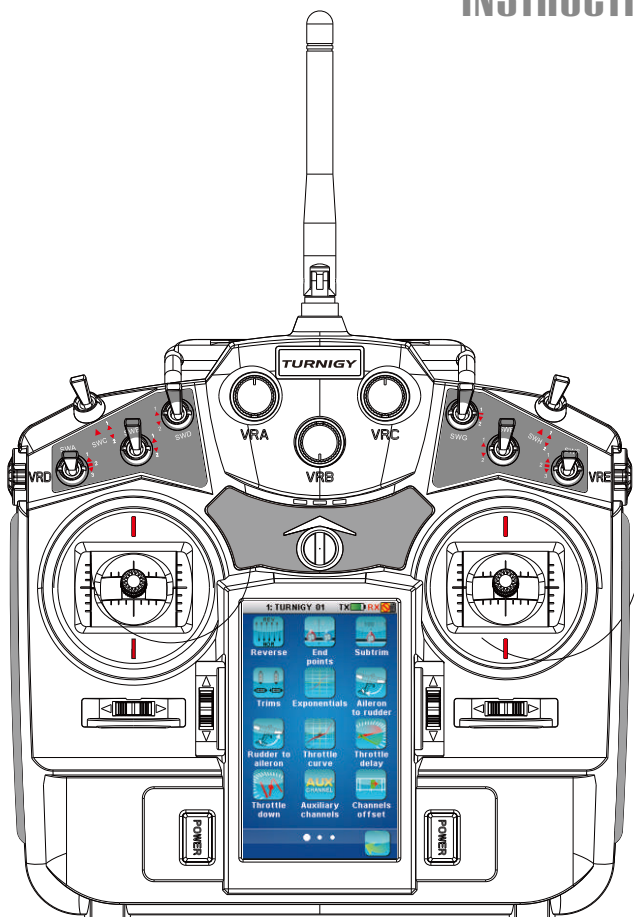


TURNIGY[®]
power systems

TGY-i10

Digital Proportional radio control system

INSTRUCTION MANUAL



AFHDS
AUTOMATIC FREQUENCY
HOPPING DIGITAL SYSTEM

2A

[Http://www.turnigy.com](http://www.turnigy.com)

CE0678FC

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1. Introduction

Thank you for choosing the TGY-i10 ten channels 2.4 GHz AFHDS2A intelligent system, which is compatible with helicopter, fixed wing, glider and powered glide systems. System parameters can be set up based on the model owned by the user. If this is your first time to use an intelligent system, this user manual will provide you with the instructions you need to obtain full enjoyment from your new system. Before using your new system, please read all instructions carefully, to ensure your safety.

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2. Services


If you encounter any problems, while using this system, please refer to the appropriate section of this manual. After consulting this manual, you are unable to solve your problem, please contact your local dealer or connect to consult our service and support website for further assistance.


[Http://www.turnigy.com](http://www.turnigy.com)

3. Special symbols

Please pay attention to the following symbols when they appear in the manual and read carefully.


 **Danger:** Not following these instructions may expose the user to serious injuries or death.


 **Warning:** Not following these instructions may expose the user to serious injuries.


 **Attention:** Not following these instructions may expose the user to minor injuries and even to serious injuries.




4. Safety guide

 Do not use at night or during a lightening storm, as bad weather will adversely affect the control of your system.

 Make sure that the motors are all moving the same direction as the operating direction.

 The shutdown sequence is as follows: 1. Disconnect the receiver battery 2. Switch off the transmitter Failure to follow this procedure may result in uncontrolled movement and damage to the system.

 Please be aware, that the 2.4G R/C system may affect nearby planes or cars after you turn on the transmitter



Be sure to set the Fail Safe function.



Do not operate outdoors on rainy days, run through puddles of water or use when visibility is limited.
Should any type of moisture (water or snow) enter any component of the system, erratic operation and loss of control may occur.



Do not operate in the following places:
Near other sites where other radio control activity may occur,
Near people or roads,
On any pond when passenger boats are present,
Near high voltage power lines or communication broadcasting antennas.
Interference could cause loss of control,
Improper installation of your Radio Control System in your model could result in serious injury.



Do not operate this R/C system when you are tired, not feeling well or under the influence of alcohol or drugs.
Your judgment is impaired and could result in a dangerous situation that may cause serious injury to yourself as well as others.



Do not touch the engine, motor, speed control or any part of the model that will generate heat while the model is operating or immediately after its use. These parts may be very hot and can cause serious burns.



Please have an overall check about the model before any operation.
Any problem in radio control system or improper installation may cause out of control.
Simple distance test methods:
One hold the model, and the other one carry the transmitter to a proper place to check the servo system condition.
Please stop operation if any exceptional case occurs.
Please check the model memory to make sure the matching is right.



Turn on the power, please check if the throttle neutral position is in its lowest position while turning on the transmitter every time.
When making adjustments to the model, do so with the engine not running or the motor disconnected, you may unexpectedly lose control and create a dangerous situation.

**Fail safe function:**

Before running (cruising), check the fail safe function:

Check Method; Before starting the engine, check the fail safe function as follows:

(1) Turn on the transmitter and receiver power switches.

(2) Wait at least 30 seconds, then turn off the transmitter. (The transmitter automatically transfers the fail safe data to the receiver every 5 seconds.)

(3) Check if the fail safe function moves the servos to the preset position when reception fails.

The fail safe function is a safety feature that minimizes set damage by moving the servos to a preset position when reception fails. However, if set to a dangerous position, it has the opposite effect.

When the reverse function was used to change the operating direction of a servo, the fail safe function must be reset.(for more information about this function please reference page 37)

**Battery :**

(1) Do not make the battery short circuit.

(2) Do not drop the battery or expose it to strong shocks or vibrations. The battery may short circuit and overheat, electrolyte may leak out and cause burns or chemical damage.

**Storage:**

1. Do not leave the radio system or models within the reach of small children.

A small child may accidentally operate the system. This could cause a dangerous situation and injuries.

2. Do not store your R/C system in the following places.

Where it is extremely hot or cold,

Where the system will be exposed to direct sunlight,

Where the humidity is high,

Where vibration is prevalent,

Where dust is prevalent,

Where the system would be exposed to steam and condensation,

Storing your R/C system under adverse conditions could cause deformation and numerous problems with operation.

Notice:

Do not expose plastic parts to fuel, motor spray, waste oil or exhaust. The fuel, motor spray, waste oil and exhaust will penetrate and damage the plastic.

5. 2.4G系统 2.4GHz System Specifications



AFHDS 2A
AUTOMATIC FREQUENCY
HOPPING DIGITAL SYSTEM

AFHDS2A stands for "Automatic Frequency Hopping Digital System 2A". This highly sophisticated radio transmission system will guarantee you a long range, jamming free and long battery life experience. This system is developed by the world's leading manufacturer and has been tested for many years.

RF specifications:

RF range: 2.4055-2.475GHz
Channel bandwidth: 500KHz
Number of channels: 140
RF power: less than 20dBm (100mW)
RF mode: AFHDS 2A(Automatic Frequency Hopping Digital System2)
Modulation type: GFSK
Antenna length: 26mmx2
RX sensitivity: -105dBm

Danger:

Misuse of this radio system can lead to serious injuries or death. Please read completely this manual and only operate your radio system according to it.

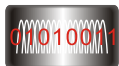
The 2.4 GHz radio band has a completely different behavior than previously used lower frequency bands. Always keep your model in sight as a large object can block the RF signal and lead to loss of control and create a dangerous situation. The 2.4 GHz RF signal propagates in a straight line and cannot circumvent objects in its path. Never grip the antenna during operation as it significantly degrades the signal and may cause loss of control and damage to the system.

Danger:

Always turn on the transmitter first then the receiver. When turning off the system, always turn off the receiver first then the transmitter. This is to avoid having the receiver on itself as it may pick a wrong signal and lead to erratic servo movements. This is particularly important for electric powered models as it may unexpectedly turn on the motor and lead to injuries or death.

A separation distance of at least 20 cm from all persons is required during operation.

6. 系统特征 System characteristics



This radio system works in the frequency range of 2.4055 to 2.475GHz. This band has been divided into 1420 independent channels. Each radio system uses 16 different channels and 160 different types of hopping algorithm. By using various switch-on times, hopping scheme and channel frequencies, the system can guarantee a jamming free radio transmission.



This radio system uses a high gain and high quality multi directional antenna. It covers the whole frequency band. Associated with a high sensitivity receiver, this radio system guarantees a jamming free long range radio transmission.



Each transmitter has a unique ID. When binding with a receiver, the receiver saves that unique ID and only accept data from that unique transmitter. This prevents obtaining the wrong signal from another transmitter and insures safety for your system..



This radio system uses low power electronic components and a very sensitive receiver chip. The RF modulation uses intermittent signal transmission thus reducing even more power consumption. Comparatively, this radio system uses only a tenth of the power of a standard FM system.



This system uses the two-way communication, which could control the working state of current model better and make the operation more enjoyable and safer than before.

7. Battery charging instructions



If your transmitter or receiver uses any type of rechargeable batteries, please check them before each flight and make sure they are in good shape and fully charged other wise it may lead to loss of control, injuries and death.



If you are using rechargeable batteries, make sure to use a suitable charger with the right charging current set otherwise it may lead to battery overheating, fire or explosion. Disconnect the battery from the charger as soon as it is fully charged. If you don't plan to use your radio system for a long period of time, remove the batteries from the transmitter and the model as it may damage them.

8. System Overview

- 采用最新双向遥测系统，并可兼容TGY所有单双向接收机；

The transmitter i10 :

- Adopts the latest two-way communication systems to ensure that all of the TGY-brand receivers are compatible with this transmitter
- Home page menu can monitor i10 voltage, speed, temperature, voltage parameters, function conditions (on/off), model structure and timers in real time.
- The flashing LED and 3D audio effect will alert the user when a system exception occurs.
- This parameter is easily set due to the 3.55 inch, 240 by 400 pixels (WQVGA) color TFT-LCD touch screen.
- The power switch design prevents accidental power off or power on conditions. The transmitter can only be turned on/off by pushing both the left and right power buttons at the same time.
- Eight switches and five knobs can be assigned to different functions in most applications. The three knobs can be hidden by pressing them.
- The high-precision double-bearing gimbal and fashionable ultra-thin transmitter ensure a great experience for the user.
- The double antenna structure ensures the 2.4G frequency module transmits in all directions for a safer and better signal.
- The transmitter can store 20 models, including every model binding conditions. It can also store model settings on a SD card.
- Free software and upgrades to the system are available online.

- It is compatible with helicopter fixed-wing, glider, and powered glider. Airplane has two type, fixed-wing and helicopter. Different airplane structure is matching with different procedure. Users can set according to airplane structure.

• (General functions)

Reverse 、 End points、 Subtrim 、 Trims 、 Exponentials 、
 Aileron to rudder 、 Rudder to aileron 、 Throttle curve 、 Throttle delay 、 Throttle down 、 Auxiliary
 channels 、 Channels offset 、 Function delay 、 Channels delay 、 Linear mixes 、 Curve
 mixes 、 Conditions 、
 Logic switches 、 Airplane structure 、 Timers 、 Trainer mode 、
 Display servos 、 Models 、 RX setup 、 System

• (Airplane/Glider)

Default structure (Engine+Aileron+Elevator+Rudder)
 Exclusive function menu :
 Aileron function 、 Flap function 、 Spoiler function 、 Elevator to flap 、 Throttle needle 、 Butterfly 、 升降
 Elevator function 、 Rudder function 、 V tail

• (Helicopter)

Default structure (fixed pitch)
 Exclusive function menu :
 Throttle hold 、 Throttle mix 、 Pitch curve 、 Swashplate mix 、 Swashplate type 、 Swashplate-
 ring 、 Governor 、 Gyroscope

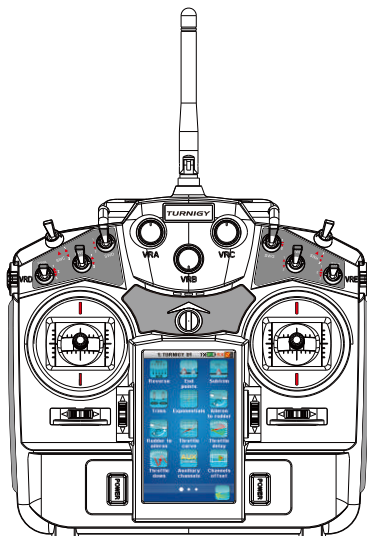
9. Transmitter specifications

Transmitter specifications:

- Channels: 10
- Model type: helicopter/ airplane/ glider
- RF range: 2.4055-2.475GHz
- Bandwidth: 500KHz
- Band: 140
- RF power: less than 20 dBm
- 2.4G system: AFHDS2A
- Code type: GFSK
- Sensitivity: 1024
- Low voltage warning: yes (less than 3.75V)
- DSC port: yes(USB, HID)
- SD port: yes
- ANT length: 26mmx2
- Weight: 653.5g (Include Battery)
- Power: 3.7V (800mAh)
- Size: 278.59mm*189.35mm*95.87mm
- Color: Silver
- Certificate: CE0678, FCC



MODEL: TGY-i10



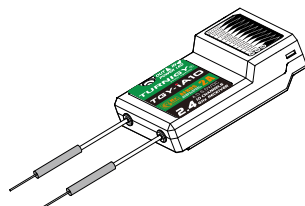
10. Receiver specifications

Specifications:

- Channels: 10
- Model type: helicopter/ airplane/ glider
- RF range: 2.4055-2.475GHz
- Band: 140
- RF power: less than 20 dBm
- Sensitivity: -105DBm
- 2.4G system: AFHDS2A
- Code type: GFSK
- ANT length: 26mmx2
- Power: 4.0-6.5V/DC
- Weight: 19g
- Size: 47mm*33.5mm*15mm
- Color: Black
- Certificate: CE0678, FCC
- i-BUS Port: yes
- Date Acquisition port: yes



MODEL: TGY-IA10



Digital proportional radio control system **TGY-i10**

10. 01. RPM Telemetry (magnetic) module

Specifications:

- Model type: helicopter/ airplane/ glider
- Monitor range of speed: 0-16000RPM
- Weight: 3.9g
- Power: 4.0-6.5V/DC
- Size: 24.4*14*8mm
- Color: Black

2.4 GHz **AFHDS 2A**
AUTOMATIC FREQUENCY
HOPPING DIGITAL SYSTEM
MODEL: TGY-APD01



10. 02. RPM Telemetry (optical) module

Specifications:

- Model type: helicopter/ airplane/ glider
- Monitor range of speed: 0-16000RPM
- Weight: 3.9g
- Power: 4.0-6.5V/DC
- Size: 24.4*14*8mm
- Color: Black

2.4 GHz **AFHDS 2A**
AUTOMATIC FREQUENCY
HOPPING DIGITAL SYSTEM
MODEL: TGY-APD02



10. 03. Temperature telemetry module

Specifications:

- Model type: helicopter/ airplane/ glider
- Monitor range of temperature: -40-100°C
- Weight: 3.9g
- Power: 4.0-6.5V/DC
- Size: 24.4*14*8mm
- Color: Black

2.4 GHz **AFHDS 2A**
AUTOMATIC FREQUENCY
HOPPING DIGITAL SYSTEM
MODEL: TGY-ATM01

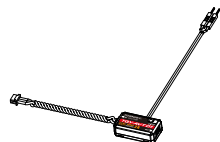


10. 04. Voltage telemetry module

Specifications:

- Model type: helicopter/ airplane/ glider
- Monitor range of Voltage: 4.0-30V/DC
- Weight: 3.9g
- Power: 4.0-6.5V/DC
- Size: 24.4*14*8mm
- Color: Black

2.4 GHz **AFHDS 2A**
AUTOMATIC FREQUENCY
HOPPING DIGITAL SYSTEM
MODEL: TGY-AVT01



10. 05. i-bus receiver

Specifications:

- Channels: 4
- Model type: helicopter/ airplane/ glider
- Weight: 6.7g
- Power: 4.0-6.5V/DC
- Size: 30*25.6*13mm
- Color: Black
- i-BUS Port: yes

2.4 GHz **AFHDS 2A**
AUTOMATIC FREQUENCY
HOPPING DIGITAL SYSTEM
MODEL: TGY-AEV01

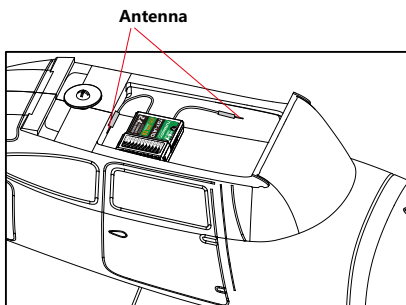
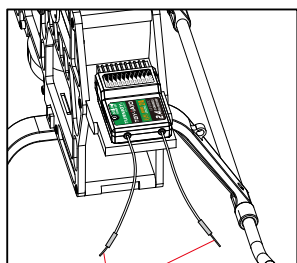
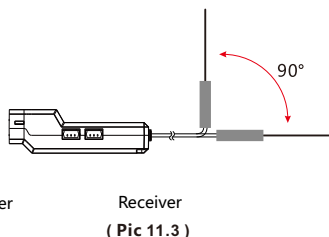
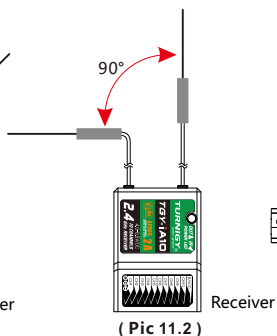
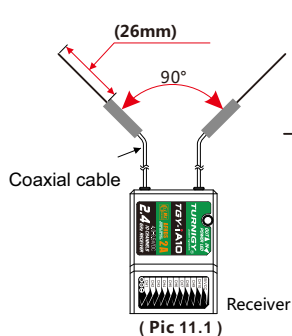


11. Receiver and servo connections

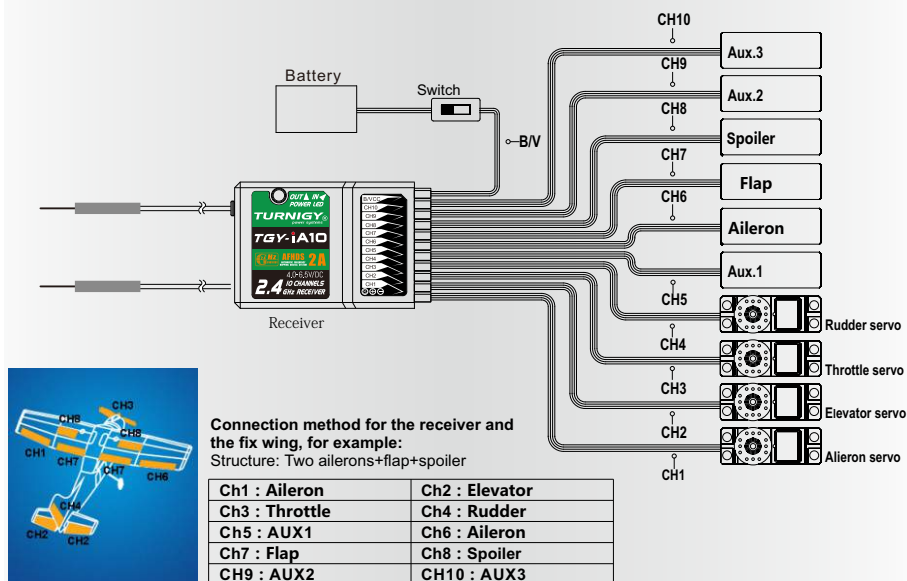


In order to make sure maximum distance between the transmitter and receiver can be obtained please follow the directions below:

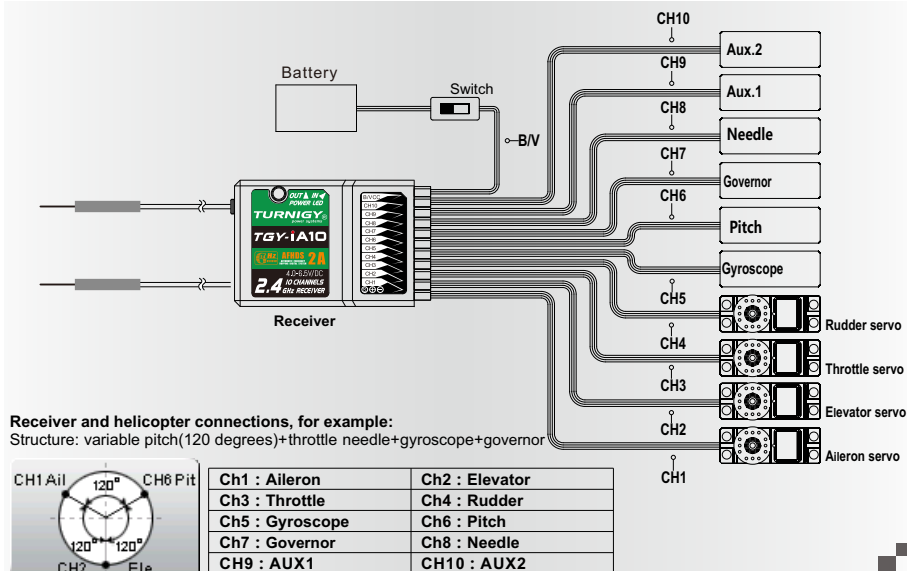
1. The two antennas must be kept as straight as possible. Otherwise, control range will be reduced.
2. The two antennas should be placed at a 90 degree angle to each other, as illustrated in the three pictures below.
3. The antennas must be kept away from conductive materials, such as metal and carbon. A distance of at least 15 cm is required for safe operation. Conductive materials will not affect the coaxial part of the antenna, but it is important that the coaxials are not bent to a severe radius.
4. Keep antennas away from the motor, speed controller and other noise sources as much as possible.



11.01 Airplane model installation

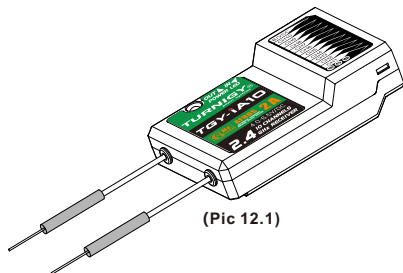


11.02 Helicopter model installation



12. Receiver operation instruction

12.01 Port Setup



(Pic 12.1)

CH1-CH10: represent relevant channel of transmitter.

Bind, VCC: represent the channel used for matching and input power respectively.

OUT: Represent i-BUS port of outputting PPMS data and be used for connecting the serial bus receiver to expand channels.

IN: Represent input ports of all kinds of sensor data, and data acquisition modules can be connected in serial optionally.

12.02 对码 Binding Setup

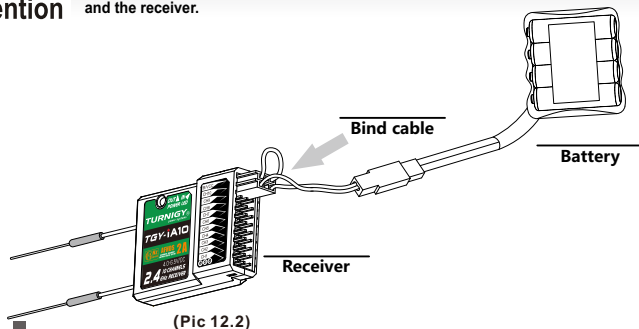
All receivers are bound to their respective transmitter at production time. If you want to bind it with another transmitter, please follow the steps below:

1. Install the battery in the transmitter, and turn on the power.
2. Open the main menu, and select "**RX setup**" function in the second page, then touch "**Bind with a receiver**" to enter bind mode.
3. Insert the standard bind cable into the power supply channel.
4. Connect the 6VDC power connector to any channel from CH1 to CH10 with correct polarity to enter bind mode, The receiver LED will flash at this time.
5. The transmitter will exit the bind mode automatically after having successfully bound with the transmitter.
6. Pull off the bind cable and restart the receiver. Please connect the servos and other telemetry modules to the receiver to check if everything operates normally.
7. If anything is wrong, please repeat the above steps to bind again.



Attention

Notice: The bound transmitter and receiver will work abnormally if the transmitter or the receiver enters the binding state by mistake. In other words, the receiver cannot be controlled by the transmitter. If so, you need to restart the transmitter and the receiver.



12.03 TGY-AEV01 i-BUS i-bus Receiver Connection instruction Setup



(Pic 12.3)

Function Details :

After connecting one TGY-AEV01 i-bus receiver to TGY-iA10 receiver, It will allow user to add four more channels if the channels on the receiver is not sufficient.

i-BUS receiver, can connect 4 modules with 16 channels in serial at most. Button K1 and K4 correspond to C1 and C4 respectively.

Operation instruction:

1. TGY-AEV01 i-BUS The "IN" port of TGY-AEV01 receiver corresponds to "OUT" port of receiver.
2. TGY-AEV01 i-BUS The "OUT" port of TGY-AEV01 receiver is used to connect post level TGY-AEV01 receiver.
3. Insert the bus receiver to receiver, and then switch on the matched transmitter and receiver. The LED will be on.
4. Select main menu of receiver setup to enter the interface of servo setup.
5. Select channel which need to be expanded, meanwhile LED of bus receiver is off.
6. Push relevant channel button by plastic needle of matching line. The setup is successful if LED flashes automatically.
7. Insert servo to check.
8. Set up 4 channels of bus receiver as above steps.
9. Just connect a new bus receiver with "OUT" port of first stage bus receiver if more channel needed. Set up the new one as above steps.



Danger Notice: When the load of serial bus receiver is excessive and electric current is higher than usual, please supply power directly to the serial bus receiver or it will break cables.

12.04 TGY-APD001RPM telemetry (magnetic) module setup



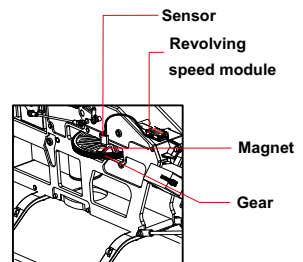
(Pic 12.4)

Function Details :

This function allows the user to monitor turning speed via the transmitter. This is a very useful function when determination of turning speed is required

Operation:

1. Insert one end of standard 3 PIN plug into "OUT" port of **RPM telemetry (magnetic) module**, and insert the other end into "IN" port of receiver or other sensor, as shown in the picture 12.4.
2. As shown in the picture 12.5: Inside hub of the model, the distance between sensor and magnet is less than 2mm. The North Pole or the south pole of the **magnet** has to be paralleled with sensor.
3. Switch on transmitter and receiver. "Motor speed 2:0RPM" will be shown in receiver window in display screen. Speed value changes as turning wheel, which means installation is successful.



(Pic 12.5)

12.05 T6Y-AP002 RPM Telemetry (optical) module setup

Function Details :

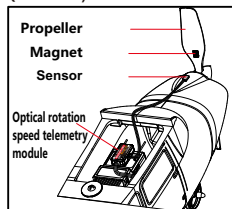
This function allows the user to monitor turning speed via the transmitter. This is a very useful function when determination of turning speed is required

Operation instruction :

1. Connect one end of the standard 3 PIN plug to the "out" port of the **speed telemetry module** and the other end to the "in" port of the receiver or the previous sensors "in" port as shown in the picture 12.6.
2. As shown in the picture 12.7: Affix the sensor and the reflection decals on the flat surface of the side of any rotating part. Keep decals flat and perpendicular to the sensor. Maintain sufficient safety distance between the sensor and the decals to avoid any damage.
3. Switch on the transmitter and the receiver. "Motor speed 2: 0RPM" will be displayed in the main screen. The speed displayed will follow the speed of the rotating part monitored by the rotation speed sensor, indicating a successful installation.



(Pic 12.6)



(Pic 12.7)

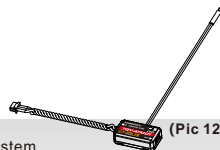
12.06 T6Y-ATM01 Temperature telemetry module connection setup

Function Details :

This function allows the user to monitor the temperature of important operating parts of the system. This will ensure that the user can be aware of any severe temperature changes which would adversely affect system operation. The system will automatically set an alarm if the temperature is outside of safe operating norms

Operation instruction :

1. Insert one end of standard 3 PIN plug into "OUT" port of **temperature module**, and insert the other end into "IN" port of receiver or other sensor, as shown in the picture 12.8 .
2. Adhere temperature sensor to proper place (such as motor and battery) tightly by sponge double stick.
3. Switch on transmitter and receiver. "Temperature 1:25.0°C" will be shown in receiver window in display screen, which means installation is successful, and 25.0°C is the temperature collected.



(Pic 12.8)

12.07 T6Y-AVTO1 External voltage telemetry module connection setup

Function Details :

This function allows the user to monitor the battery voltage of the system. This will ensure that the user can be aware of any severe voltage changes which would adversely affect battery operation. The system will automatically set an alarm if the voltage is outside of safe operating norms

Operation instruction :

1. Insert one end of standard 3 PIN plug into "OUT" port of **external voltage module**, and insert the other end into "IN" port of receiver or other sensor, as shown in the picture 12.9.
2. Switch on transmitter and receiver. "Ext.voltage4:12.40V" will be shown in receiver window in display screen, which means the installation is successful.
3. Insert red and black contact pin into battery port respectively. The red one is positive pole and the black one is negative pole. as shown in the picture 12.9 "Ext.voltage4:12.40V" is shown in the receive widow in display screen, which means the tested voltage is 12.40V.

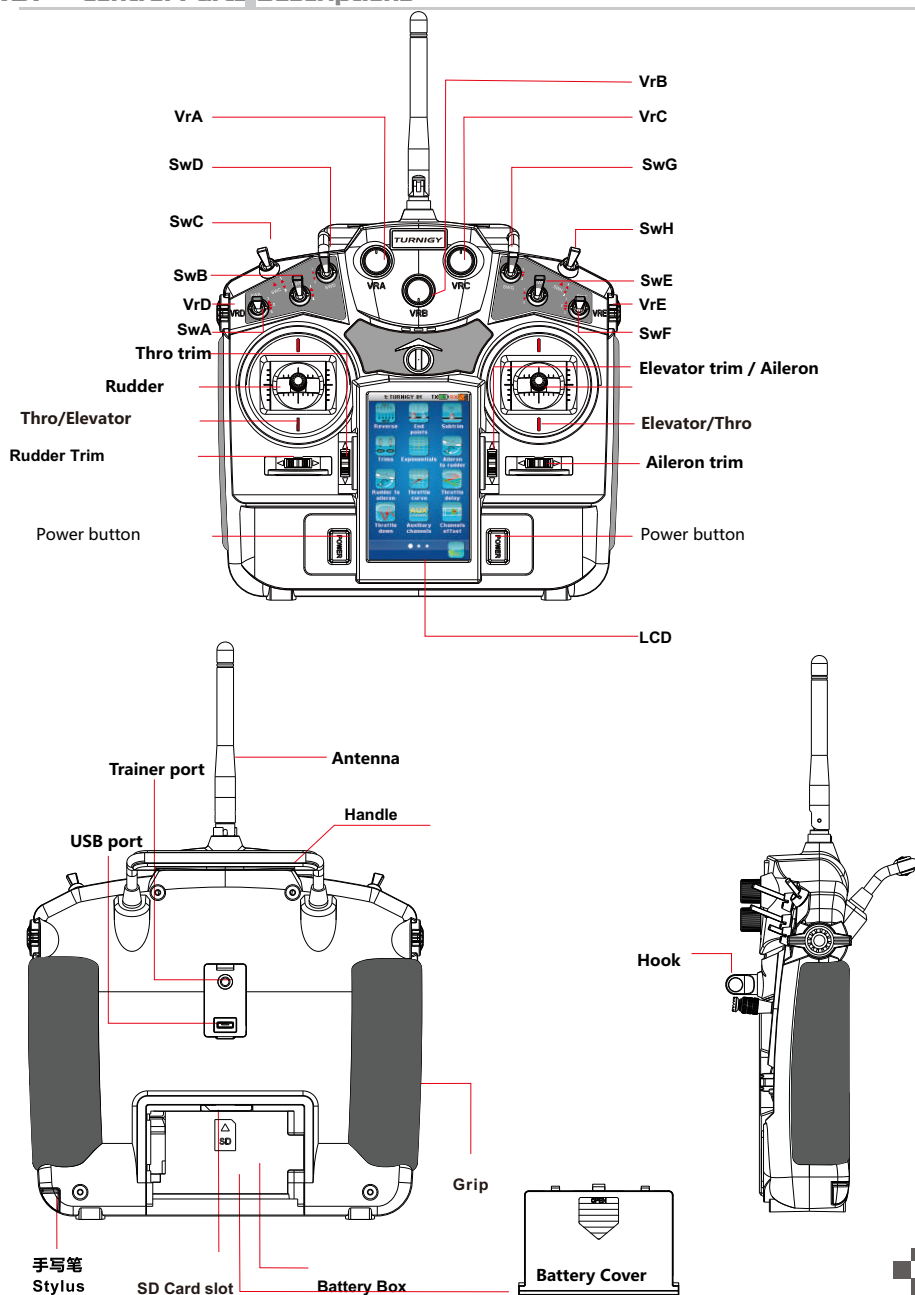
Notice: The polarity of red and black line can not be reversed, or the receiver will be damaged.

Notice: Be sure the IN and OUT ports are connected correctly. Improper connections will cause the transmitter to be unable to distinguish between telemetry modules.



(Pic 12.9)

13. Control Parts Descriptions



14. Stick mode adjustment

Stick Mode Adjustment

The mode can be changed based on user preferences

The instructions for changing default mode 2 are detailed below:

1. Touch system option to select the stick mode as shown in picture 14.1.
2. Change mode to 4.
3. Adjustment of mode 1 and mode 3 as shown in pictures 14.3 and 14.4
 - 1). Change mode 1 and mode 3 to mode 1 or mode 3.
 - 2). Open the battery box and remove the battery.
 - 3). Remove the transmitters left and right grips.
 - 4). Use the inner hexagonal screwdriver to remove the six screws on the back of the transmitter and put them in a safe place as shown in picture 14.5.
 - 5). Disconnect the transmitter back cover plug carefully and you will see the layout as shown in picture 14.6.
 - 6). Remove the eight screws with a small cross screwdriver and put them in a safe place.
 - 7). Switch the left and right gimbal, rotate 180 degrees, adjust the wire and then lock the screw.
 - 8). Insert the transmitter back **cover wire** to main board. Then close the back cover and lock the **screw**.
 - 9). Install the **left and right grip**, and then install the battery. After that, close the battery cover.
 - 10). Turn on the transmitter to ensure the channel and direction are working correctly by touching the servo display. Check the trim direction by sliding the trim.



(Pic 14.1)



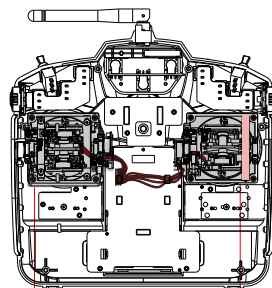
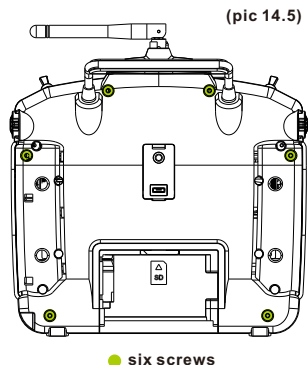
(Pic14.2)



(Pic 14.3)



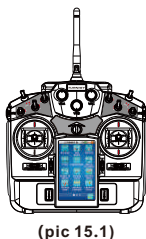
(Pic 14.4)



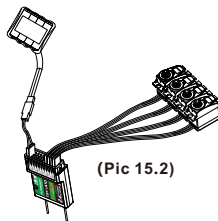
right gimbal ● eight screws left gimbal

15. Power On

1. Connect all parts,
2. Press the two power buttons to power on the unit. Switch on the transmitter,
3. Connect the receiver battery,
4. The receiver red LED indicator is solid indicating the presence of a correct signal,
5. When the error rate of transmitter is less than 5%, the signal of receiver is stable,
6. Use the radio system.



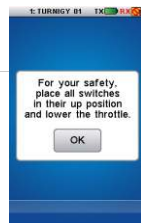
Power on



15.01 Boot Abnormal Protection

If the screen looks like picture 15.1.1, there is a system problem. You must resolve the problem before restarting the system

1. The switch is not reset. (You need to push switch up.)
2. Thro Stick (Push to lowest setting)

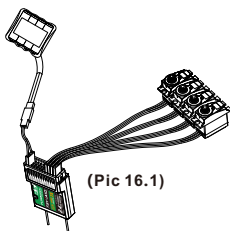


(pic 15.1.1)

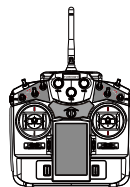
16. Power off

1. Cut off power source of receiver,
2. Press the two power buttons to power off the unit. Switch off the transmitter.

Attention: transmitter cannot be turned off if the power source of receiver is not cut off.



Power off



16.01 Shutdown Abnormal Protection

If the screen looks like picture 16.1.1 you need to turn off the receiver first and then turn off the transmitter



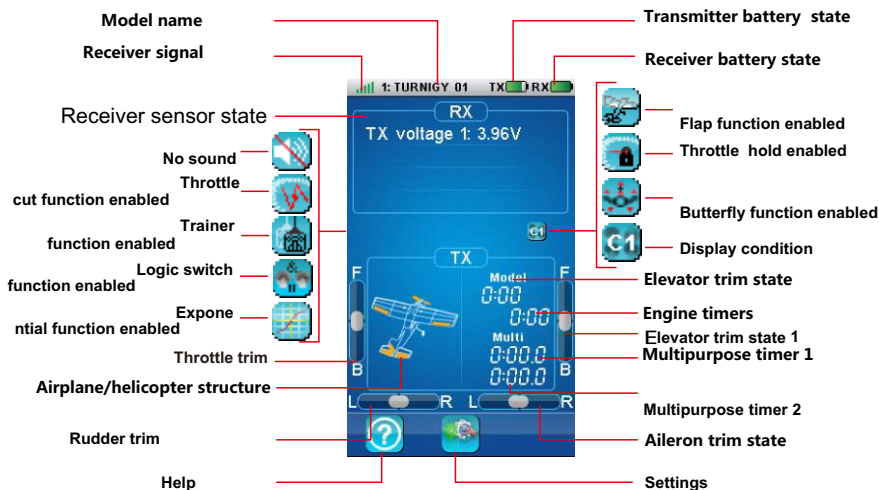
(Pic 16.1.1)

17. Logo/Information Screen

The TGY logo will be shown on the screen when first switching on the transmitter. After two seconds the main menu will be displayed:



(Pic 17.1)



(Pic 17.2)

18. Main menu



(Pic 18.1)




(Pic 18.2)



(Pic 18.3)




(Pic 18.4)

The main menu can be accessed by touching the settings icon  at the bottom of the main screen.

The main menu is organized in horizontal pages. Each page contains up to 12 icons representing 12 different functions.

The main menu has 26 icons by default, but may have as few as 21 or as many as 33, depending on the model of the aircraft.

- The white balls in the bottom tray indicate which menu page is displayed.
- The big white ball represents the currently displayed page.
- To display the next page, touch the current page anywhere on its right part and slide it to the left.
- To display the previous page, touch the current page anywhere on its left part and slide it to the right.
- To enter a function, simply touch its corresponding  icon.

To return to the main screen, touch the back button in the bottom tray.

19. System Status



The System Status of the screen constantly displays the main status of the whole system.

Displays the status of the receiver battery. If the voltage is too low, an audible alarm rings and this symbol blinks.
See further how to set up the receiver battery alarm voltage.

• Displays the status of the remote control battery. If the voltage is too low, an audible alarm rings and this symbol blinks.

Displays the number and the name of the currently selected model.

Displays the signal strength received by the vehicle.
The strongest signal is represented with 5 bars, when the signal strength is lower or equal to two bars, an audible alarm rings.

 Charging

 Charging is complete

RX  Receiver disconnected

RX  Receiver battery fully charged

RX  No signals of current and voltage of receivers (Needs checking the connection of sensors)

 Fully charged

TX  Low battery (Needs charging)

20. General Functions Description

20.01 Introduction



(Pic 20.1)

All functions use a set of standard user interface objects.
The bottom tray can contain the following buttons:

The back button returns to the previous screen.

The default button sets back the current page parameters to their default values.

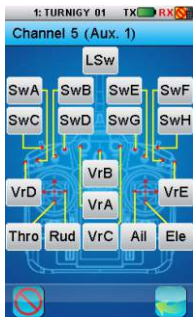
Some functions require usage of 1-4 as stated in 20.02 below to enable proper control.
Some functions require usage of 1 and 4 as stated in 20.02 below to turn on or off.
Some functions require usage of 2 and 3 as stated in 20.02 below to adjust parameters.

These 2 buttons respectively enable and disable the current function.

When you touch this icon the turn on and turn off icons will be displayed



20.02 Switch Function Details:



(Pic 20.2)

1 (SwA~SwH)

Choose one switch direction from upward direction, middle direction and downward direction as the open status when the switches (SwA~SwH) are assigned to enable or disable functions.

2 The sticks(Ail、 Ele 、 Thro、 Rud) are assigned to adjust the function rates.

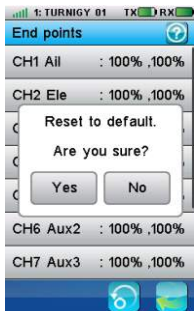
3 The knobs (VrA ~ VrE) are assigned parameters to adjust the function rates.

4 The logic function needs to be defined at first when logic switches (LSW\LS1~LS3) are assigned to enable or disable functions. Logic switches function as shown in picture 20.2

Picture 20.2 shows the default four channel aircraft structure and CH5 auxiliary structure



20.03 Reset Function Details:



(Pic 20.3)

Pressing this icon will display screen as shown in picture 20.3

Yes: reset to default the current displayed function

No: no operation

Please touch the " ? " in the top right corner to get help information



Please use this function with care, as this will reset all parameters to factory settings and you will lose any changes you have made



20.04 Online Help Function Details:

1: TURNIGY 01 TX RX

Timers

Function Details:

This function is used to control time and reduce the risk of aircraft crashing.

There are three choices for timing. Select Timers to set the timers function. Model/Engine: Model timer is the total time of turning on the model. Engine timer counts the time when throttle value exceeds the set value. Both timers can be reset by touching

A title bar displays the name of the current function or menu.

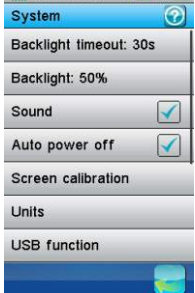
A white question mark on the right of a title bar indicates that contextual help is available. Touch the question mark to see the help details.

To scroll down a help page, touch the bottom of the page and slide up. To scroll up a help page, touch the top of the page and slide down. Touch the back button in the bottom tray to return to the function page.

(Pic 20.4)

20.05 1 Scrolling Menu Details:

1: TURNIGY 01 TX RX



To select an option use the vertical menu.

This example selects the System option. The gray vertical bar on the right is used for scrolling.

To scroll down the vertical menu, touch it at the bottom and slide up. To scroll up the vertical menu, touch it at the top and slide down. To select a menu item, simply touch it.

(Pic 20.5)

1 : Example one :How to turn on or off sound

1: TURNIGY 01 TX RX



(Pic 20.6)

No sound

1: TURNIGY 01 TX RX

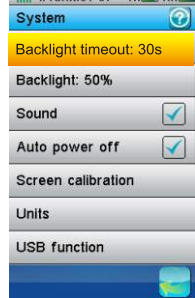


(Pic 20.7)

Sound enabled

2 Example two : How to enter the next submenu

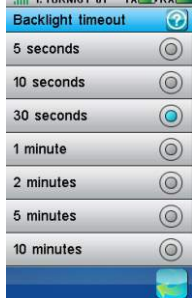
1: TURNIGY 01 TX RX



(Pic 20.8)

Set backlight timeout

1: TURNIGY 01 TX RX



(Pic 20.9)

20.06 2 Vertical Scrolling Function Details:



(Pic 20.10)

This is the default menu for selecting system parameters

This example selects the sytem parameter to set.
The right gray vertical bar indicates the lengths of the menu and the current position in it.

To scroll down a vertical menu, touch it anywhere on its bottom and slide it up.
To scroll up a vertical menu, touch it anywhere on its top and slide it down.
To select one of the menu items, simply touch it.

The blue ball indicates the currently selected value. To select another value, simply touch it.

For example : picture 20.6 has selected the TURNIGY 01 option

20.07 Multi-function dialog settings:



(Pic 20.11)

Most functions are set using a dialog box.
A dialog box contains a set of different objects.
Touching a button will execute or select the function associated to it.

This example contains the following objects:



(Pic 20.12)

The value of the selected parameter is displayed in the value box on the top of the dialog box.



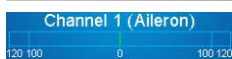
(Pic 20.13)

Servo end point position



(Pic 20.14)

The 2 buttons "down side" and "up side" select the parameter to modify.
To activate a button, simply touch it.
The selected option is highlighted in yellow.



(Pic 20.15)

Channel - Aileron output value



(Pic 20.16)

The wheel at the bottom allows modification of the selected parameter value.
To decrease the parameter value, touch the wheel any where on the right and slide it to the left.
To increase the parameter value, touch the wheel anywhere on the left and slide it to the right.

21. General function menu

21.01. Reverse

Function Details

This function enables the user to modify the direction of operation of each of the ten servos. For each channel the user can toggle a reverse state based on demand.

The **reverse** function individually reverses the direction of operation of the servos on the 10 channels. This menu contains 10 check boxes, one for each channel. To toggle the **reverse** state of a channel, just touch it.

As shown in the picture 21.1, only the third channel is reversed, the other channels operate normally.

! Always complete your servo reversing prior to any other programming. If mix functions control multiple servos, it may be confusing to tell whether the servo needs to be reversed or a setting in the function needs to be reversed.

! Always check servo directions prior to make sure they are in the same way with operation direction. If not, please adjust to right direction.



(Pic 21.1)

21.02. End points

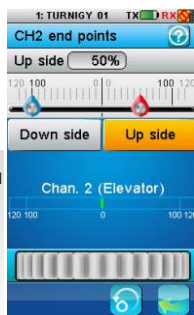
Function Details:

This function enables the user to control the low and high travel limits for each servo. For each channel the user can set the low and high limits. This ensures that the channel data for the servo is consistent with structural design and performance requirements to ensure the best results. Adjustments can be made for any channel.

The **end points** function individually adjusts the low and high travel limit of each servo on the 10 channels. Set the end points according to your airplane structure.

To choose the side of one channel **end point** to set, move the **stick** to the desired **low** or **high side** or just touch the corresponding button. The selected side will be highlighted in yellow. The red needle represents the selected side. Use the wheel to move it and modify the **end point** value. The position of the corresponding channel is displayed in real time.

As shown in the picture 21.2, the acceleration side of the elevator is selected and the elevator trigger is half accelerating.



CH2 stick to the far right

(Pic 21.2)

21.03. Subtrim

Function Details:

This function enables the user to control the structure and angle difference for each channel on the servo. This allows the user to make adjustments to get the best results for their system.

The **subtrims** function individually adjusts the center position of each servo of the 10 channels. This is particularly useful when the servo mechanics doesn't allow an adjustment fine enough.

Touch the channel which **subtrim** must be adjusted. Use the wheel to move the red needle and modify the **subtrim** value of the selected channel. The position of the corresponding channel is displayed in real time.

As shown in the picture 21.3, the channel 1 has been selected and the red needle is at the position of 50%.



(Pic 21.3)

21.04 Trims

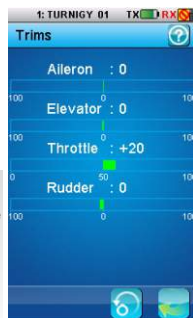
Function Details:

This function is to amend channels' output and value of channels' output. So far there are a lot of players use it to amend center gravity of model and Revomix caused by aerodynamic, etc. So it makes model more stable in the air. This function is only available for CH1-CH4

The **trims** function individually adjusts the center position of each servo of the 4 channels. It also can reset and display in real time the conditions of **4 sticks** and **trim button**.

The current condition of the **trim** will be displayed after touching the **Trims** icon. Touch the **reset button** and all the **trim** value will be back to 0. The trims condition will be displayed when moving the **trim stick** in any condition and it will be back to the original interface after 2 seconds.

As shown in the picture 21.4, the **throttle** is selected and move the **trim sticks** to the position of +20.



(PicP 21.4)

21.05. Scaling Exponentials

Function Details:

This function is a special function which has two sub-functions: one is dual rate setup and the other is exponent setup. Dual rate function is used to set different rate according to different type of aircraft. For example: Aircraft needs larger movement when you choose 3D and it needs smaller movement when choose 3A. In addition, smaller movement is appropriate for beginners and larger movement is appropriate for practiced ones. All above needs to be completed by setting rate. Exponential function is used to get a better effect for professionals. When exp is positive, the sensitivity of neutral point data's output will be decreased and the sensitivity of two terminal points will be increased. It is opposite when Exp is negative

Exponentials function is used to adjust the **rate** and **exponential** of the airplane. Once activated, 2 buttons select which parameter value to modify. The function can be set in **5 conditions**. (Condition instruction can be acquired on manual from page 1 to page 7).

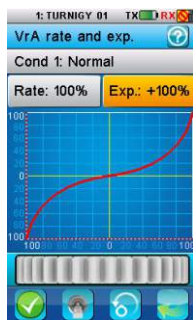
Rate: adjust the slope of the curve. The smaller is the slope, the shorter is the throw of the corresponding servo.

Exp: adjust the linearity **curve** of all **sticks** or **knobs** (Ail, Ele, Thro, Rud, VrA~VrE). A value of 0 corresponds to a perfectly linear **curve**. A positive value decreases the sensitivity near the neutral position and increases it on the extreme sides. A negative value increase the sensitivity near the neutral position and decreases it on the extreme sides.

The vertical dotted line displays in real time the position of the curve. The horizontal dotted line displays in real time the curve position after the **exponential** function.

Select the **stick** or the **Knob** which need to be set. After that, touch the enable button to enable this function and then select the **Rate** button or the **Exp.** button. Use the wheel to modify the corresponding value.

As shown in the picture 21.5, VrA is selected. The **exponential** function is activated. The selected parameter is rate and is set to its maximum value. The horizontal dotted line shows the VrA 60 on the left side. But the horizontal dotted line indicates that the resulting channel output is at the position between 20 and 40 under the middle position showing the efficiency of the exponential function.



(Pic 21.5)

21.06. Aileron to rudder

Function Details :

The **aileron to rudder** automatically creates a coordinated turn for the aircraft with **aileron** and **rudder**. It is the pre-programmed mix which controls the **rudders** with the **aileron** operation and can modify the master channels rate, which is 10% by default. If the aircraft does not have the **aileron or the rudder**, these two function icons will not be displayed. This function can be set in five conditions.

Select the desired **low side** or **high side** to set the rate and move the wheel to modify the corresponding values after activating this function. This function can be assigned to a **switch** (SwA-SwH, LSw).

For this example: The **low side rate** is set to 20% and the **high side rate** to 20%. Move the **rudder stick** to the far left, and the corresponding channels are displayed as shown in picture 21.6. Move the **aileron stick** to the far right, and the corresponding channels are displayed as shown in picture 21.7.



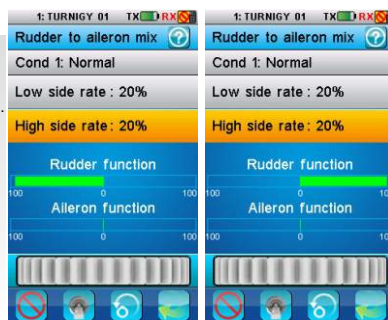
21.07. Rudder to aileron

Function Details:

This function can be used to counteract undesirable roll of aircraft with **rudders** and **ailerons**. This happens with the **rudder** input, when it is crabbing. It is the pre-programmed mix which mixes the **aileron** with the **rudder** operation. This setup can modify the master channel's rate, and the default value is 10%. If the aircraft does not have the **aileron or the rudder**, these two function icons will not be displayed. This function can be set up in each of five conditions.

Select the desired **low side** or **high side** to set the rate and move the wheel to modify the corresponding value after activating this function. This function can be assigned to a **switch** (SwA-SwH, LSw).

As shown in pictures 21.8 and 21.9: The **low side rate** is set to 20% and the **high side rate** to 20%. Move the **rudder stick** to the far left, and the corresponding channels are displayed as shown in picture 21.8. Move the **rudder stick** to the far right, and the corresponding channels are displayed as shown in picture 21.9.



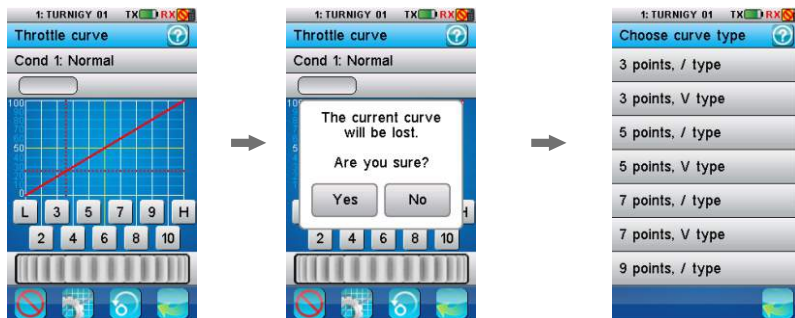
Function Details:

This function enable the user to adjust the operation curve of the aircraft throttle and make it coordinate the **stick** movement and **throttle** output to compensate the non-linear problems of the throttle.

The 11 points (L, 2~10, H) of **throttle curve** can be adjusted from 0% to 100%. The horizontal dotted line displays in real time the throttle **stick** position. The vertical dotted line displays in real time the position of the **throttle output** after the **throttle curve** function has been applied. If the airplane and helicopter does not have an **engine**, this icon will not be displayed. This function can be set in five **conditions**.

Select the desired point to set and move the wheel to modify the corresponding value after activating this function.

For this example 21.10: The **throttle curve** function is activated. Point 2 is set 20%, point 3 30%, point 4 40% and point 5 50%, point 6 74.1%, point 7 80%, point 8 85.5%, point 9 90.0% and point 10 95.0%. In this situation, when the position of the **throttle** below the neutral, that is (L, 2~6), the acceleration of the **throttle needle** output is faster than its position above the neutral (that is 6~10, H point), V-shaped curve and "/>



(Pic 21.10)

21.09. Throttle Delay

Function Details :

Throttle delay is used to reduce the response speed of throttle output and imitate turbine **engine** in airbrake, which can be set from 0s to 10s. If the airplane does not have an **engine**, such as a **glider**, this icon will not be displayed.

Move the wheel to set the throttle delay time. The red bar represents throttle **stick** position and the green bar represents channel position.

As shown in the picture 21.11: The delay time is 5 seconds. There will be 5 seconds delay when moving throttle **stick** from bottom side to top side. Due to 5 seconds delay, the throttle is in the position when it is one second and it displays 20%



(Pic 21.11)

21.10. Throttle Down

Function Details:

This function contains two options: option one is **idle** setup and option two is **throttle hold**. Two options would be set when you adjust models. The idle is useful for the models with engines and make models keep low rpm without shutting down. And the **throttle hold** is to completely lock model's throttle without shutting down.

Throttle down function is to enable **idle down** rate adjustment and **throttle cut** function turned on or off. Modify the rate from 0% to 50% after idle function is applied. This function can be set in five conditions.

Idle down: the throttle output minus the rate set in advance after this function is applied.

Throttle cut: the throttle output will be in its lowest point after this function is applied.

Throttle cut function is prior to **idle down** function. There is no output while moving throttle stick if **throttle cut** function is applied. **Idle down** function and **throttle cut** function are turned off by default. The default value of **idle down** is 10%.

These two functions can be assigned to 2 **switches** (SwA~SwH, LSw). If the **airplane** does not have an **engine**, this icon will not be displayed.

Select two switches to enable or disable **idle down** and **throttle cut** function and move the wheel to modify the corresponding value after activating this function.

As shown in the picture 21.12: The **idle down** function and **throttle cut** are applied, and adjust the **idle down** to 20%. There is no output of throttle channel.



(Pic 21.12)

21.11. Auxiliary Channels

Function Details :

The model function allows users to set additional **auxiliary channels** if the model has more than the default 4 channels. Some aircraft have more than four auxiliary channels, so these additional channels can be modified using this function.

Assign the **auxiliary channel** a **switch**, a **knob**, a **logic switch** or a **stick** after finishing the airplane structure setting. The default structure is 4-channel fix wing, so auxiliary channels are from Ch5 to Ch10.

Touch the auxiliary channel needed and select a switch, a knob, a logic switch or a stick to control this function.

For this example: Select CH5 as **auxiliary channel** and push SwD upward to enable this function. At this time, the channel in **Servo display** is displayed as shown in picture 21.14



(Pic 21.13)



(Pic 21.14)

Push swd downward

21.12. Channels offset

This function is to revise model when there are some deviations in structures. Set **channel offset** rate from -50% to 50% based on the channel neutral position. The default is 0%. This function can be set in five **conditions**.

Select the desired point to set and move the wheel to modify the corresponding value after activating this function. The position of the corresponding **channel** is displayed in real time.

The **offset** value of CH2 is adjusted to 10%. Move the **stick** to the far left, and the channel is displayed as shown in picture 21.15. Move the **stick** to the far right and the channel is displayed as shown in picture 21.16.



Ch2 stick to the far left
(Pic 21.15)



Ch2 stick to the far right
(Pic 21.16)

21.13. Function Delay

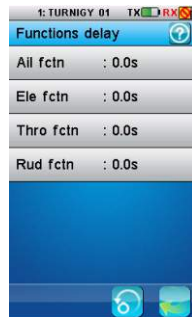
Function Details:

This function is used to imitate some movements of real aircraft, like flap movement and some other special movements. For example, when the user is flying 3D, he could do some smoothing to change from NOR to 3D.

Functions delay is used to slow down the response speed of **basic function** (**basic function** can be acquired in the manual from page 31). It can be adjusted from 0 seconds to 10 seconds and the default is 0 seconds.

Select the desired basic channel and move the wheel to modify the delay time. The position of the corresponding basic channel is displayed in real time. The red bar represents **stick** position and the green bar represents channel position after setting.

As shown in picture 21.18: The delay time is set to 5 seconds. At this time, there will be a 5s delay when moving **aileron stick** from bottom side to top side.



(Pic 21.17)



(Pic 21.18)

21.14. Channels delay

Function Details:

This function is to imitate some movements of real aircraft like the flap

Channels delay is used to slow down the response speed of **channel output**. It can be adjusted from 0 seconds to 10 seconds and the default is 0seconds.

Select desired basic **channel** and move the wheel to modify the delay time. The position of the corresponding channel output is displayed in real time. The red bar represents the **stick** position and the green bar represents channel output position.

As shown in picture 21.20: The delay time of **CH2** is set to 5 seconds. At this time, there will be a 5s delay when moving the **rudder stick** from bottom side to top side.



(Pic 21.19)



(Pic 21.20)

21.15. Linear mixes

Function Details:

This function could be helpful when you are flying some special movements and need mix control function. **Linear Mixes** can set 4 groups of mix controls among any two **sticks**, **basic functions** and **output channels**. This function can be set in five **conditions**.

The slave channel will be affected by corresponding rate of **master channel**, which will be changed in a linear fashion after **linear mix** function is applied. **Master channel** contains **stick/knob** option and **basic function** option or **output channel** option. **Slave channel** contains **basic function** option or **output channel** option. But when **output channel** option is selected in **master channel** function, there is only one **output channel** option in **slave channel** options. Otherwise, no matter what option you select in the **master channel** function, any option channel could be selected in the **slave channel**. The **master channel** and the **slave channel** can be assigned to **sticks** or **knobs**, **basic channels** or **output channels**. The 4 mix functions can be assigned to a **switch**.

Stick/knob: stick and knob from VrA to VrE.

Basic function: It is the basic function for the aircraft movement. For example: aileron function, rudder function, throttles function, and rudder function and the throttle needle function for the aircraft structure with the throttle needle, etc.

Output channel: CH1~CH10;

Low side: Set how much the **channel** is affected by low side of **master channel**.

High side: set how much the **channel** is affected by high side of **master channel**.

Offset: set the deviation rate of the channel, based on the channel neutral position.



(Pic 21.21)



(Pic 21.22)

The position of the corresponding channel output is displayed in real time while adjusting the low end mix, high end mix or offset.

As shown in picture 21.22: The first set of mix is activated, and the **master channel** is **aileron function** and the **slave channel** is **elevator CH2**. The **low side** mix is set to +50% and the **high side** mix is set to +100%. Move the **stick** to the far left, the channel position is displayed.

21.16. Curve Mixes

Function Details:

This function can be helpful when you fly with some special movements and need some mix control function.

The **curve mixes** like **linear mixes** can be set to 4 set of mixes. This function can be set in 5 **conditions**.

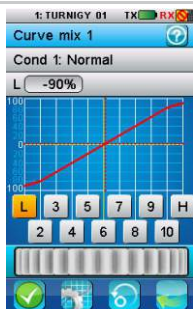
The **slave channel** will be affected by **master channel** after **linear mixes** are applied, which will be presented with curve distribution. Set 11 points (L,2~10,H) from -100% to 100% to adjust the curve. The horizontal dotted line displays in real time the **stick** position and the vertical dotted line displays in real time the position of **slave channel** output after this function. The **master channel** and **channel** can be from **stick** or **knob**, **basic** and **output channel**. These 4 sets of mixes can be assigned to a **switch** (SwA~SwH, LSw) respectively.

The position of the corresponding **channel output** is displayed in real time while adjusting the curve.

As shown in picture 21.23 The first mix is activated. The **master channel** is **aileron function** and the **slave channel** is **CH2 Ele**. Adjust the value of point L to -90%, and point H to 90. Do not adjust other points. At this time, the output will be shown as curve in picture



(Pic 21.23)



(Pic 21.24)

21.17. Conditions



(Pic 21.25)

Function Details:

This function enables the user to select five different **conditions** for the model.

This function can set the flight **condition** and there are 5 **conditions** at most. The default name is **Normal**, **Take off**, **High speed**, **3D fight**, **Landing**, which can be amended. C2 - C5 can be assigned to one switch to be turned on or off and can be copied (excluding the switches you set). After setting parameter of one condition, you can copy it to create a new one and then sub trim it, which can help you save setting time. No assigned switches are set by default. So C1 is the default and C2-C5 is off.

When any other **conditions** are assigned to a switch, it will be Normal condition after turning off this switch.

The high level **condition** is available if assigning two or more **conditions** at the same time. C5 is the highest level and C1 is the lowest level.

Select one condition, and you can amend the **condition** name, copy the **condition** and assign it to a switch.

As shown in picture 21.25: **C2: Take off** is selected. Push the SwA **downward** to enable this function

21.18. Conditions Delay

Function Details:

This function can set the delay of each channel, which can help enhance mechanical stability or electronic stability when changing state. This function only works during the changing procedure.



(Pic 21.26)

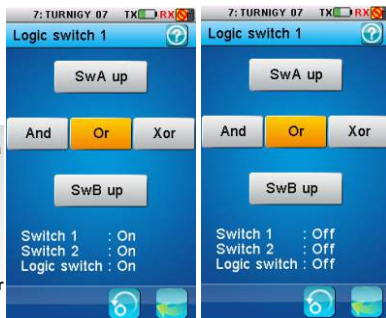
21.19. Logic switches

Function Details:

The **logic switch** is a virtual switch which consists of two switches plus a mathematical logic relationship. The logic switch is used to control turning on or turning off of some functions

The **logic switch** is a virtual switch which consists of two switches plus a mathematical logic relationship. The **logic switch** is used to control turning on or turning off of some functions two switches control one function. There are 3 sets of **logic switches** (Lsw1, Lsw2, Lsw3). Select switches from SwA to SwH to combine the logic switch. The logic relationship includes "And", "Or" and "Xor". The combination is as follows

switch		logic relationship		
Swth1	Swth2	And	Or	Xor
off	off	off	off	off
off	on	off	on	on
on	on	on	on	on
on	off	off	on	on



(Pic 21.27)

As shown in the picture 21.27: Select SwA up and SwB up and the **logic relationship** is set to or. Sw1, Sw2 and logic switch are displayed in real time. SwA is used to lower the wheels and logic Sw1 is to cut the engine. To accomplish this you need to access the auxiliary channels screen. So, if SwA and SwB pushed down at the same time, the engines will be cut

21.20. Airplane structure

Function Details:

This function can be set according to the airplane structure.

There are engine, throttle needle, aileron, two aileron, flap, two flap, spoiler, two spoiler, rudder, two rudder, V-tail to choose if the mode type is fix wing or glider. There will be a reminder Maximum number of channels reached. if the airplane parts selected is more than 10. Because the two rudders and V-tail can not exist at the same time, the V-tail will be hidden automatically when two rudders is selected. The default type is Fix wing/glider with engine, aileron, elevator and rudder.



(Pic 21.28)



(Pic 21.29)

(Pic 21.30)

Function Details:

This function is used to control time and reduce the risk of aircraft crashing. There are three choices for timing. Select Timers to set the timers function. Or click "Timers" on main menu, there appears "multifunctional timers will be reset", "Yes" means reset, "No" means entering into Timers interface

Model/Engine: Model timer is the total time of turning on the model. **Engine timer** counts the time when throttle value exceeds the set value. Both timers can be **reset** by touching 'Reset' button, and **engine timer** can modify throttle value by moving wheel on the screen.

As shown in pictures 21.31 and 21.32: When throttle exceeds -80%, the engine timer starts to time.

Multi-purpose timer 1 and 2: Multi-purpose timer 1 and 2 can select **Up timer**, **Down timer**, and **Down then up** for timing. It can individually **start**, **stop**, and **reset** and you can also set a switch or logic switch to **start** or **stop** it.

Up timer: Timing starts from 0s. It can be **started**, **stopped** and **reset**.

Down timer: Default count down from 1 minute, it can be modified by moving wheel.

Down then up: Default count down from 1 minute, and it start to up timing after 1 minute. It can be modified by moving wheel.

As shown in picture 21.29: Make countdown time back to beginning time you set.

As shown in picture 21.30: Down timer set to 5 minutes and it stops now. The race timer **start**, **stop** function can be assigned to a push button

21.22 Trainer Mode

Function Details:

This function allows you to connect 2 transmitters together using a **dedicated cable** (see page 53, No.14 optional) connected to the back interface. Once enabled, switching on the selected trainer switch will set up the remote as the instructor and use the trainer transmitter to control the model.

Use **dedicated cable** to connect two transmitters and touching **trainer mode** to activate function. The trainer transmitter can control 8 channels of learner model, and you can select **stick or knob**, **basic function**, **output channel** or **none**. Select **display servos** function, push down **SwE** and hold it, learner model's channels will display in real time. Activated trainer mode function, setting Channel 1 to **aileron function**, channel 5-8 is None. Learner model's channels will **display**. As shown in picture 21.32.



(Pic 21.31)

(Pic 21.32)

Display servos of trainer transmitter

21.23. Display servos

Function Details:

This function is to display model channel output and automatically test all output channels.

This function displays in real time the position of the 10 servos.

The test button lets the 4 servos move slowly between their respective end points.

This allows testing of the consistency of the mechanics of the model.



(Pic 21.33)

21.24. Models

Function Details:

This function is used to set the **model** type, airplane/glider/helicopter. It can save twenty different **model** type parameters. It is changeable, copiable and renameable. You can move model parameters so a SD card and delete them from the SD card.



Only compatible with the SD card 2.0, whose capacity is over 1GB



(Pic 21.34)

Name:

Modifies the name of the current model.



(Pic 21.35)

Select model:

Select the model configuration to load and use. In this example, the first model is selected. Simply touch another model menu item to load and use it.



(Pic 21.36)



(Pic 21.37)

Copy model:

Copies a model configuration to another. The target configuration is lost and replaced by the source configuration.

The first menu selects the source model configuration to copy from.

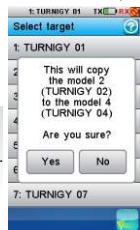
How to operate:

1. Enter model function and press copy model to select which one you need to copy
2. The screen will change to the model you copied.
3. After selecting one copied model, the window will automatically open with a message asking if you are sure to copy, YES or NO. Shown in picture 21.

The second menu selects the target model configuration to copy to.



(Pic 21.38)



(Pic 21.39)

Since the target model configuration is overwritten by the source model configuration, a confirmation is requested.

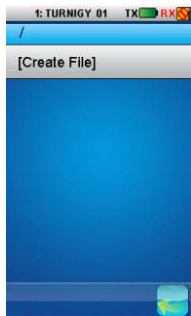
As shown in the picture 21.40: After touching the "Yes" button, the model configuration 4 will be lost and replaced by the model configuration 2.

Export models:

Export the current model parameters and save them in the SD card. The default file name which can be modified is model name.

How to operate:

1. Enter model function and press export model
2. Select one replacement
3. Press OK to complete replacing and save the new one
4. If you want to create a new file, just press Create a new file and save it.



(Pic 21.40)



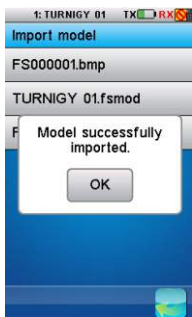
(Pic 21.41)

Import models:

Import the model parameter from the SD card and the current model will be covered.

How to operate:

1. Enter model function and press import model
2. Select one model you want to import
3. Press OK to complete importing



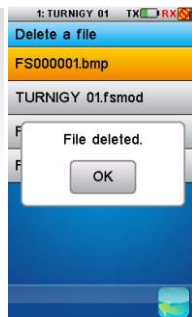
(Pic 21.42)

Delete files:

Delete the model file in the SD card.

How to operate:

1. Enter model function and press file deleted
2. Select one file you need to delete
3. Press OK to complete deleting

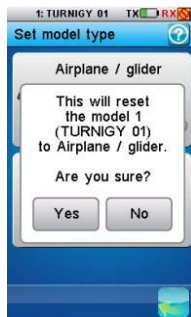


(Pic 21.43)

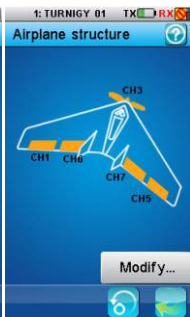
Setting model type:

All the model settings must be reset to default state of airplane or glider, then enter 'structure setting'. The default **structure of airplane or glider** is 4 channels (**throttle, aileron, elevator and rudder**), the structure can be changed by touching the check box. The default structure of helicopter is **fixed pitch**; it can be changed to **variable pitch** by touching check box. At the same time, the swash plate type can be set.

As shown in picture 21.44, modifies the structure of Flysky01, touch "setting model type", after selecting the **airplane or glider** type, the Flysky01 will reset to default state. Select **throttle needle**, two **ailerons**, two **flaps**, and then touch back key. The modified structure will be as shown in picture 21.45



(Pic 21.44)



(Pic 21.45)

21.25 RX setup

Function Details:

Set up the receiver. This function is used to set the corresponding parameter of the receiver and the sensors connected. RX setup menu. (As shown in picture 21.46)

Bind with a receiver: The transmitter enters in bind mode. Once the receiver is correctly bound, press the back button to return to normal operation. (As shown in picture 21.48)

AFHDS2: the default is a 2-WAY AFHDS2A communication system. AFHDS, AFHDS2, 1-way AFHDS2A, and 2-WAY AFHDS2A. Users can select the required system based on the receiver type.

RX battery monitor: Monitors the receiver battery voltage.

External sensor: Do not monitor the receiver power supply voltage but use an external sensor instead. This is useful when the receiver is powered by an ESC. Connect the external sensor directly to the main battery. (As shown in the picture 21.47)

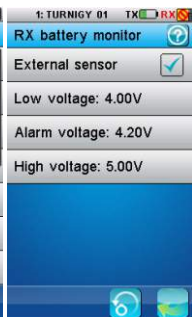
Low voltage: set the minimum voltage when the battery is almost empty. default low voltage value is 4.00V.

Alarm voltage: set the voltage under which an audible alarm rings and the receiver battery icon in the top tray blinks. (As shown in the picture 21.49)

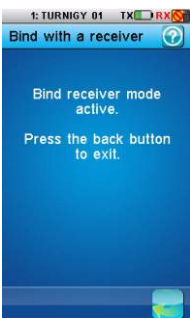
High voltage: set the maximum voltage when the battery is full. default high voltage value is 5.00V.



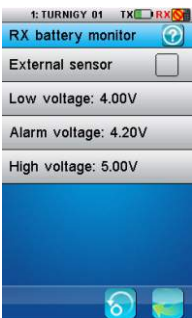
(Pic 21.46)



(Pic 21.47)



(Pic 21.48)



(Pic 21.49)

Range test:

Function Details :

This is to check if high-frequency periodic lines of the transmitter and receiver are normal. Enable this function, and transmitter output power will decrease about 100 times. At this time, control distance will become short correspondingly so we can past the short distance text. This way can be used to judge whether high frequency is OK.



(Pic 21.50)

I-Setup utility:

Function Details :

This is used to set up the ESC and other equipment required, such as GPS module, digital servo and so on. Only ESC can be set up for now.



(Pic 21.51)

failsafe function:

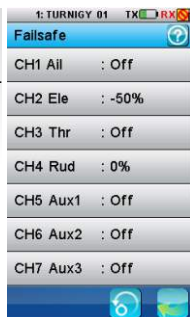
Function Details :

This function is used to protect aircraft with parameters set in advance when the receivers don't receive the signals.

Press **failsafe function** and it will display the current setting of 10 channels.

Off means that in case of a loss of signal, the corresponding servo will keep its last received position.. The servo will move the position you preset . All the channel is able to be set failsafe.

As shown in picture 21.50: Only **CH2 Ele** is set to -50% in case of a loss of signal. The others will keep their previous position.



(Pic 21.52)



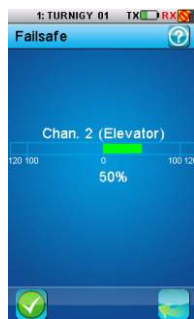
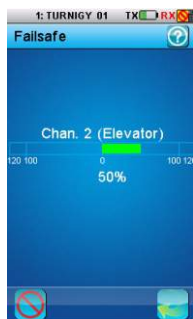
(Pic 21.53)

Setup:

Touch a channel to set its **failsafe** behavior. If activated, set the channel to the desired position using the corresponding channel **switch, knob, logic switch or stick** then while maintaining that position, touch the back button. The position of the servo is then memorized.

If multiple channel **failsafe** are activated, set the **channels** to the desired position using the corresponding channel **switch, knob, logic switch or stick** then while maintaining that position, touch the **back** button. The position of the servo is then memorized.

The **failsafe** on the channel 2 (elevator) and channel 4 (rudder) are activated and set to -100%.



(Pic 21.54)



For your safety, please use this function

Display sensors:

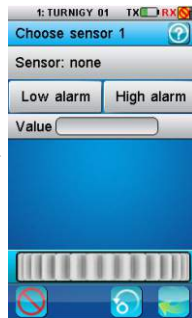
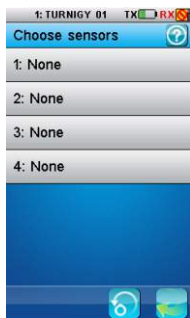
Display the type, ID and value of all connected sensors. Receiver can connect 15 sensors at most.

Type	ID	Value
Int. voltage	1	5.07V
Int. voltage	3	0.00V
Temperature	4	25.0°C
Motor speed	2	0rpm
Motor speed	5	0rpm
TX voltage	1	3.79V
Error rate	1	25%

(Pic 21.55)

Choose sensors:

The main screen can display the value of up to 4 sensors. This function selects which sensors to display. Select the main screen slot to attribute (1 to 4). The currently attributed sensor is displayed. This function enable users to select sensors they want to display.



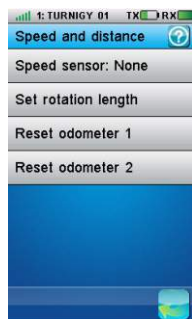
(Pic 21.56)

Speed and distance:

As shown in picture 21.54, if a rotation speed sensor is connected to the receiver, this function set up the virtual speed and odometers sensors.

Parameter Details:

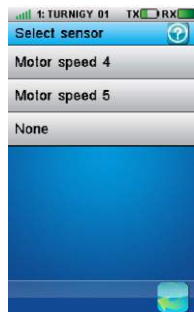
Speed sensor : Number shows over one mean that there are sensors connecting
 Set rotation length means length of each rotation
 Reset odometer 1 means odometer when single use
 Reset odometer 2 means the odometer of total use



(Pic 21.57)

Speed sensor:

Select the rotation speed sensor to use. If none is selected, this function is disabled.

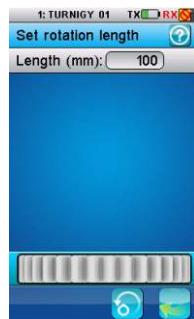


(Pic 21.58)

Set rotation length:

Set the model travel distance corresponding to one rotation speed sensor. This distance is used to control the virtual speed and odometers sensors.

Touch "Set rotation length" to set distance traveled by the model in one revolution of wheel (Unit: mm). As shown in Picture 21.59, touch back button to return.



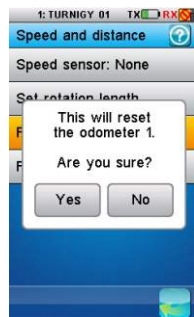
(Pic 21.59)

Reset odometer:

Touch "Reset odometer 1" or "Reset odometer 2" to reset the corresponding odometer.

Odometer 1: It is used for recording the distance traveled by the vehicle one time.

Odometer 2: It is used for recording total distance traveled by the vehicle.



(Pic 21.60)

i-BUS

i-bus setup:

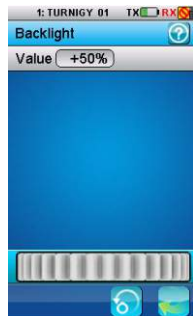
If servos are connected on the external serial interface, this function attributes a channel to each servo. Choose the channel to attribute.



(Pic 21.61)

Servo frequency selection:

Adjust the servo frequency from 50HZ to 380HZ. Move the wheel to modify the frequency value, which can be saved on exit.



(Pic 21.62)

21.24. System

This function is used to set some parameters of the system

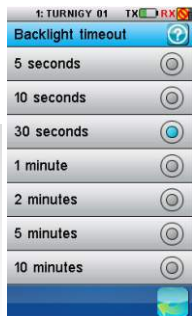


(Pic 21.63)

Backlight timeout:

30s is the default time of backlight timeout when there is no operation.

⚠ The longer the LCD backlight stays on, the shorter the battery of the transmitter lasts.



(Pic 21.64)

Backlight:

This function is used to adjust the brightness of the backlight. High brightness can be used on a sunny day! 50% is the default shown in picture 21.65!

⚠ The higher the brightness is, the shorter the battery of the transmitter lasts.



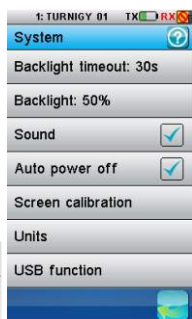
(Pic 21.65)

Sound:

Turn on or turn off the sound. It defaults turn on the sound.

Auto power off:

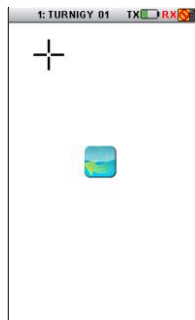
After five minutes of no operation, the transmitter will sound an alarm and flash its LED. After five more minutes of no operation, the transmitter will automatically shut down. Touch "Auto power off" to cancel automatic power off function.



(Pic 21.66)

Screen Calibration:

You can use a pen to touch the cross center point to calibrate. After calibrating, it will exit or press return button to exit.



(Pic 21.67)

Units:

Select length and the temperature unit.

Length:

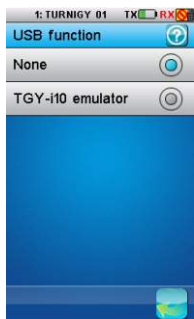
Metric uses millimeter, kilometer and kilometer per hour. Imperial uses inch, mile and mile per hour.

Temperature:

Celsius and Fahrenheit degree for your option.



(Pic 21.68)



(Pic 21.69)

USB Function Details:

None: the USB interface can be used only to charge the battery of the transmitter.

FS-i10: when connected to a computer, the transmitter acts as a standard HID with 4 axes (one for each channel) and 10 buttons (1-10) and can be used as the main controller in any compatible simulation software.

1. Connect the transmitter to the computer by the Micro USB cable.
2. Switch on the transmitter, then touch **system-----USB function-----TGY-i10 simulator**. After that, the computer will automatic identify the HID.
3. In the computer control panel, double click **Game controller-----TGY-i10 emulator** to test whether the simulating function is ok.

摇杆模式 Sticks mode



(Pic 21.70)

(Pic 21.71)

This function is used to switch the Mode 1, Mode 2, Mode 3, and Mode 4. After mode switching, the relevant stick will switch automatically. Press reset button to Mode 2 by the default.

Language:

The user interface can be displayed in several languages.

Setup

Select the language you want and press return button to complete.

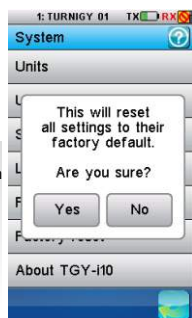


(Pic 21.72)

Factory reset :

Reset the whole configuration of the transmitter to its default. All model configurations and other settings are lost and reset to their default.

A confirmation is requested.



(Pic 21.73)



(Pic 21.74)

Firmware update:

The internal software of the transmitter can be updated using the USB interface connected to a PC computer. Once this function is activated, all functions of the transmitter stop. To avoid any loss of control of the vehicle, turn its receiver off before entering this mode. A confirmation is requested.

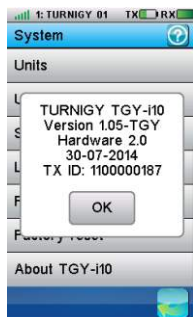
When the firmware is updating, never disconnect the USB cable or remove the battery or the transmitter will become unusable.

This function can be helpful only when connected with computer. Follow the steps as shown below:

1. Download the newest official software
2. Connect a transmitter with a computer by USB cable
3. Enter transmitter firmware upgrade menu and press OK to complete

About TGY-i10

Touch 'About TGY-i10', and the version of the current firmware is as shown on the left. Touch the "OK" button to go back.



(Pic 21.75)

22. Airplane/glider exclusive function menu

22.01 Aileron function

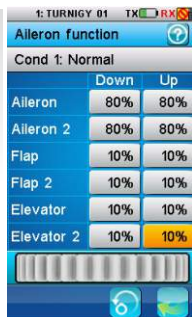
Function Details :

This function is used to adjust aileron function of models and give it best control.

Aileron function can be used to adjust the proportion of the 2 **ailerons** end points. If the structure does not have the **aileron**, 2 **aileron** linkage, flap or elevator, then there is no this function, and no icon will be displayed. It also can be used as **aileron** function if the airplane structure has 2 **flaps** or **elevators**, meanwhile the corresponding value be adjusted exceed 0%. This function can be set in 5 **conditions** respectively.

Select desired **upside** or **downside** and move the wheel to modify the corresponding value.

For this example: The airplane structure has 2 **ailerons**, 2 **flap** and 2 **elevator**. Setting the value as the picture 22.1, in this situation, the end points of the two **ailerons** are 80%, and the 2 **flaps** and 2 **elevators** are regarded as **aileron function**, which the end points both are 10%.



(Pic 22.1)

22.02. Flap function

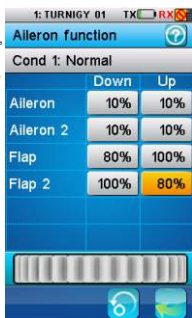
Function Details :

This function is not available when aircraft structure has **aileron**, **flap** or only one **elevator** or less than one **elevator**, so there is no icon in the main menu. If aircraft has more than 2 **ailerons**, **flaps** and **elevators**, this function exist

The up/down travel of each **flap** can be adjusted independently at each servo according to the wing type. If the **structure** does not have an **aileron**, 2 **ailerons** linkage, **flap** or **elevator**, then this function is not available, and no icon will be displayed. It can be used as **flap function** if the airplane **structure** has 2 **ailerons**, the corresponding value must be adjusted to more than 0%. The **flap function** can be assigned to a switch (SwA-SwH) to enable and disable it; it also can be assigned to a **stick** or a **knob** (Ail, Ele, Thro, Rud, VRA-VRE) to adjust the value. This function can be set in 5 **conditions** respectively.

Select desired **upside** or **downside** and move the wheel to modify the corresponding value.

For this example: The airplane **structure** has 2 **flaps** and 2 **ailerons**. Setting the value as the picture, in this situation 22.2, the end points of the two **flaps** are 80% and the 2 **ailerons** are regarded as **flap function**, which the end points are all 10%.



(Pic 22.2)

22.03 Spoiler function

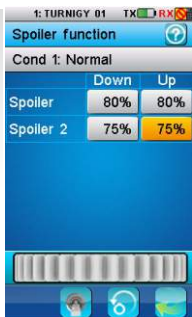
Function Details:

Spoiler will be used when aircraft is landing. It is used to increase pressure between aircraft and land so as to brake quickly

Spoiler function can be used to adjust the proportion of the 2 **spoilers**' end points. If the structure does not have **spoiler** or 2 **spoiler** linkage, then there is no this function, and no icon will be displayed. The **spoiler function** can be assigned to a switch (SwA-SwH) to enable and disable it, or be assigned to a **stick** or a **knob** (Ail, Ele, Thro, Rud, VRA-VRE) to adjust the value. This function can be set in 5 **conditions** respectively.

Select desired **upside** or **downside** and move the wheel to modify the corresponding value.

For this example: The airplane **structure** has 2 **spoilers**. Setting the value as the picture 22.3, in this situation, the end points of the 2 **spoilers** are 80% and 75%.



(Pic 22.3)

22.04 Elevator to flap



The elevator to the topside
(Pic 22.4)

The elevator to the bottom
(Pic 22.5)

Function Details:

When aircraft has **elevator** and **flap**, **elevator to flap function** is used to adjust the proportion of the corresponding mix end point, which default value is 10%. The airplane can fly up or down, which makes the flap move up or down accordingly. It is commonly used for turning somersaults during the flight. In most circumstances, the flap goes down when the elevator goes up. It is the pre-programmed mix of elevator and flap. The position of the corresponding channel is displayed in real time. If the structure does not have **Elevator** or **flap**, then this function is not available, and no icon will be displayed. This function can be set in 5 **conditions** respectively.

Touch the open button in the lower-left corner to activate the **elevator to flap** function, Select desired **upside** or **downside** and move the wheel to modify the corresponding value. The function can be assigned to a **switch** (SwA-SwH, LSw) to enable and disable it. Touch the open button in the lower-left corner to activate the elevator to flap function. Touch the low side rate or high side rate to set. Adjust the corresponding value by moving the wheel. The function can be assigned to a **switch** (SwA-SwH, LSw).

For this example: Activate the **elevator** function and the **flap** by touching the open button and set the value as shown in pictures 22.4 and 22.5. Push the **elevator** to the topside, the **elevator** and the **flap** function are displayed as shown in picture 22.4. Push the **elevator** to the bottom, the elevator and the **flap** function are displayed as shown in picture 22.5.

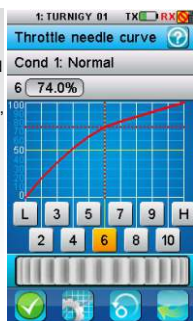
22.05 Throttle needle

Function Details:

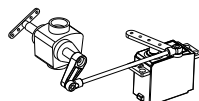
If the airplane structure has both an **engine** and a **needle**, set the **throttle needle** according to the features of **engine** power output. After that, the needle position effected by **throttle stick** will be presented with curve distribution, which can achieve a best flight effect. The 11 points (L, 2~10, H) of **throttle curve** can be adjusted from 0% to 100%. The horizontal dotted line displays in real time the throttle stick position, and the vertical dotted line displays in real time the position. If the structure does not have an **engine** or **engine** does not have a **needle**, then this function is not available, and no icon will be displayed. This function can be set in 5 **conditions** respectively.

Select the desired point and move the wheel to modify the corresponding value.

As shown in picture 22.6: Activate the **throttle needle** function by touching the open button. Setting the value as shown in picture 22.6. Point 2 is set to 20.0%, point 3 to 36.5%, point 4 to 51.5%, point 5 to 64.0%, point 6 to 74.1%, point 7 to 80.0%, point 8 to 85.5%, point 9 to 90.0% and point 10 to 95.0%. In this situation, when the position of the throttle is below the neutral, that is (L, 2~5), the acceleration of the **throttle needle** output is faster than its position above the neutral (that is 6-10, H point).



(Pic 22.6)



(Pic 22.7)

22.06 Butterfly



(Pic 22.8)

Vra旋钮调至最右边
Vra to the far right
(Pic 22.9)

Function Details:

If the airplane structure has 1 **aileron**, 1 **flap**, 1 **spoiler** and 1 **elevator**, it can be used to adjust the rate of the corresponding motion (the default rate is +30%). This function allows powerful brake operation by simultaneously raising the left and right ailerons and lowering the **flaps (camber flap, brake flap)**. It can be controlled by a switch or stick to achieve the best flight effect. If the airplane structure does not have any one of the **aileron**, **flap**, **spoiler** or **elevator**, then there is no this function, and no icon will be displayed. This function can be set in 5 **conditions** respectively.

Select the function and then adjust the relative parameter by touching the corresponding icon. Adjust the corresponding value by moving the wheel. Select a switch(SWA-SWH, LSW) by touching it to enable or disable this function or select a **stick or knob** (Ail, Ele, Thro, Rud, VRA~VRE) to control the value.

For this example, adjust the **aileron**, **aileron2**, **flap**, **spoiler** and **elevator** to 20% and select the knob to control the value. To the servo display function and then **CH1 (aileron)** and **CH6 (aileron2)** are displayed as picture 22.8 to limit the speed.

22.07 Elevator function

Function Details:

This function can adjust the proportion of the 2 **elevators** end points and the default is 100%.

There is no this functions if the airplane does not have the **elevator** or 2 **elevator** linkage. The function icon will not be shown on the screen. This function can be set in 5 conditions respectively.

Select the desired "**Down**" or "**Up**" and move the wheel to adjust the corresponding value.

For this example: The airplane has 2 **elevators**. Adjust the **Down** and **Up** value to 75%. In this situation, the **elevators** end points as shown in picture 22.10.



(Pic 22.10)

22.08 Rudder function

Function Details:

Rudder function is used to adjust the proportion of the 2 **rudders** end points and the defaults are 100%. There is no function if the airplane does not have the **rudder** or 2 **rudder** linkage. The function icon will not be shown on the screen. This function can be set in 5 **conditions** respectively.

Select the desired "**Down**" or "**Up**" and move the wheel to adjust the corresponding value.

For this example: The airplane has 2 **rudders**. Adjust two **rudders**' value as picture 22.11. In this situation, the **rudder** end points will be 80% and 75% .



(Pic 22.11)

22.09 V-tail

Function Details:

This function is used to control **elevator** and **rudder** of models with **V-tails**. CH2 is a left **V-tail** by default and CH4 is right **V-tail** . When both **V-tails** move in the same direction, they act as **elevators** and when both **V-tails** move in the opposite direction. This function lets users adjust for left and right **rudder** angle changes at **elevator** and **rudder** operation of a **V-tail** airplane. **V-tail** is when 2 servos are used together to control **rudder** movement as **Elevators**. In addition to each **rudder** side moving up and down together, each side moves in opposite directions when moving as **Elevators**. It is better that the sum of the **rudder** proportion and **elevator** proportion is no more than 100%. The defaults are 50%. The position of the corresponding channel displays in real time while moving the stick.

Select the **elevator** rate or **rudder** rate to set and move the wheel to adjust the corresponding value.

For this example: The airplane structure with the **V-tail**, will adjust the value as shown in pictures 22.12 and 22.13. Move the **rudder** stick to the far left, then CH2 channel displays at the position of 40 on the right. On the contrary, move the **rudder** stick to the far right, then CH4 displays at the position of 40 on the left. Moving the **elevator** stick to the topside or the bottom, both of the CH2 and CH4 display at the position of 60 on the right or on the left at the same time, then the **elevator** function.



方向摇杆打到最左边
The rudder to the far left

(Pic 22.12)

升降摇杆打到最上边
The elevator stick to the topside.

(Pic 22.13)

22.10. Airplane structure

Function Details:

This function can be set according to the airplane structure.

There are **engine**, **throttle needle**, **aileron**, **two aileron**, **flap**, **two flap**, **sopiler**, **two spoiler**, **rudder**, **two rudder**, **V-tail** to choose if the mode type is fix wing or glider. There will be a reminder "**Maximum number of channels reached.**" if the airplane parts selected is more than 10. Because the **two rudders** and **V-tail** can not exist at the same time, the **V-tail** will be hidden automatically when **two rudders** is selected. The default type is **Fix wing/glider** with **engine**, **aileron**, **elevator** and **rudder**.



(Pic 22.14)

(Pic 22.15)



(Pic 22.16)

Default airplane/glider type

airplane list

Maximum number
of channels reached

23. Helicopter exclusive function menu

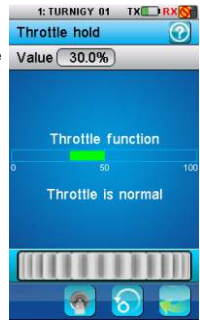
23.01. Throttle hold

Function Details :

This function is used to maintain the **throttle channel** position as preset position. The default rate is 10.0%. Throttle will be in preset position after this function is applied. It is commonly used to practice auto-rotation landing.

Touch the **throttle hold** and move the wheel to modify the corresponding value. This function can be assigned to a **switch** (from SwA to SwH, LSW).

For this example: **Throttle hold** value is set to 30% and push the SwA **upward** to enable this function. The channel position is displayed as 30 in real time. Throttle value will not be changed while moving the **throttle stick**.



Throttle stick to any position
(Pic 23.1)

23.02. Throttle mix

Function Details :

This function is the pre-programmed mix for some special functions and it can mix **aileron** channel, **elevator** channel and **rudder** channel. The default is as shown in picture 23.2. This function can be set up in 5 **conditions**. For example, in order to not reduce the height and maintain speed, control the **elevator** and increase the throttle output automatically.

Select the desired **Down** or **Up** and move the wheel to modify the corresponding value.

As shown in the picture 23.2: The value of the **aileron downside** is set as -15% and the value of the **upside** is 15%.



(Pic 23.2)

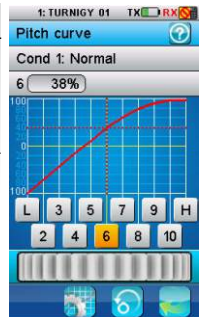
23.03. Pitch curve

Function Details :

This function is used to adjust the pitch of the helicopter with the variable pitch to achieve the best flight effect. It will be presented with curve distribution. This function can be set up in 5 **conditions** respectively, and the 11 points (L, 2~10, H) of **throttle curve** can be adjusted from 0% to 100%. The horizontal dotted line displays in real time the **throttle stick** position and the vertical dotted line displays in real time the position of **pitch curve** output after this function. This function icon will not be shown if the structure is fix pitch.

Select the desired point and move the wheel to modify the corresponding value.

For this example: The **pitch curve** function is activated. Point 2 is set to -72%, point 3 to -43%, point 4 to -15% and point 5 to 10%, point 6 to 38%, point 7 to 63%, point 8 to 85%, and point 9 to 97%. Other points are not adjusted. In this situation, when the position of the **throttle** is below the neutral, that is (L, 2~5), the acceleration of the **pitch curve** output is faster than its position above the neutral (that is 6-10, H point).



(Pic 23.3)

23.04. Swashplate mix

Function Details:

This function is the pre-programmed mix control of the helicopter **aileron**, **elevator** and **pitch**. Adjust the motion range of these three functions to achieve the best flight effect. This function can be set in 5 **conditions** respectively.

Select the desired point and move the wheel to modify the corresponding value.

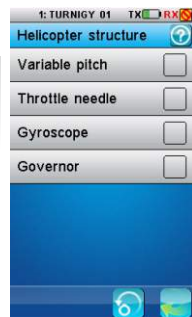


(Pic 23.4)

23.05. structure

Function Details:

There are **fixed pitch**, **variable pitch**, **throttle needle**, **gyros copeand governor** for your option if the airplane structure is set as helicopter. The variable pitch has 6 swash plate types. The default type is the 4-channel **fixed pitch helicopter**.

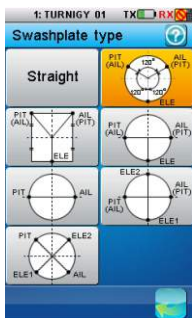


模型类型为直升机
Model type is helicopter
(Pic 23.5)

23.06. Swashplate type

Function Details:

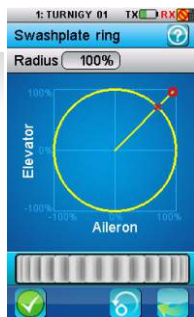
This function is used to set your model structure And it offers 7 types of swash plate structure Touch the Swash plate type to select desired type. It defaults to fixed pitch.



(Pic 23.6)

23.07. Swashplate ring

This function is to set limitation for the swash plate travel to achieve the best flight effect. Move the wheel to modify the corresponding value.



(Pic 23.7)

23.08. Governor

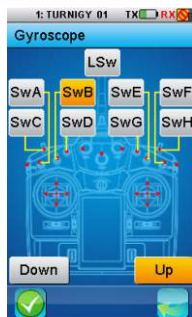
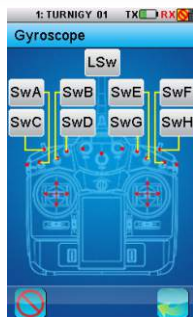
This new function is mainly used for maintaining the propeller speed. The default channel is CH7. It can be set in 5 conditions respectively. Move the wheel to modify the corresponding value.



(Pic 23.8)

23.09. Gyroscope

This function is used for adjusting the gyro sensitivity in current conditions. The higher the sensitivity is, the more correction the gyro provides and the "softer" or less responsive the helicopter feels. The default channel is CH5 and this function can be set in 5 conditions respectively, to maintain a hover, assign a knob for adjusting the pitch in helicopter mode. Move the wheel to modify the corresponding value.



(Pic 23.9)



Function Details:

To maintain a hover, assign a knob for adjusting the pitch in helicopter mode.



(Pic 23.10)

24. Warning function introduction



Audible alarm

1. When the transmitter battery is low and the voltage is lower than 3.75 V, the system will make alarm which sounds slowly.
2. If the voltage is lower than setting data due to low battery of receiver, the system will make a sound "Ba,Ba".
3. When the error rate is more than 60%, the system will make a sound "Du,Du".
4. When the timer goes off, the system will make a sound "Bi, Bi, Bi, Bi" three times.
5. Before the transmitter is turned off automatically, the system will make a sound "Du Du Du".
6. When the transmitter's battery voltage is lower than 3.7 V, the system will make alarm which sounds quickly.
When the voltage is lower than 3.65 V, the transmitter will be turned off automatically.

LED indicator alarm:

LED indicator alarm function synchronizes with audible alarm function. It has no effect on LED indicator after turning off the audible alarm. Please check as follows:

- 1.The LED remains on: all functions are normal.
- 2.The LED flashes slowly: the transmitter battery is low.
- 3.The LED flashes quickly:
The battery of the transmitter is very low,
Error rate is more than 60%,
The battery of receive is low,
The transmitter will turn itself off soon.
- 4.LED indicator is off: power off.

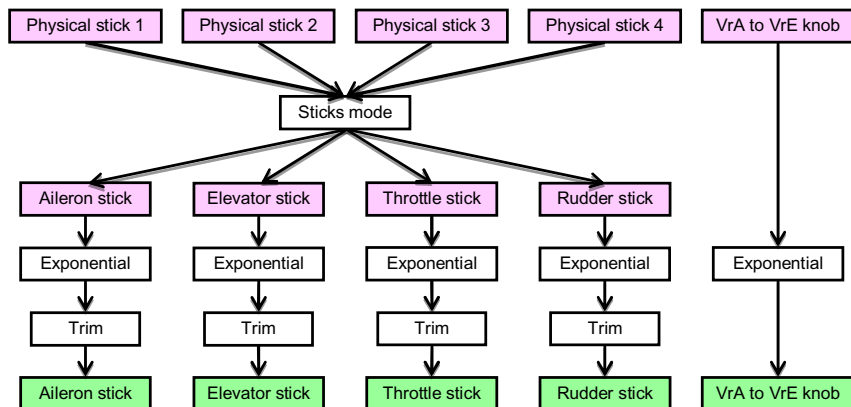
25. Troubleshooting guide



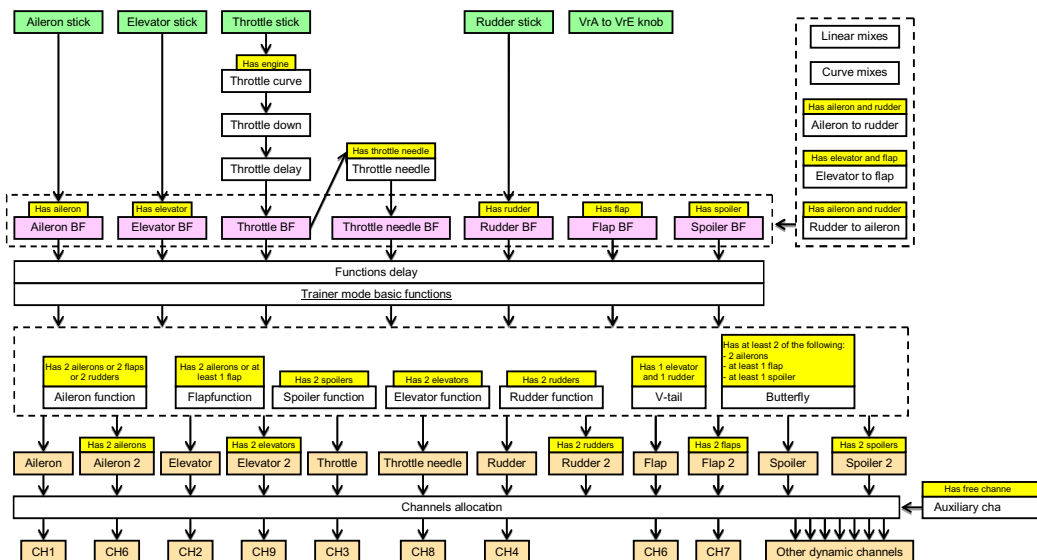
Problem solving

1. The transmitter can not be turned on
 - The battery is not properly installed,
 - Battery is empty,
 - The screen flashes when the transmitter is powered on, and then the transmitter turns itself off immediately. It indicates the electric quantity can't support system for a long time and the transmitter will be turned off once it is powered on,
 - The battery shrapnel is oxidized and loose contact.
2. Remote control distance is not enough
 - The wrong position of transmitter antenna or receive antenna,
 - Nearby radio interference,
 - Battery is empty,
 - Obstacle blocks off part of the signal.
3. The transmitter can't control the receiver
 - The transmitter or receiver enters into the bound status by accident. The problem can be solved by powering on again or binding again if necessary
4. The transmitter may not accept the data sent by the receiver sometimes when many people race at the same time
 - The distance between two transmitters is too close, Please keep more than 5 meters as far as possible.
5. The item number of acquisition module does not appear in the transmitter screen
 - The data cable of acquisition module is connected to the wrong place,
 - The plug of data cable is damaged.
6. Unstable data speed acquisition
 - The position of speed sensor is not proper, which drifts too far.
7. The simulator can not be checked on the computer
 - The USB simulator function of transmitter is not activated.

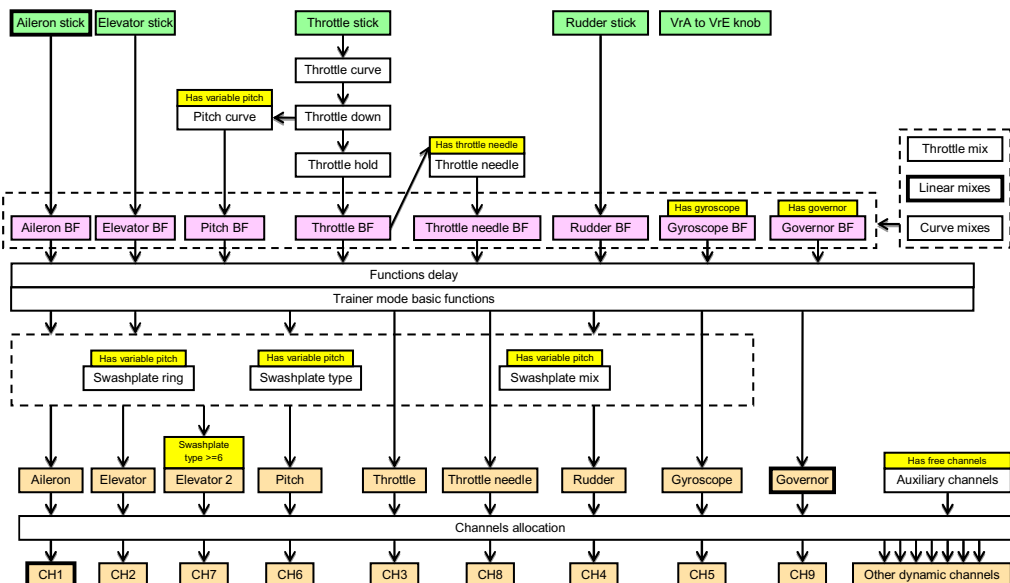
Input processing



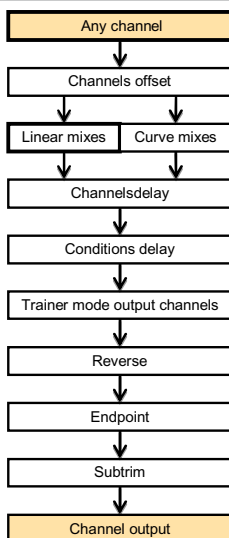
Airplane processing




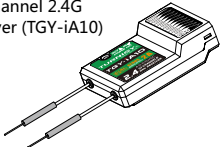


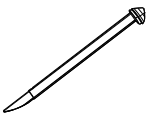

Helicopter processing

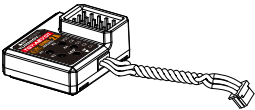

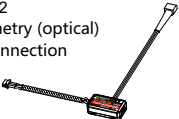
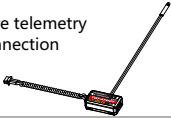






Output processing



27. Packaging content

NO:	Model	Sum	Remarks
1	10 Channel 2.4G Transmitter (TGY-i10) 	1	
2	10 Channel 2.4G receiver (TGY-iA10) 	1	
3	TGY-BA800 	1	
4	USB cable 	1	
5	Stylus 	1	
6	User manual 	1	

NO:	Model	Sum	Remarks
8	TGY-AEV01 i-bus receiver connection instruction 	1	
9	TGY-APD01 Data telemetry connection 	1	
10	TGY-APD02 RPM telemetry (optical) module connection 	1	
11	TGY-ATM01 Temperature telemetry module connection 	1	
12	TGY-AVT01 External voltage telemetry module connection 	1	
13	USB cable 	1	Optional
	Charger 		
	Trainer cable 		

**FCC Statement**

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

- Reorient or relocate the receiving antenna.
 - Increase the separation between the equipment and receiver.
 - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
 - Consult the dealer or an experienced radio/TV technician for help.
- To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

(Example use only shielded interface cables when connecting to computer or peripheral devices).

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

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

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

The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

Caution!

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

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