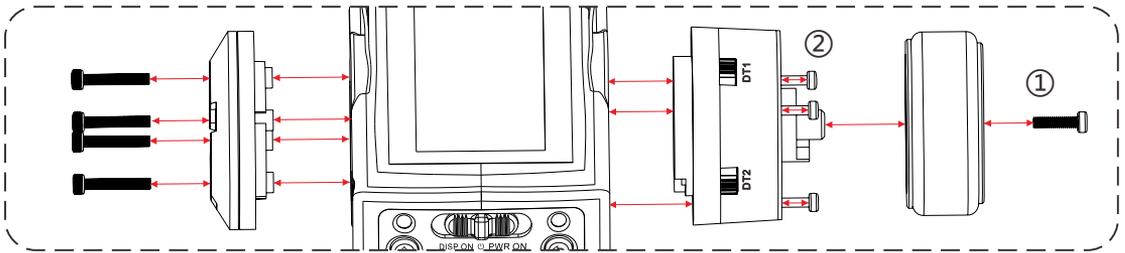
## II

### The switch of Left And Right Hand Of The Steering Wheel

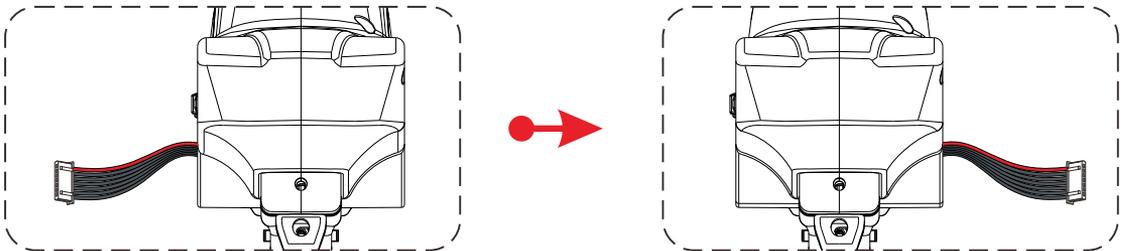
This structure lack of the steering wheel arm,  
The steering wheel is directly installed on body, simple and flexible!



- 1** The step of the screw on the steering wheel ,as showed in the following picture .  
1,screw , remove the steering wheel;  
2, then the three screws .



- 2** Pull out the data cable plug, Remove the steering wheel arm and the round cover;  
make cable plug through the gap.



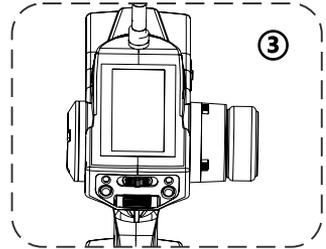
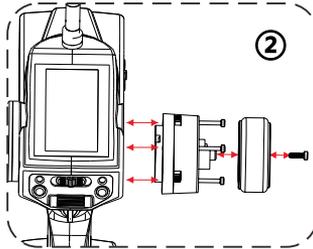
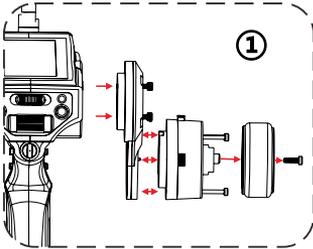
- 3** Change the position of the steering wheel seat and the round cover , plug the cable,  
install the screw;  
Screw unloading methods according to the second step of the above, fix the screw .

Methods



No Arm Rocker Operation Mode Change

- ① Remove the four screws which is on steering wheel arm , unpack cable;
- ② Remove the four screws which is on steering wheel ;
- ③ Remove the steering wheel arm , connect the cable, install the corresponded screw.

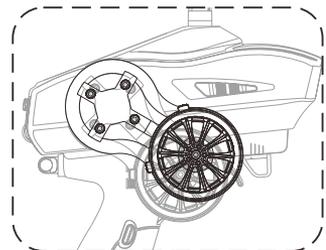
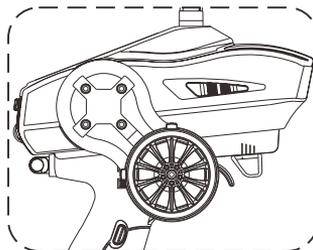
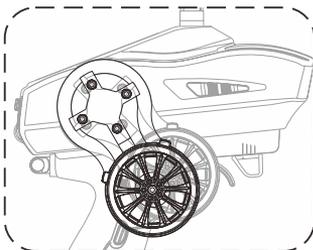
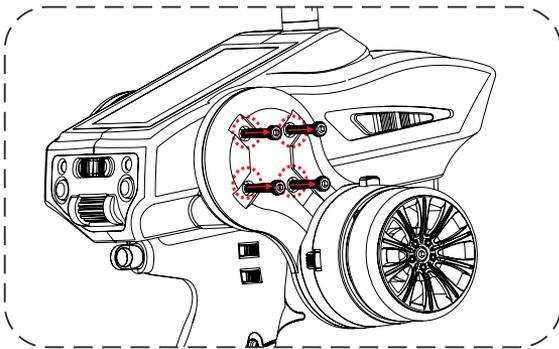


Methods



Adjust Steering Wheel Rocker Angle

- ① Remove the four screws which is on steering wheel arm;
- ② Choose the position you like , adjust arm angle , the default angle is 45° , 15° for each gap ;
- ③ Install the corresponded screw.

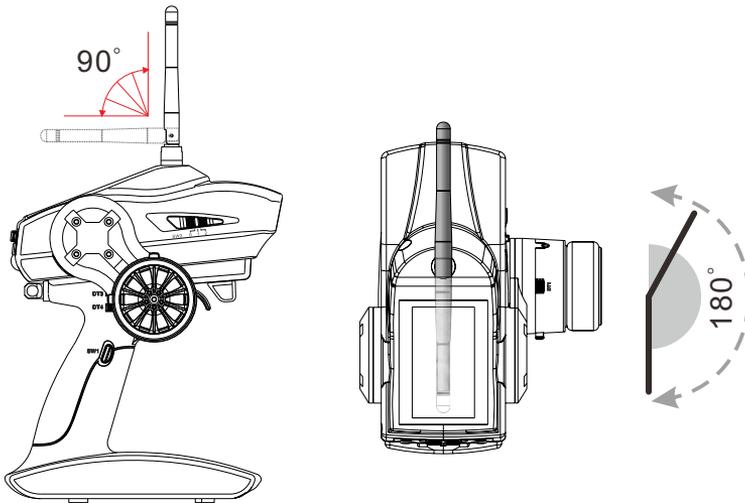


## Transmitter Antenna And Receiver

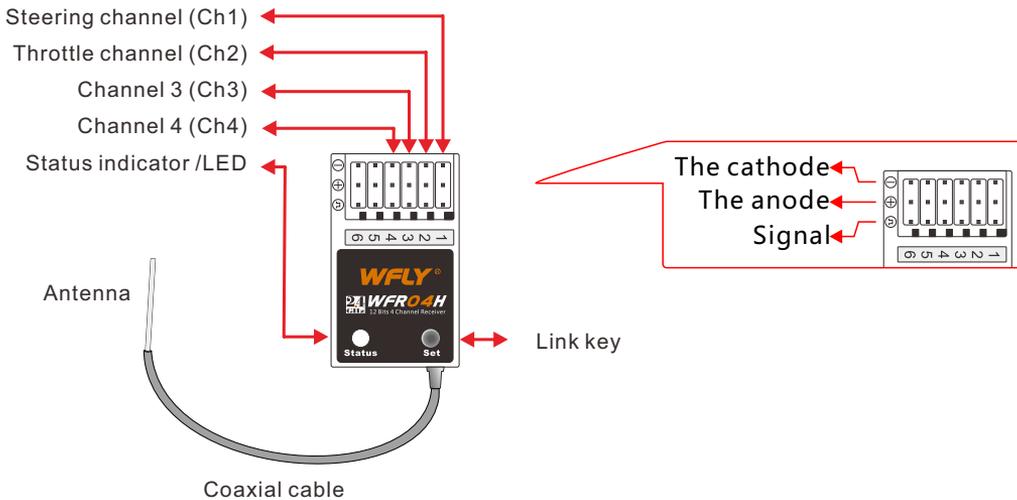
### Antenna

- ❗ During the operation, the antenna is not vertical to the ground, it will shorten the distance of the transmitter .
- ⊘ During the Driving, do not hold the antenna.
- ⊘ When Adjusting the antenna , do not exceed the rotatable range.

 **Caution**



### Introduction



## How To Link

Each transmitter has its own ID.

In order to successfully operate, the receiver must link to the transmitter to pair. After pairing once, the Transmitter and receiver will not need to pair again.

- 1, Put the transmitter and receiver about 1 meter;
- 2, Transmitter : power on;
- 3, Receiver : power on;
- 4, Press "set" button receiver about 1 second, the yellow led flashes;
- 5, Operate the transmitter to perform the code action;
- 6, The receiver the green led light on, the code operation is completed;
- 7, Check each channel output is normal.



### Careful

When your receiver is linking, and there are other WFLY 2.4GHz device also linking, the receiver may not be correctly connect to your X4. In this case, even if the receiver green led on, it can be that your receiver has linked to the other WFLY 2.4GHz transmitter. If we ignore this situation it will be very dangerous! To avoid this problem, after the linking is done, please cycle receiver power and check if the receiver to be linked is really under the control of your transmitter.

## LED Status

No linking		Red LED:ON
Linking		Yellow LED:Blink
Linked		Green LED:ON
Low voltage indication		Red LED: Blink

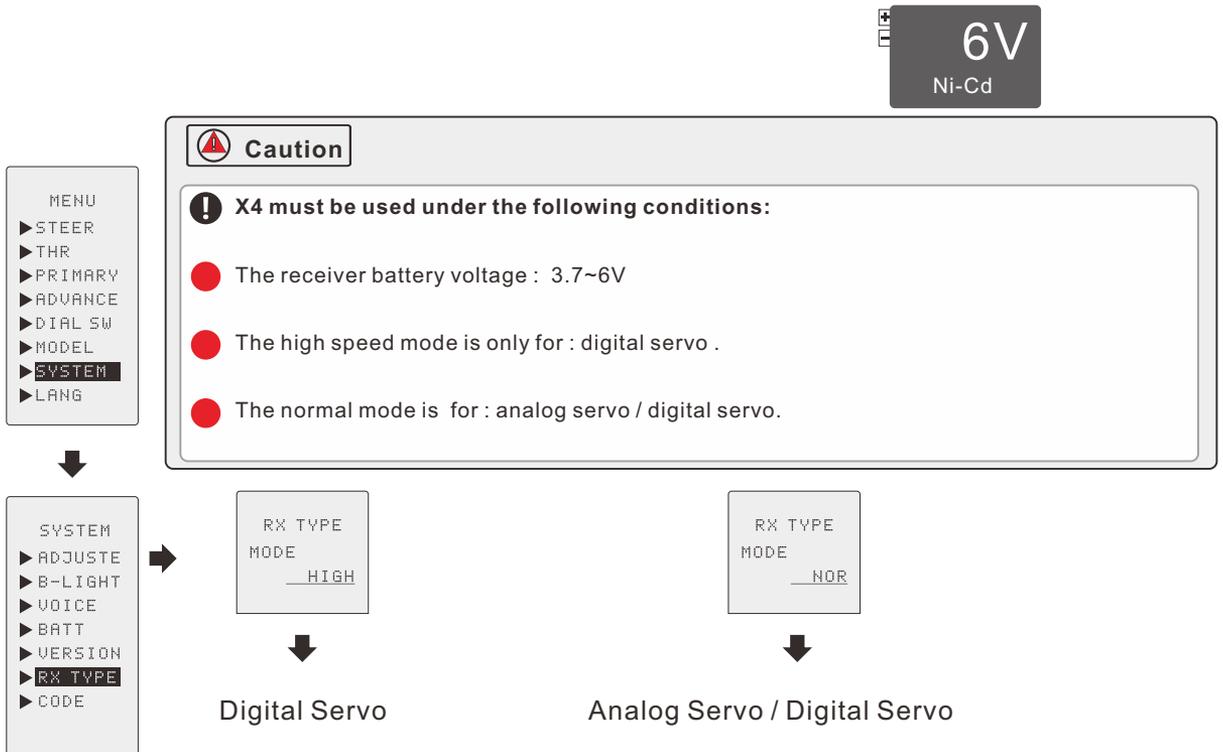
### Caution

- When linking, please stop the engine.
- After linking, please make sure the servo responses correctly.

## Installation

- ⊘ Do not cut or tie up the antenna.
- ⊘ Don't bend the antenna , which may cause damage.
- ! Install the antenna on a higher position.
- ! Put the antenna into the pipe to protect it.
- ! Please try to make the receiver stay away from battery, ESC , motor or metal wire and other noise sources.
- ! Please use the foam to pack receiver and fix the receiver by double-side tap to anti-vibration. Put the receiver into waterproof plastic bags to waterproof .

**Note:** install the receiver on the ventilative place , to avoid overheating .



## Assembly

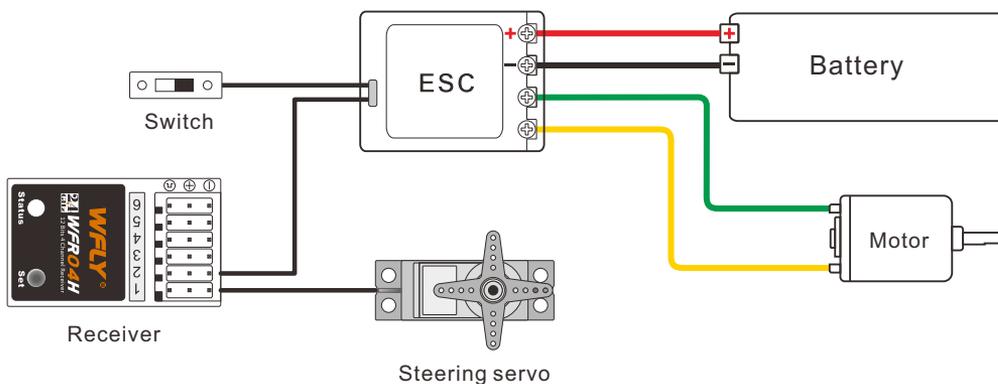
### Receiver And Servo Connections

Connect the receiver and servos according to the following diagram .

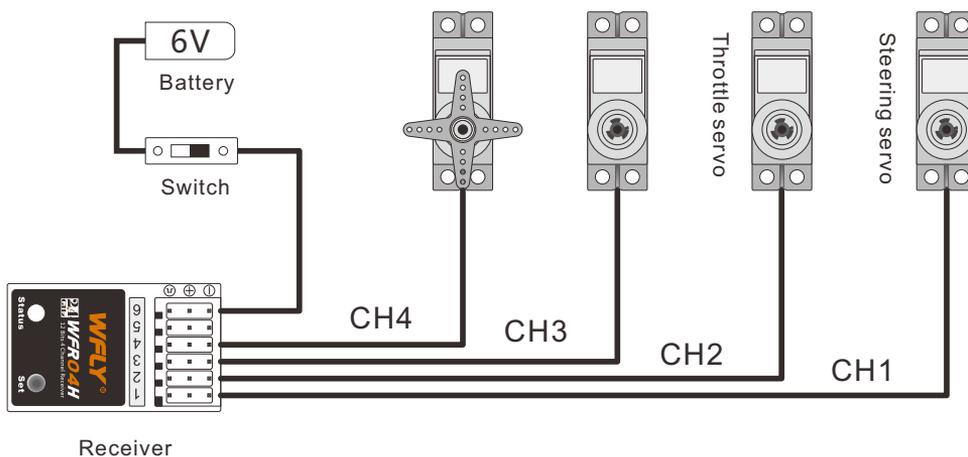
When Connecting and installing please follow the " **Important Notes & Notice** " (9~13 pages).

The following is reference , for Practical use different accessories has different ways to connect.

#### 1 Electric Model Connection Method



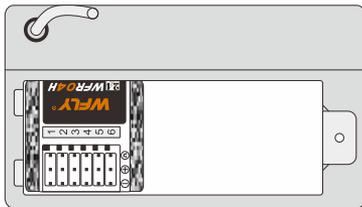
#### 2 Fuel Models Connection Method



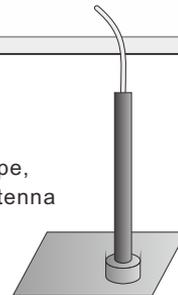
### Warning

#### The Receiver Antenna

-  Do not cut or tie up the antenna.
-  The antenna can not be tie up the other wires.
-  Do not close to the motor or power battery (etc.)which has large current ,keep at least 1CM distance.
-  Don't use the metal antenna seat on the metal plate made by metal or carbon fiber or other conductive material.
-  The antenna seat should be installed near the receiver.



Use the plastic pipe,  
make sure the antenna  
is vertical.



#### The Anti-vibration Of The Receiver

-  Please use the foam to pack receiver and fix the receiver by double-side tap to anti-vibration.

#### Connect

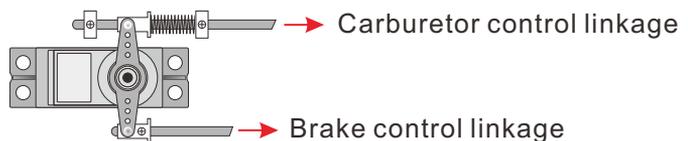
-  When installing, please make sure that the servo, the battery plug into the deepest ( good contact).

#### Servo Installation

-  Please use the anti-vibration rubber (anti-vibration washer) to make the servo installed on the fixed seat .

#### The Motion Range Of The Servo

-  Make sure the servo is normally operate under the maximum range and adjust the push rod so that it will not bend.



**Warning****ESC**

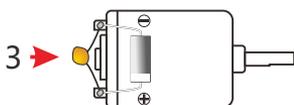
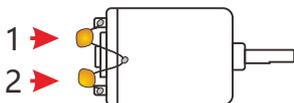
- ! When installing the cooling plate, please do not contact the aluminum or carbon alloy chassis and other conductive material .

**Brush Motor Disturbance Countermeasures**

- ! Use the brush motor please make sure to install the filter capacitor .
- ! If not installed the filter capacitor or installed wrongly , the receiver may affected by the motor , lead to the wrong operation. So please be sure to install three filter capacitors on the motor.

In addition, if ESC has the schottky diode, please weld the negative pole onto the "+"side, and the positive pole onto the "-"side .

Make sure weld the positive pole of power onto the "+"side and negative pole onto the "-" side, or it will damage the ESC or the diode.



↑  
Schottky diode

**Other Disturbance Countermeasures**

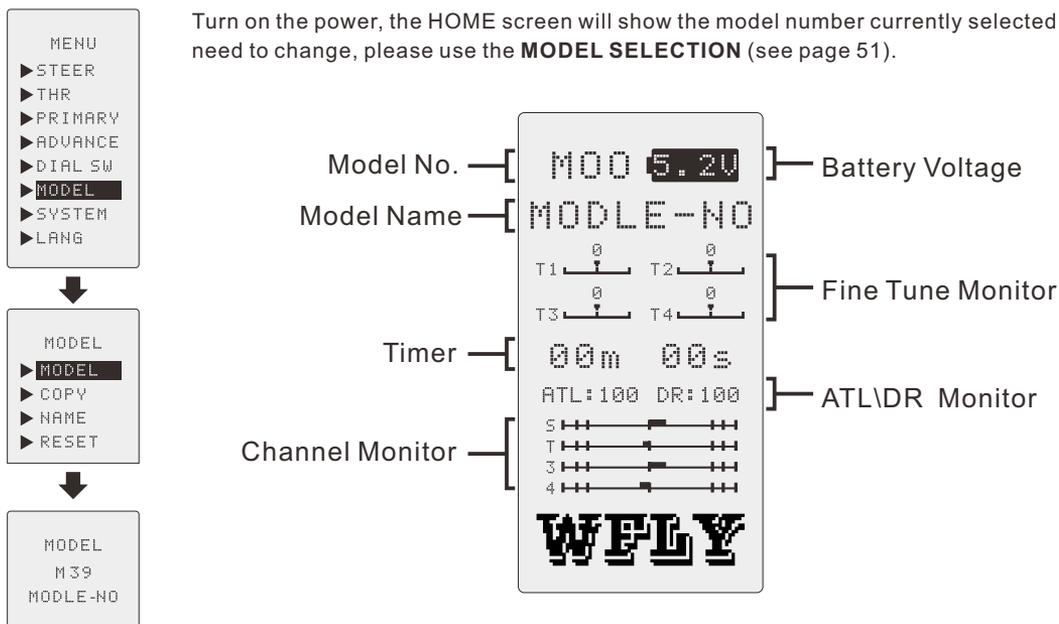
- ! Be sure there are no metal parts in your model which under vibration can come in contact with other metal parts.

## Initial Set-up

### Preparations(Transmitter)

Set The Function Of Transmitter, Please Confirm And Set The Following ①~④ Items.

Turn on the power, the HOME screen will show the model number currently selected, if you need to change, please use the **MODEL SELECTION** (see page 51).



### 1 The RF Signal Output Validation

Turn to the "PWR ON", RF can be normally output signal, blue led is on.  
Turn to the "DISP ON", RF does not output signal, red led is on.

### 2 Servo Type Validation

When using the high speed mode, please use the digital servo .  
When using the normal mode, please use the analog / digital servo .

### 3 Throttle Mode Validation

Using throttle trigger, the throttle servo travel can be set to 5:5 or 7:3.  
Please refer to < **THROTTLE MODE** > (page 35) .

## 4 Trims Initial Setting

### Steering trim (DT1) check

Default setting, DT1 is the Steering trim .  
Stir DT1 to confirm "T1" on screen moving or not .

### Throttle trim (DT2) check

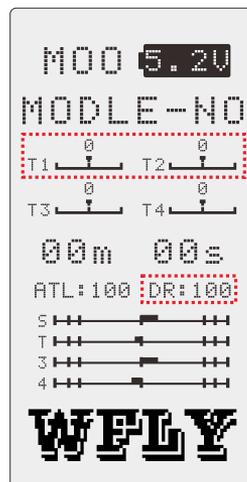
Default setting, DT2 is the throttle trim .  
Stir DT2 to confirm "T2" on screen moving or not .

### Channel 3 (DT3) check

Default setting, DT3 is the CH3 .  
Stir DT3 to confirm "3" on screen moving or not .

### DR (DT4) check

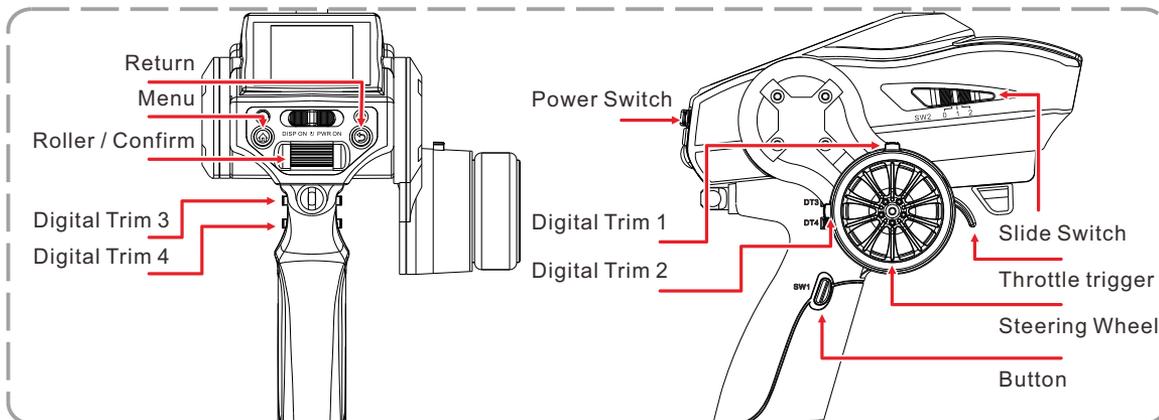
Default setting, DT4 is DR .  
Stir DT4 to confirm "DR" value on screen changing or not .



**When installing servos , following steps are recommended to set function .**

- 1, Implement the steps above from ① to ④ (trim initial setup).
- 2, Set the direction of servo and motor in **REV** function .
- 3, Adjust the neutral point.
- 4, Set throttle trigger and ATL as your own habit.
- 5, Set the maximum travel of each channel.

## Switch, Button Description



**Power switch:** push **Power Switch** to  is power off ,

push **Power Switch** to **PWR ON** is power on normally ,

push **Power Switch** to **DISP ON** is power on with RF off .

**Throttle trigger:** pull the trigger is speed up ; push forward is brake or back off.

**The steering wheel:** backward to turn left ; forward to turn right.

**Menu:** enter menu or back to home screen.

**Return:** backward (and save).

**Roller / Confirm:** up and down(roll) , enter the menu , sure to save (press).

**Digital trim 1 (DT1):** can be customized , step , default is steering trim.

**Digital trim 2 (DT2):** can be customized , step , default is throttle trim .

**Digital trim 3 (DT3):** can be customized , step , default is CH3.

**Digital trim 4 (DT4):** can be customized , step , default is D/R.

**Slide switch (SW2):** can be customized , default is CH4 ; three gears.

**Button (SW1):** function switch , can be customized , switch mode, the default for the timer switch.

## General Operation

1, press [**Menu**] to enter the menu.

2, roll [**Roller**] , select the option menu or edit data.

3, press [**Confirm**] enter edit state.

4, roll [**Roller**] adjust data.

5, after setting up press [**Return**] / [**Menu**] exit and save.

## LED Description (Transmitter)

**Blue On**  **RF ON**

**Red On**  **RF OFF**

**Blue Blinking Fastly**  **Advanced Function ON**

**Blue&Red Blinking Slowly**  **Low Voltage**

**Blue Blinking Slowly**  **Linking**

## •Model Memory For 40 Models

Each model can be set independent name .

You can simply set parameters of models that only has few difference by

**MODEL COPY** function .

## •Large Car Brake Mixing

Brake mixing of the front and rear wheels of 1/5GP and other large cars can be adjusted independently .

## •Anti-Lock Brake System(A.B.S)

Prevent the car from slipping when crossing a curve or braking .

## •Throttle Acceleration

Engine accelerator or brake will produce delay before the arriving of action command . Which can limit the delay time to a minimum range .

## •Steering Speed

Adjust the steering wheel speed with flexible way .

## •Throttle Speed

When the throttle sudden strongly operated on the wet road , the wheel may slip so that it can not successfully complete the acceleration motion. Set this function can simply complete the acceleration motion and the wheel will not slip.

## •Timer

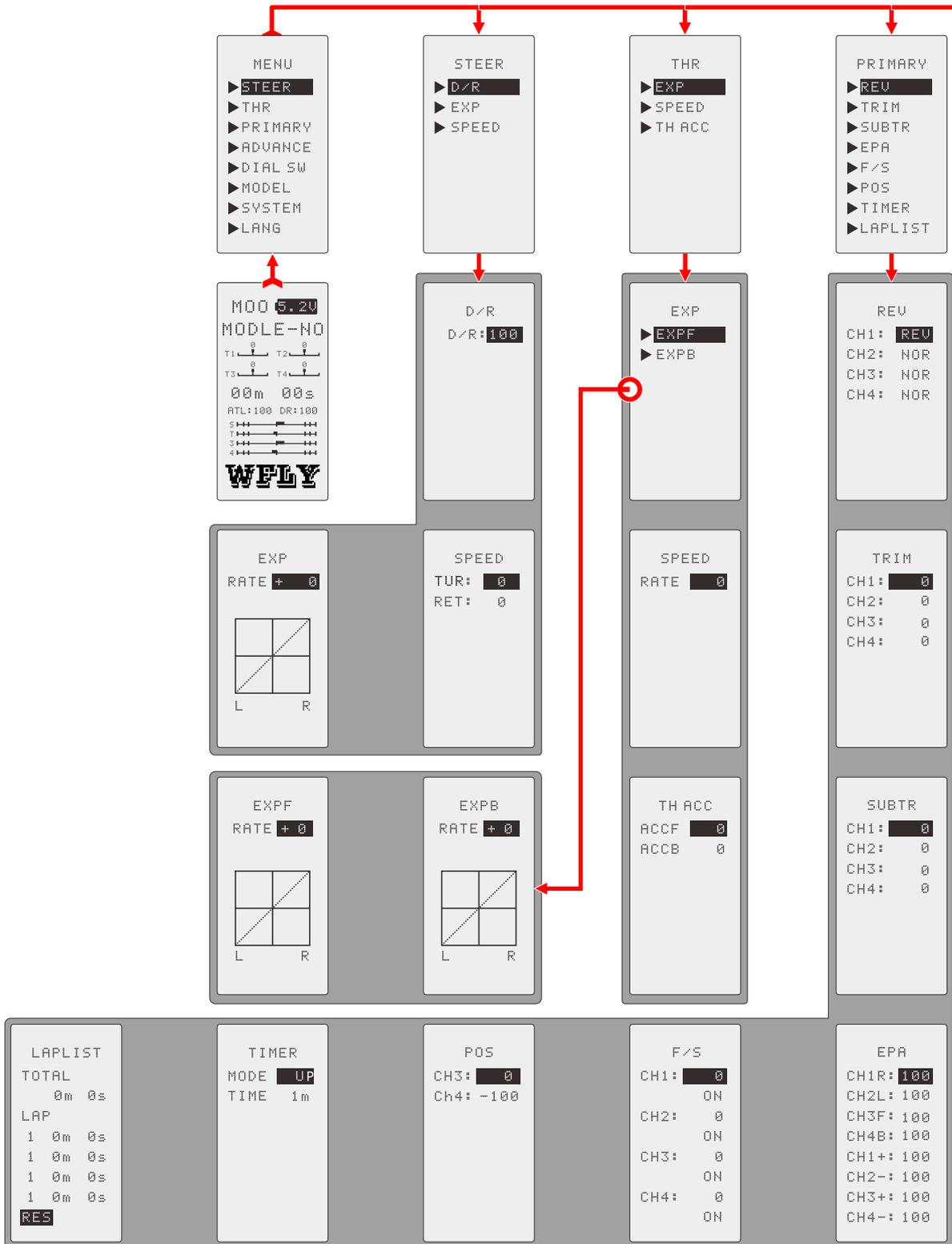
You can choose timing/countdown timing or lap timing.

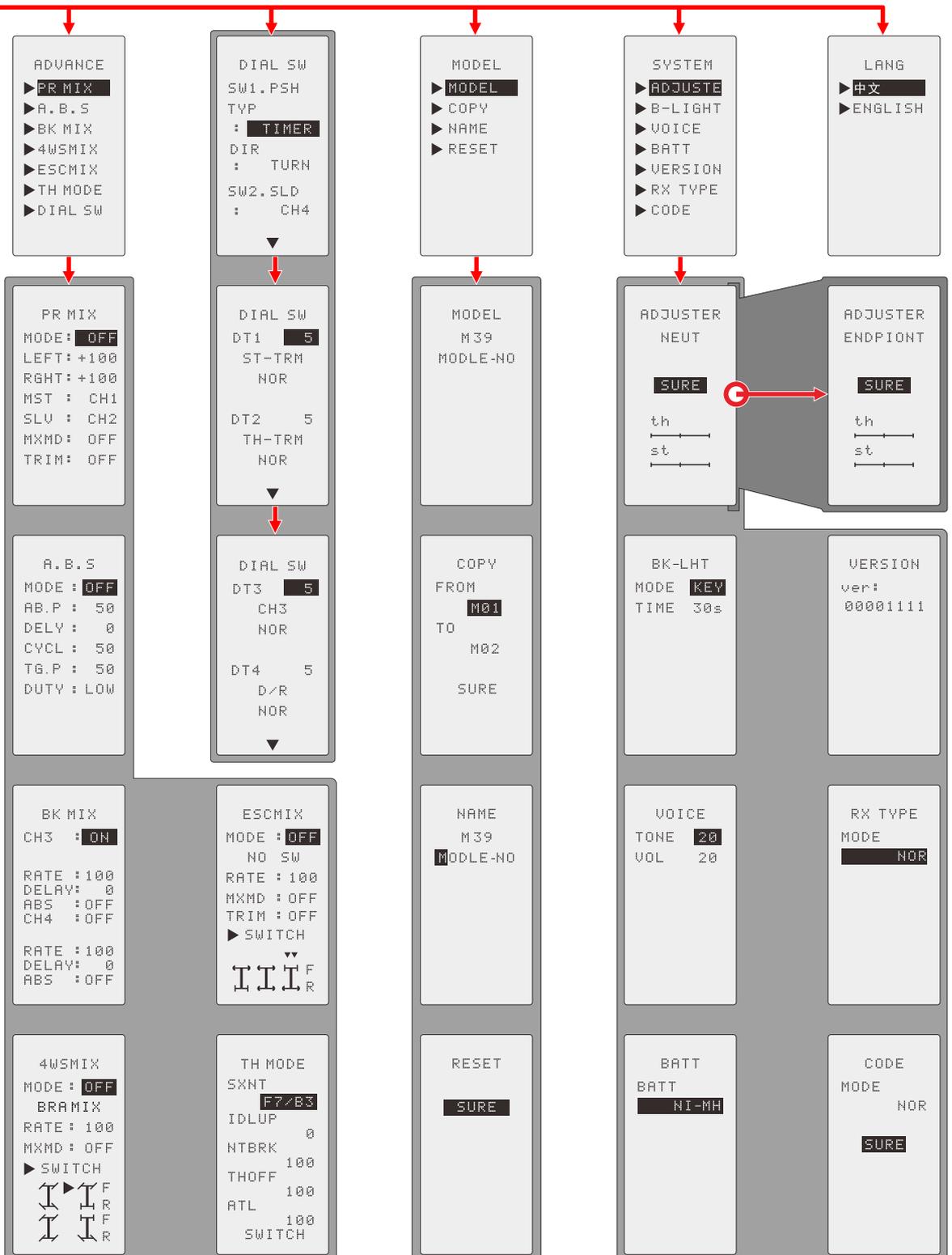
Lap timing can record a single lap time or total time of 100 groups .

## •Trim / Switch Function Select

The function can assign different functions to each trim or switch.

## HOME Screen / MENU Screen





## Function List

Function List		
Function Abbreviation	Function Description	PAGE
D/R	Servo angle adjustment function	33
EXP(STEER)	Steering curve adjustment	33
SPEED(STEER)	Steering servo delay	34
EXP(THR)	Throttle curve adjustment	35
SPEED(THR)	Throttle servo delay	36
TH ACC	Adjust the throttle neutral position	37
REV	Sever operation revering	38
TRIM	Selection of functions operated by digital dial and digital trim	38
SUBTR	Servo center position fine adjustment	38
EPA	End point adjustment	39
F/S	Fail safe	39
POS(CH3/4)	Channel 3/4 default position	40
TIMER	Up , down , or lap timer	40
LAPLIST	Lap timer list	41
PR MIX	Programmable mixing between arbitrary channels	42
A.B.S	Anti lock brake system	43
BK MIX	Front and rear independent brake control for 1/5GP car ,etc.	44
4WSMIX	Four wheel independent mixing function	45
ESCMIX	The double ESC mixing	46
TH MODE	The adjustment function of throttle characteristics	47
DIAL SW	assign different functions to each trim or switch	49
MODEL	Name models , copy model , reset	51
SYSTEM	Battery type, light, sound, calibration , circle the number list, servo mode, the code function setting and operation.	52
LANG	English / Chinese	53

## STEER

### D/R

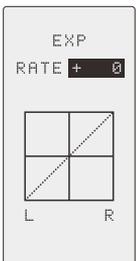


Adjust the positive and negative travel of steering channel simply .  
 Min is 0 , no action ;  
 Max is 100,steering travel depends on EPA .

Set: Main Menu → STEER → D/R



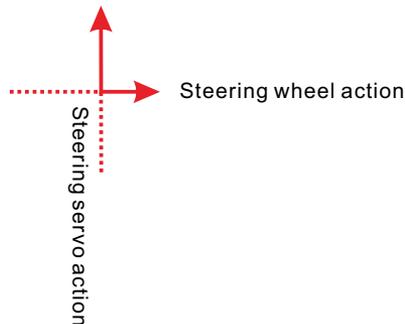
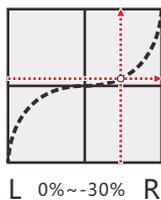
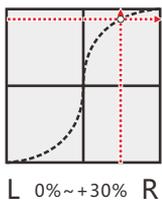
### EXP(STEER)



**This function is used to change the sensitivity of the steering servo around the neutral position . It has no effect on the maximum servo travel .**

Adjust the sensitive of steering wheel near neutral point and at the end point to make the servo action sensitive or dull.

- 0~-30     Sensitivity near the neutral point is low and at the end point is high.
- 0         Sensitivity near the neutral point and at the end point are the same.
- 0~+30     Sensitivity near the neutral point is high and at the end point is low.



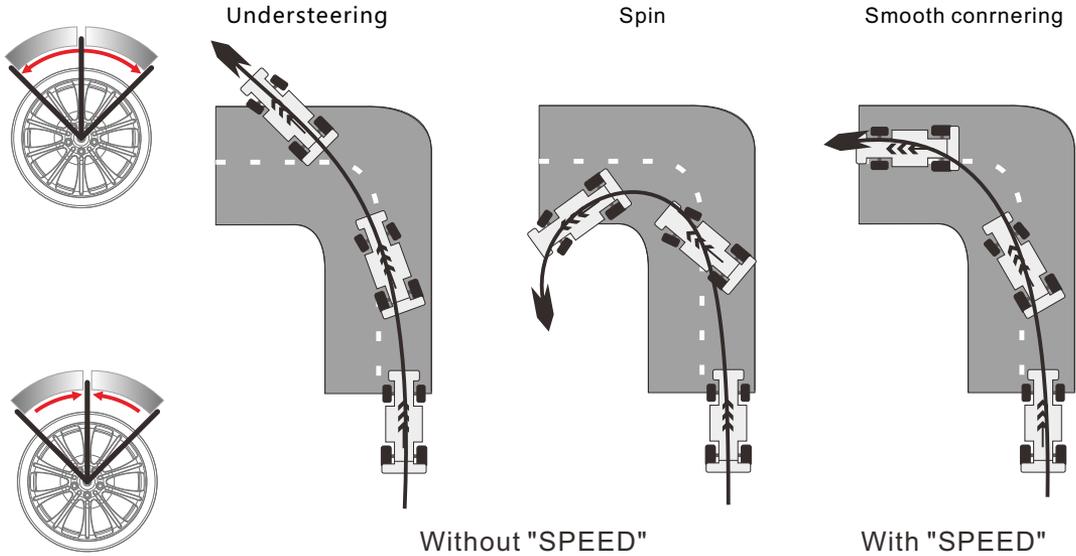
Set: Main Menu → STEER → EXP



## SPEED

When the fast operate steering, the body may suddenly lose control, or the danger of slip.

The "SPEED(STEER)" can avoid the occurrence of the situation .



• Adjust the steering wheel TURN and RETURN delay of servo action respectively.

SPEED  
TUR: 0  
RET: 0

0      the fastest speed , no delay.  
100      the slowest speed, maximum delay.

As the value increases, delay increases!

Set: Main Menu → STEER → SPEED



## THR

### EXP(THR)

This function can make the throttle accelerate and the brake more sensitive or smooth (corresponding to the ESC or throttle servo), its adjustment does not affect the maximum travel of throttle setting.



0~-30 smoothly.  
0 linear.  
0~+30 sensitivity.

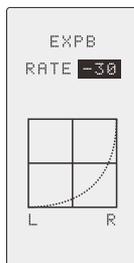
Suggestions:

When the course conditions are good and the surface has good grip, make the curve set in the "0~+30".

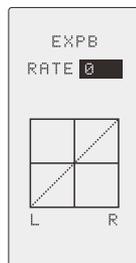
When the road surface is slippery and the drive wheels do not grip is, the curve set in the "0~-30".



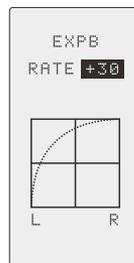
0~-30 smoothly.  
0 linear.  
0~+30 sensitivity.



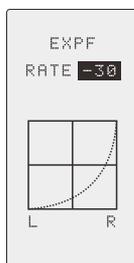
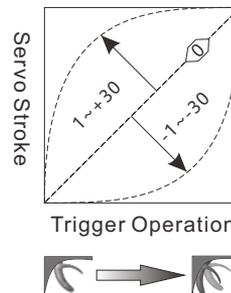
Accelerated smoothly



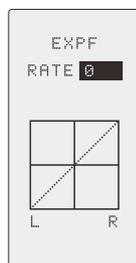
Accelerated linear



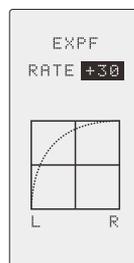
Acceleration sensitivity



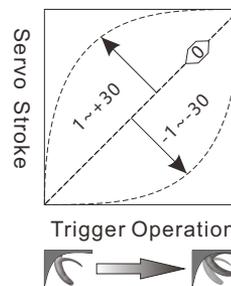
Brake smoothly



Brake linear



Brake sensitivity



Set: Main Menu → THR → EXP



## SPEED(THR)



On the wet road the sudden throttle operation will cause the wheel slip so that the model can not normally go forward.

Set the throttle delay can prevent the waste of energy and allows you to enjoy a more smooth operation.

This function has no effect on the throttle trigger return and brake (only for acceleration).

- 0 acceleration without delay.
- 100 acceleration maximum delay.

As the value increases, delay increases!



Without "SPEED" : quick start without skidding



With "SPEED" : slow start due with skidding

Set: Main Menu → THR → SPEED



## TH ACC(THR)



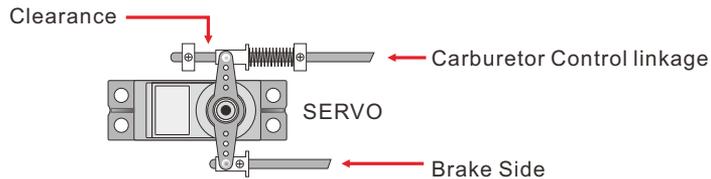
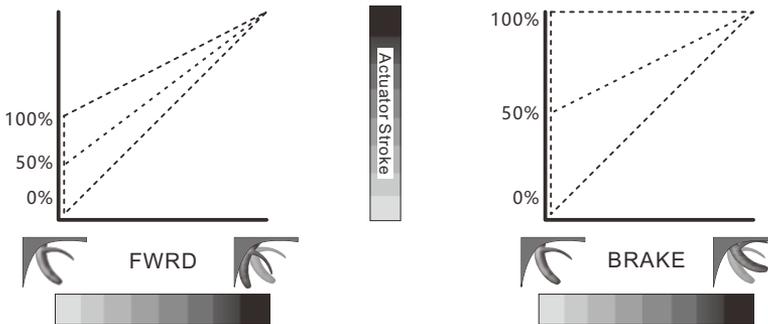
Adjust operation amount near the throttle acceleration and brake neutral position .

- 0 Near the neutral will not produce the acceleration action.
- 100 Near the neutral will produce the strongest acceleration action.

**As the value increases, the effect will increase!**

Accelerator is Influenced by the travel setting.

- The acceleration effect near the neutral position is improved .
- Acceleration and brake (back) effect can be adjusted independently.
- When setting the throttle mixing, CH3/4 is also effective.



Aiming at the fuel machine models, because a single servo needs to control carburetor and brake at the same time , we must leave part of the clearance on the servo arm , so there is a significant delay in the throttle and brake.

We can achieve this function by ESC . (If ESC has no this function , it can be set by this function )

Set: Main Menu → THR → TH ACC



## PRIMARY

### REV

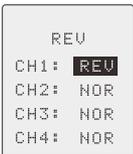


Set the positive and negative of each channel independently .

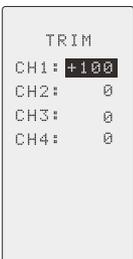
**Note:**

**Please set the direction according to your model !**

Set: Main Menu → PRIMARY → REV



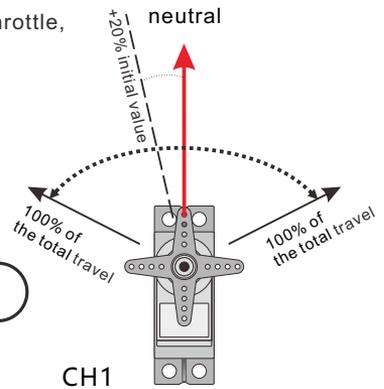
### TRIM



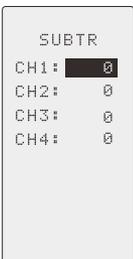
Compensate the operation amount of the neutral point of throttle, steering, CH3 and CH4.

Will not affect the total travel.

Set: Main Menu → PRIMARY → TRIM



### SUBTR

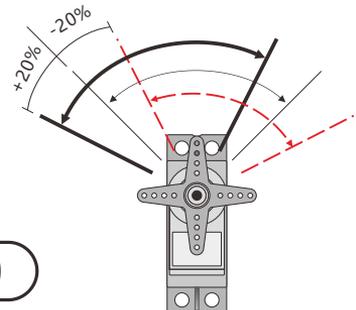


Fix the neutral position of throttle , steering ,CH3 , CH 4 .

When neutral position of the model car deflect , which will cause unable to walk straight.

**Use this function to fix!**

Set: Main Menu → PRIMARY → SUBTR



## EPA

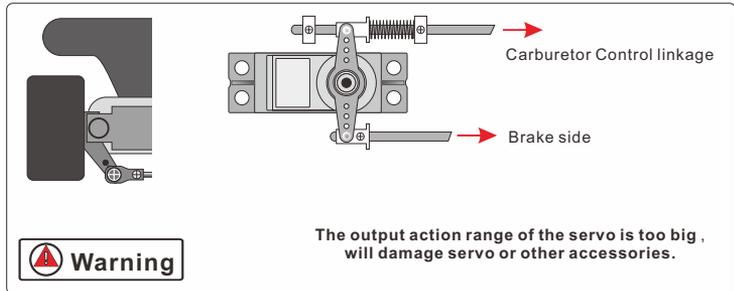
EPA  
 CH1R: 100  
 CH2L: 100  
 CH3F: 100  
 CH4B: 100  
 CH1+: 100  
 CH2-: 100  
 CH3+: 100  
 CH4-: 100

Implement the most flexible travel adjustment, can respectively adjust one direction travel of the throttle, steering, CH3, CH4 without influencing the other direction .

The related matters of the maximum travel.

**Actually travel setting can determine the maximum travel of each channel, but when you adjust the following functions , it may exceed the maximum range of travel:**

SUBTR  
 PR MIX  
 IDLUP  
 TH ACC  
 BK MIX  
 4WSMIX  
 ESCMIX



Set: Main Menu → PRIMARY → EPA



## F/S

F/S  
 CH1: 0  
 ON  
 CH2: 0  
 ON  
 CH3: 0  
 ON  
 CH4: 0  
 ON

Shut down the transmitter or receiver and lose contact with the transmitter , receiver will make a pre-set action.

ON	KEEP
Output pre-set action	Keep the action before out of control

F/S protection range : -100% ~ +100% .

F/S protection function is a safety auxiliary function to reduces hurt to the lowest . But if the pre-set position is a dangerous position, it will cause the opposite effect.

**Suggestions: set the throttle on the 0 position.**



**Attention: when setting the F/S function , the transmitter and receiver must be linked, and keep in communication.**

When exiting the F/S function , the receiver receive the command , the green led blinks quickly !



1 -----> 2 -----> 3 -----> 4 -----> 5 -----> 6

Set: Main Menu → PRIMARY → F/S



## POS



This function is to preset the CH3, CH4 at a fixed position.

During the adjustment of the following functions, the action of CH3 and CH4 will be base on mixing control, instead of fixing in the preset position:

- \* PR MIX                      \* BK MIX
- \* 4WSMIX                    \* ESCMIX

CH3 and CH4 can be set on trim (DT1/2/3/4) or switch (SW.2), for the specific operation please refer to the **DIAL SW**.(page 49)

Set: Main Menu → PRIMARY → POS

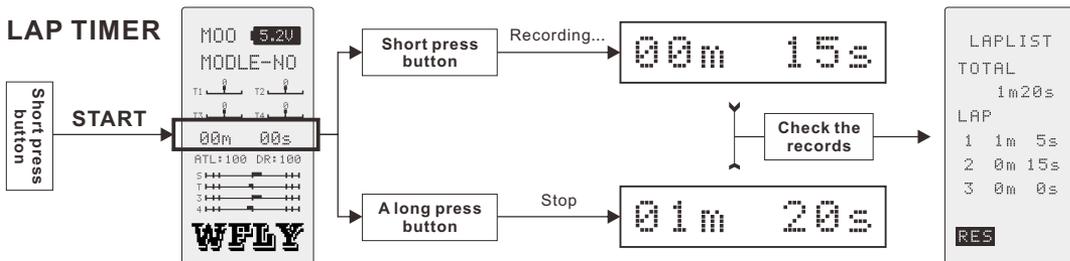
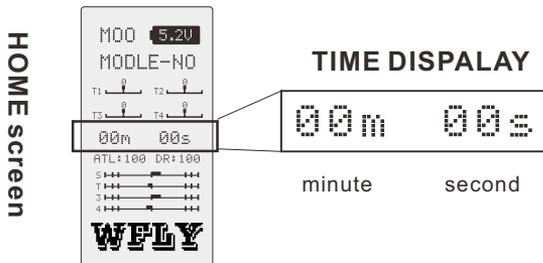


## TIMER



Three modes : timing , countdown timing , lap timing .

- Every 1min transmitter made the voice "DI.." to make a remind.
- When the time reach the final 20s, transmitter made the voice "DI..DI..". When finished .the transmitter will make a long blow ! It reminds the timer has finished.
- Preparation , make the **DIAL SW1** set to the timer.



When The timer has finished you can view the record in **LAPLIST**. (page 41)

## The Calculation Of The Time

$$\text{Total time} = \text{lap1} + \text{lap2} + \text{lap3} + \dots$$

LAPLIST	
TOTAL	2m20s
LAP	
1	1m 5s
2	1m 15s
3	0m 0s
RES	

Exp:

\*When the car finish the first lap, short press the button to record time of 1'5" , the total time is 1'5";

\*When the car finish the second lap, short press the button to record time of 1'15" , the total time is 2'20" ;

\*At this time, long press the button to stop timing , this will not affect the total time. After stopping the total time is the time recorded when the last time short press ,it is 2'20" .

Set: 1, Main Menu → DIAL . SW . SW1 → TIMER  
Set: 2, Menu → PRIMARY . TIMER . MODE → UP/DOW/LAP



## LAPLIST

LAPLIST	
TOTAL	0m 0s
LAP	
1	0m 0s
2	0m 0s
3	0m 0s
RES	

View all lap times recorded by lap timer .

After Starting the lap timer, each lap time will be recorded in accordance when you short press the button.

List data will not be lost when power off, press the **RES** to clear the list.

Set: Main Menu → PRIMARY → LAPLIST



## ADVANCE

### PR MIX(Programmable Mixing)

```

ADVANCE
▶ PR MIX
▶ A.B.S
▶ BK MIX
▶ 4WSMIX
▶ ESCMIX
▶ TH MODE
▶ DIAL SW
    
```

This function allows you to apply mixing between the steering , throttle , CH3 , CH4 .

**MST** : Master channel ,select the channel needed to be mixed .

**SLV** : Slave channel , select the channel to mix.

The movement of the master channel side will be added to the movement of the slave channel side .

**LEFT** : Left side mixing rate, mixing output range: -120% ~ +120%

**RGHT** : Right side mixing rate , mixing output range: -120% ~ +120%

**TRIM** : Removed or added the trim of the master channel to the slave channel .

**MXMD** : Removed or added the other setting of the master channel to the slave channel.



```

PR MIX
MODE: OFF
LEFT: +100
RGHT: +100
MST : CH1
SLV : CH2
MXMD: OFF
TRIM: OFF
    
```

The following are some functions of the master channel that will be added to the slave channel when mixing mode is on:

Steer: **EPA, SPEED, D/R, EXP, 4WSMIX;**

Throttle: **EPA, SPEED, SXNT, IDLUP, NTBKR, TH ACC, A.B.S, EXP, ESCMIX, ATL, THOFF;**

Ch3: **EPA, 4WSMIX, BK MIX;**

CH4: **EPA, BK MIX, ESCMIX.**

#### Programable mixing application :

1, **PR MIX.MODE** set to **ON**, the function can take effect.

2, Set to be control by **switch** then set **PR MIX.MODE on**, it will be controlled by the switch to take effect .

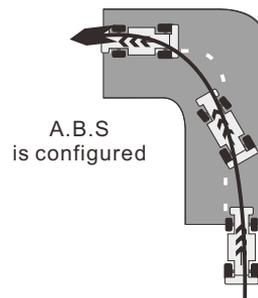
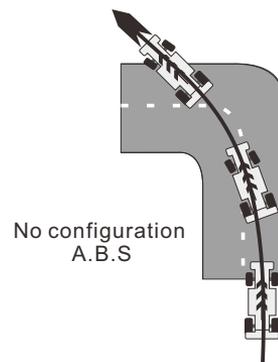
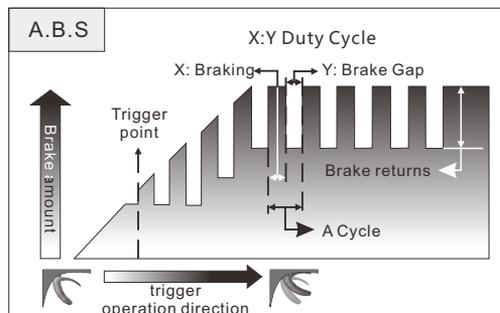
The specific operation can be seen in the **DIAL SW** .(page 49)

1, MAIN MANU → ADVANCE → PR MIX  
 Set: 2, MAIN MANU → ADVANCE → DIAL SW  
 or(MAIN MANU → DIAL SW)



## A.B.S

A.B.S  
 MODE : OFF  
 AB.P : 50  
 DELY : 0  
 CYCL : 50  
 TG.P : 50  
 DUTY : LOW



### TG.P : trigger position .

- 0 as long as the brake it will generate A.B.S action.
- 50 The brake reached 50% produce A.B.S action.
- 98 brake reached 100% produce A.B.S action.

### AB.P : brake return amount

- 0 returns ratio is 0, which does not return, no A.B.S function, become a common brake.
- 50 return 50%.
- 100 to return to the position of neutral point.

### DELY : delay amount

- 0 without delay.
- 50 delay of about 0.5s to start A.B.S.
- 100 delay of about 1s start A.B.S.

### CYCL : cycle speed

The set value is small, put less time on it;  
 conversely, the set value is larger, spend more time on it.

### DUTY: cycle duty ratio

Low, brake time accounted for the entire point time of 25% .  
 Mid, braking time to put 50% of the time.  
 High, brake time accounted for the entire point time 75%.

The application of **A.B.S**:

- 1, The **A.B.S. MODE** is set to **ON**, the function can take effect.
  - 2, Set to be controlled by **switch**, then set the **A.B.S . MODE** to **on**, it will be controlled by the switch whether the function will take effect or not.
- The specific operation can be seen in the **DIAL SW** .(page 49)

Set: Main Menu → ADVANCE → A.B.S



```
BK MIX
CH3 : OFF
RATE : 100
DELAY: 0
ABS  : OFF
CH4 : OFF
RATE : 100
DELAY: 0
ABS  : OFF
```

This function is use when the front and rear brakes must be adjusted independently such as the scale GP car.

It has 3 modes :

- 1, the throttle channel control rear brakes, CH3/CH4 to control the front wheel brake.
- 2, the throttle channel control rear brakes, CH3&CH4 to control the front wheel brake.
- 3, the throttle channel control speed acceleration alone does not control the, brake, CH3 and CH4 control the front and rear wheel brake .

When the throttle channel brake, make the braking action mixed control to the CH3 , CH4 according to the proportion.

The ratio is set to 0, the brake action 0% mixed control to CH3, CH4, CH3, CH4 no action.

The ratio is set to 100, the brake action 100% mixed control to CH3, CH4.

A.B.S:

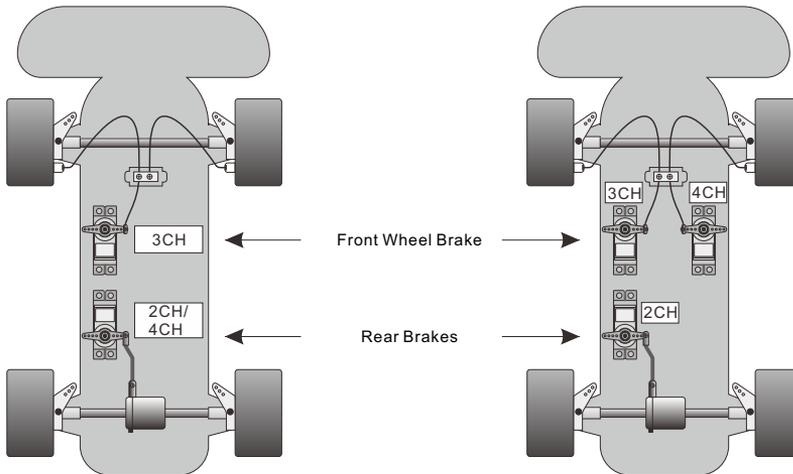
Set to open , mix the brake motion with A.B.S to CH3, CH4.

Set to turn off , do not mix the brake motion with A.B.S to CH3, CH4.

DELAY: adjust the CH3 and CH4 to execute the action speed of the brake .

0 :the speed is the fastest, without delay.

100 : the speed is the slowest, maximum delay.



SET: MAIN MANU → ADVANCE → BK MIX



## 4WS MIX(4 Wheel Mixing)



The action of the steering channel through the mixing control make the CH3 control the movement of back wheel .

### RATE: CH3 rate (rear side)

0: the steering channel movement is not mixed to CH3.

100: mix the steering channel action 100% to CH3.

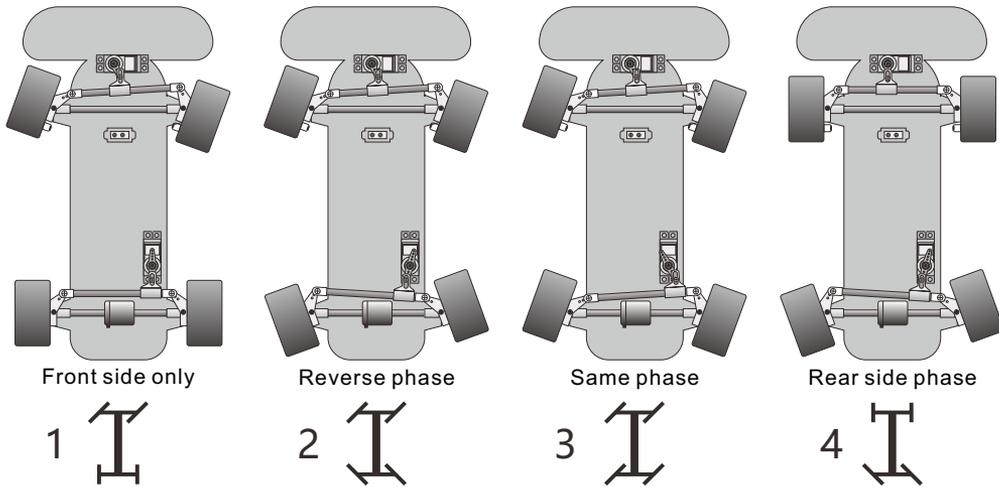
### MXMD:

Mix mode on , delay of the steering Channel and D/R and steering curve will be mixed to CH3.

Mix mode off , delay of the steering Channel and D/R and steering curve will not be mixed to CH3.

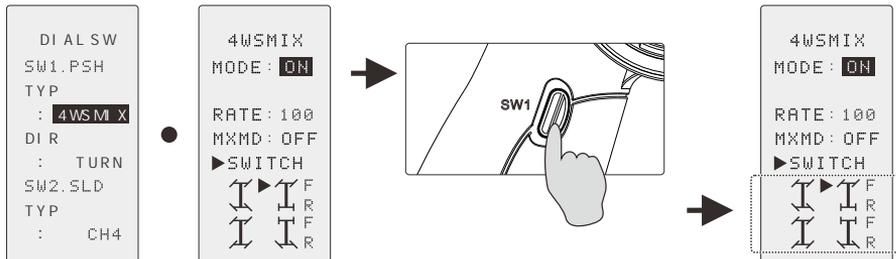
### 4WS MIX has 4 modes:

- 1, Front side only, the 4WS MIX is off.
- 2, Reverse phase, front side is different from rear side.
- 3, Same phase, front side is same as rear side .
- 4, Rear side phase , front wheel does not move, the rear wheel steering .



### Mode selection of the 4WS MIX :

**DIAL.SW1.** selection for 4WSMIX , DIR set to TURN , through the button to select the mixing mode.



Set:Main Menu → ADVANCED → 4WSMIX



## ESC MIX(Dual ESC Mixing)

```

ESC MIX
MODE : OFF
NO SW
RATE : 100
MXMD : OFF
TRIM : OFF
▶ SWITCH
  
```



The action of throttle channel make the channel 4 to control the front wheel move by mixing .

### RATE :

0 , the throttle will not be mixed to CH4.

1-100 , the throttle will be mixed to CH4 1%-100% .

### MXMD :

Mix mode on : throttle servo delay , neutral point rate , throttle curve , idle speed , neutral point brake, throttle acceleration , A.B.S , brake can be mixed to CH4.

Mix mode off :the functions above will not be mixed to CH4.

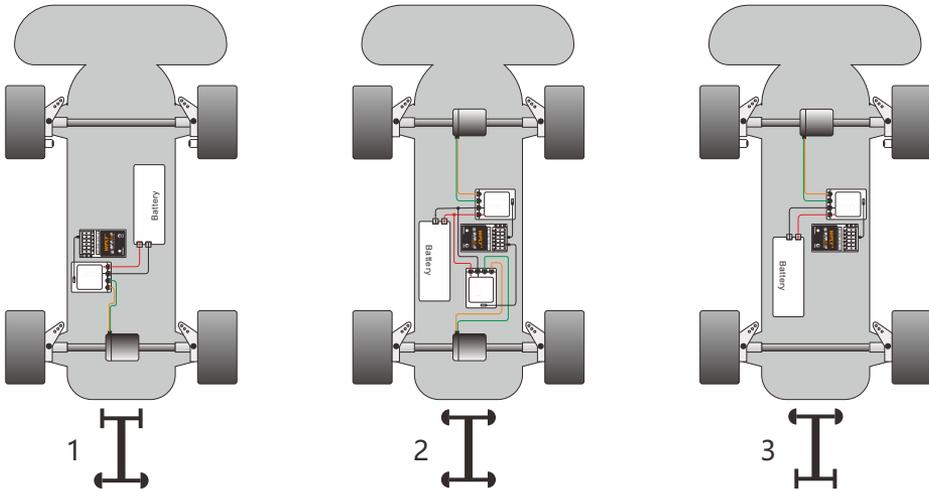
### TRIM :

Trim on : the **SUBTR** and **TRIM** will be mixed to CH4

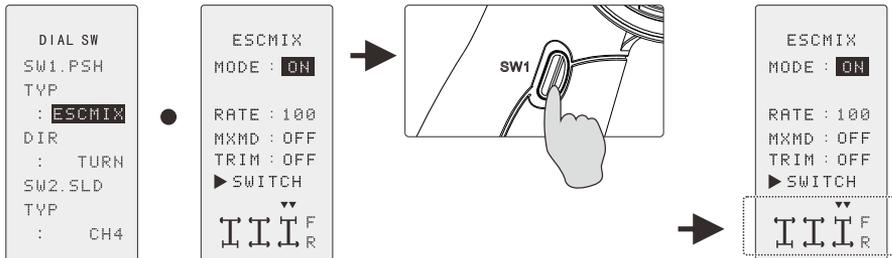
Trim off : the **SUBTR** and **TRIM** will not be mixed to Ch4

### ESC MIX has modes:

- 1, Rear mode ; the rear wheel drive.
- 2, Mixing modes : front and rear wheel drive at the same time.
- 3, Front mode : the front wheel drive.



**ESC MIX mode selection:**  
**DIAL SW.SW1** set to **ESC MIX**, **DIR** set to **TURN**,  
 Through the button to select the mixing mode.



Set:Main Menu → ADVANCED → ESC MIX

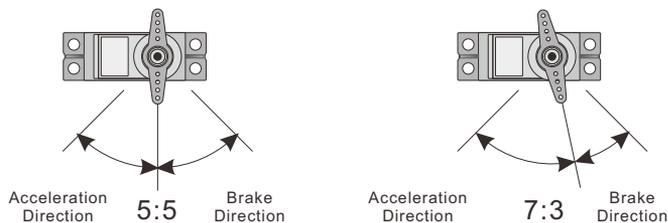


## TH MODE(Throttle Mode)

TH MODE	
SXNT	F7/B3
IDLUP	
NTBRK	0
THOFF	100
ATL	100
ATL	100
SWITCH	

### SXNT[The Midpoint Rate]

Select rate of the acceleration and braking action as 7:3 or 5:5.



Set: Main Menu → ADVANCE → TH MODE → SXNT



### IDLUP [Idle Speed]

This function is used to improve engine starting performance by raising the idling speed when starting the engine of a gasoline model.

The throttle neutral position is offset to the forward side or brake side .

There is no change near the maximum operation angle even when the neutral position is offset by this function .

Set the offset value :

While **IDLEUP** is U, set offset to the forward side.

While **IDLEUP** is D, set offset to the brake side.

The maximum offset of throttle travel is 50%.

#### Application of IDLUP:

- 1, Directly set , it will take effect .
- 2, The switch is set to the **IDLUP** , start or stop the function by the switch .

Set: Main Menu → ADVANCE → TH MODE → IDLUP



TH MODE	
SXNT	
	F7/B3
IDLUP	0
NTBRK	100
THOFF	100
ATL	100
SWITCH	

## NTBRK [Neutral brake]

Execute braking action at the neutral positive of the throttle.

0 : no brake.

1-100 : 1%-100% brake.

Neutral brake Application:

1, Directly set , it will take effect.

2, The switch is set to **NTBRK** ,  
start or stop the function by the switch .

Set: Main Menu → ADVANCE → TH MODE → NTBRK



## THOFF [Throttle Off]

Set the throttle action to a fixed position.

0 : neutral point.

1-100 : 1%-100% .

1, Main Menu → ADVANCE → TH MODE → THOFF  
Set: 2, Main Menu → DIAL SW → SW1/SW2 (set to THOFF)



## ATL [The volume of brake]

Adjust the throttle brake travel simply.

0 : the brake side have no action.

1-100 : 1%-100% .

Combine the **ATL with EPA (brake side of THR)** is the real brake travel.

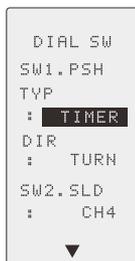
Set: Main Menu → ADVANCE → TH MODE → ATL



## DIAL SW(Function Select Dial And Switch)

Set the function of switch and trim .

### Dial, Switch

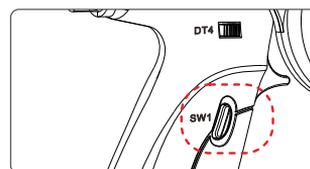


#### Switching mode (SW1):

**TURN** : press to switch ON/OFF state.  
**NATURE** : press is ON , release is OFF .

Button can be assigned to the functions below:

<b>TIMER</b>	<b>ON/OFF</b>
<b>ESCMIX</b>	<b>ON/OFF</b>
<b>4WSMIX</b>	<b>ON/OFF</b>
<b>THOFF</b>	<b>ON/OFF</b>
<b>PR MIX</b>	<b>ON/OFF</b>
<b>IDLUP</b>	<b>ON/OFF</b>
<b>A.B.S</b>	<b>ON/OFF</b>
<b>NTBRK</b>	<b>ON/OFF</b>

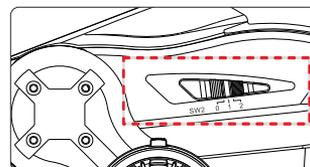


#### Switch(SW2):

Push to the side of 0 is OFF ,  
 Push to the side of 1 or 2 is ON .

Switch can be assigned to the functions below:

<b>CH4</b>	<b>Channel Action</b>
<b>CH3</b>	<b>Channel Action</b>
<b>THOFF</b>	<b>ON/OFF</b>
<b>PR MIX</b>	<b>ON/OFF</b>
<b>IDLUP</b>	<b>ON/OFF</b>
<b>A.B.S</b>	<b>ON/OFF</b>
<b>NTBRK</b>	<b>ON/OFF</b>



Set: Main Menu → DIAL SW (SW1/SW2)



Set step and function of the trim .



→ The step can be set to 1~20.

→ Trim direction : NOR(normal) and REV(reverse).

Trim can be assigned to the functions below:



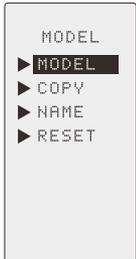
<b>ST-TRM</b>	<b>4WSMIX</b>
<b>TH-TRM</b>	<b>BK4-RT</b>
<b>SPEED</b>	<b>BK3-RT</b>
<b>ACCBK</b>	<b>PMX-R</b>
<b>ACCFW</b>	<b>PMX-L</b>
<b>CYCL</b>	<b>THOFF</b>
<b>ABS.DY</b>	<b>ESCMIX</b>
<b>ABS.PS</b>	<b>IDLUP</b>
<b>SPD-RN</b>	<b>SUBT4</b>
<b>SPD-TN</b>	<b>SUBT3</b>
<b>EXPB</b>	<b>SUBT2</b>
<b>EXPF</b>	<b>SUBT1</b>
<b>EXP</b>	<b>CH4</b>
<b>ATL</b>	<b>CH3</b>
<b>D/R</b>	

Set: Main Menu → DIAL SW(function and step of trim)



## Model Information

### Model Selection



40 models can be stored and selected.



Set: Main Menu → MODEL → MODEL



### Model Copy



Copy the currently selected model data to another , without changing the current model data . You can simply set parameters of models that only has few difference by this function .

Exp : copy model M01 to model M02 !

Set: Main Menu → MODEL → COPY



### Model Name



To distinguish the difference of each model , you can use letters, numbers and punctuation to name your model!

Set: Main Menu → MODEL → NAME



### RESET



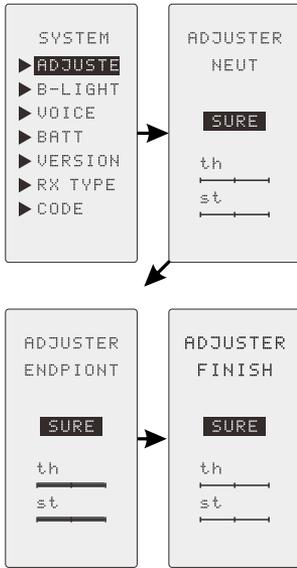
Reset the current model parameter, reset value to factory settings. (only for the current model data! )

Set: Main Menu → MODEL → RESET



## System Setting

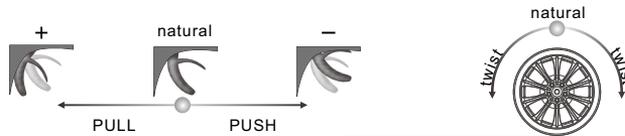
### Adjustment



When the throttle and steering wheel appear the mechanical deviation, use **ADJUSTE** function to fix.

Setting method:

- 1, When "**NEUT**" shows , release the trigger and wheel , then press confirm button.
- 2, When "**ENDPOINT**" shows , turn the trigger and wheel to the both side endpoints for several times ( as the following graph ) , then release them , and press confirm button.
- 3, Then "**FINISH**" shows , and return to the standby interface. If "**ERROR**" shows , repeat step 1 ~ 2 .



Endpoint Calibration

### Backlight



Set the backlight mode and time.

**MODE:**

**OFF** : no backlight .

**ON** : backlight is always on.

**KEY** : when the button action occurs the backlight will be on for a period of time.

**TIME:**

key mode, backlight brightness time. 5~60s.

Set: Main Menu → SYSTEM → B-LIGHT



### Volume



Set the tone and volume of transmitter .  
20 level volume to be set .

Set: Main Menu → SYSTEM → VOICE



## Battery Type Setting

Please select the correct power supply solutions!



Different battery needs to select different power supply scheme. If not choose properly, it will not damage the transmitter. But it will affect the life of the battery.

When you hear the continuous warning alarm , it means the voltage is too low, please replace new battery.

Standard power supply voltage: 3.7~6.5V

**Four battery scheme:**

Common battery (3.7V alarm voltage); Li-Ion (3.4V alarm voltage); Ni-Cd (3.7V alarm voltage); Ni-MH (3.7V alarm voltage).

Set: Main Menu → SYSTEM → BATT



## Version Information



The version information of the transmitter .

**Warning**

If high speed mode has been selected but connected to analog servo it will damage the servo!

## High Speed Mode



If you use a digital servo please choose high-speed mode; And analog servo please choose normal mode.

Set: Main Menu → SYSTEM → RX TYPE



When changing the mode, please link again to take effect.

## Link



Get contact between the transmitter and receiver.

TIPS

\ When linking , the blue led blink slowly ;

\ If it's successfully linked , it will return automaticly .

\ If it is not linked for a long time, press the [↻] 1s force to exit.

Set: Main Menu → SYSTEM → CODE



**Warning**

Before linking ,please confirm whether you have chosen the correct servo type .

## LANGUAGE



Chinese: Chinese **MENU**;  
English: English **MENU**.

Set: Main Menu → LANG



## Transmitter

Model: X4  
Application: car , boat  
Band: 2.400GHz-2.483GHz  
Power:  $\leq 100\text{mW}$   
Modulation: DSSS  
Language: Chinese, English  
Memory: 40 groups  
Resolution: 1024  
Voltage: 3.7~6.5V  
Controllable range: about 100m (relate to the environment)

- Large dot-matrix LCD, more compact menu, more intuitive UI, easy to operate!
- The special **FLASPEED** technology , control is more agile, quick as lightning!
- Low voltage design, low consumption. Suitable for different kinds of battery.

## Receiver

Model: WFR04H  
Application: model car, boat  
Band: 2.4GHz-2.483GHz  
Demodulation: DSSS  
Resolution: 1024  
Voltage: 3.7V-12.6V,  $\leq 60\text{mA}$   
Size: 34.85x21x11.3  
Weight: 5.8g  
Controllable range: about 100m (relate to the environment)  
Fail safe

- Adapt to series products of WFLY2.4GHz.





**WFLY**<sup>®</sup>

EN201708V0.7