EXMITTER

EX7

2.4GHz FHSS Radio System

EXMITTER -- Professional Remote Control Products Expert

WARNING

The following terms are used throughout the product literature to indicate various levels of potential harm when operating this product.
CAUTION: Procedures, which if not be properly followed, is able to create a possibility of physical property damage AND or possibility of injury.

⚠ Read the **ENTIRE** instruction manual to become familiar with the features of the product before operating. Fail to operate the product correctly can result in damage to the product, personal property and cause serious injury.

⚠ This is a sophisticated hobby product and **NOT a toy**. It must be operated with caution and common sense and requires some basic mechanical ability. Fail to operate this Product in a safe and responsible manner could result in injury or damage to the product or other property. This product is not intended for use by children without direct adult supervision. Do not attempt to disassemble, use with incompatible components or augment product in any way without the approval of VolantexRC Co., Ltd..
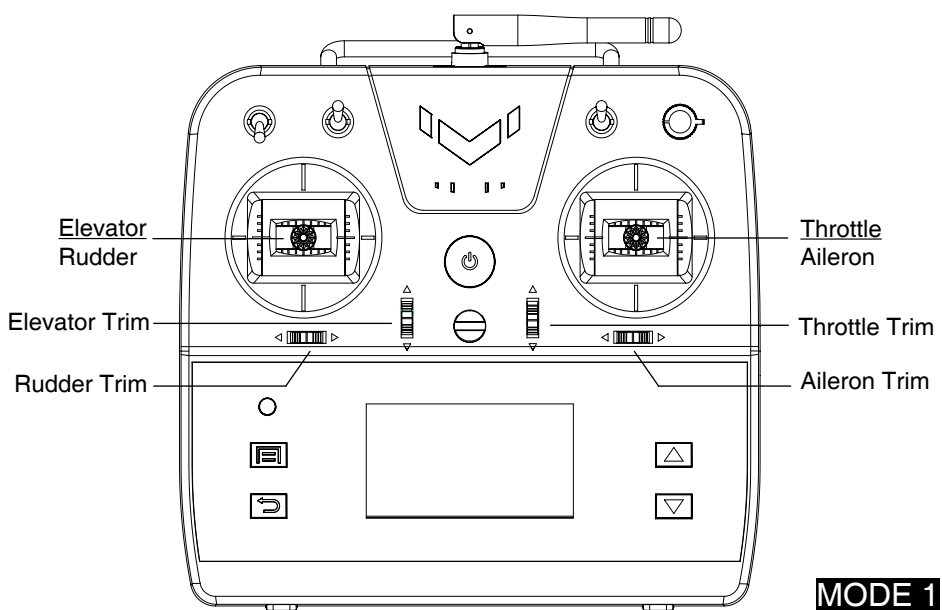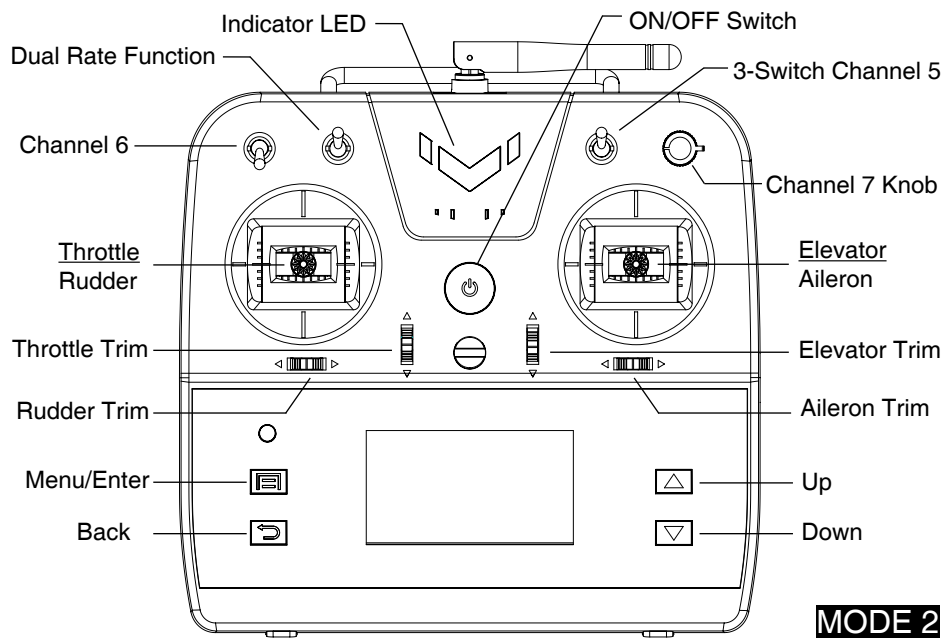This manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or serious injury.
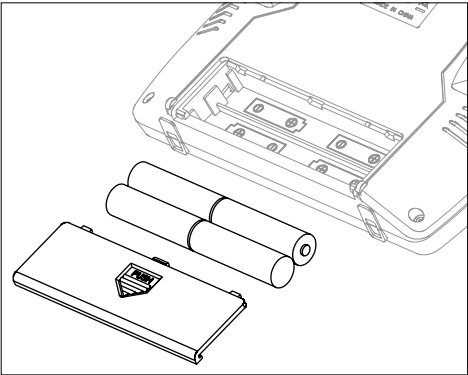
Safety Precautions

• Always ensure all batteries have been properly charged prior to using the model.
• Always check all servos and their connections prior to each run.
• Never operate your model near spectators, parking areas or any other area that could result in injury to people or damage of property.
• Never operate your model during adverse weather conditions. Poor visibility can cause disorientation and loss of control of your model.
• Never point the transmitter antenna directly toward the model. The radiation pattern from the tip of the antenna is inherently low.
• If at any time during the operation of your model you observe any erratic or abnormal operation, immediately stop operation of your model until the cause of the problem has been ascertained and corrected.

Transmitter Details

Indicator LED

ON/OFF Switch

Dual Rate Function

3-Switch Channel 5

Channel 6

Channel 7 Knob

Throttle
Rudder

Elevator
Aileron

Throttle Trim

Elevator Trim

Rudder Trim

Aileron Trim

Menu/Enter

Up

Back

Down

MODE 2

Elevator
Rudder

Throttle
Aileron

Elevator Trim

Throttle Trim
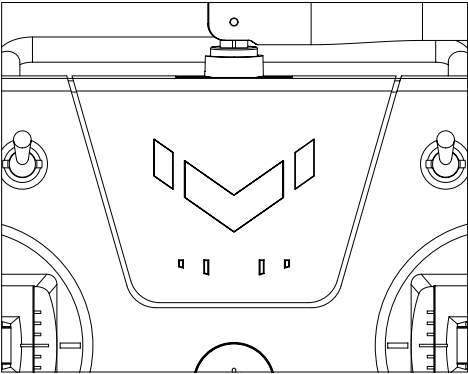
Rudder Trim

Aileron Trim
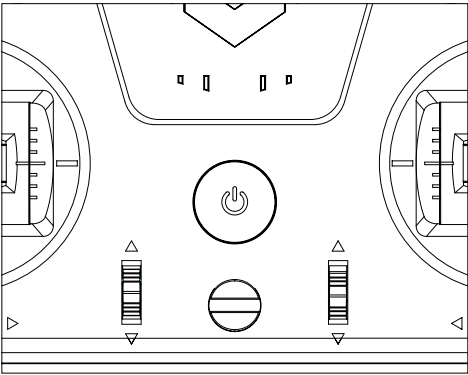
MODE 1

Install Batteries

Remove the battery cover and install 4 AA batteries. Make sure the polarity of each corresponds with the diagram in the battery holder. Replace the battery cover.
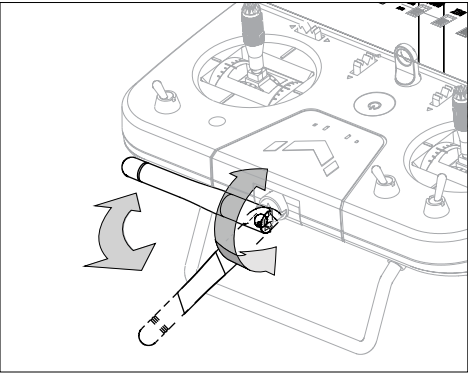
One-Button ON/OFF Switch

EX7 uses one-button ON/OFF switcher. Press the button for 1 second to turn on the transmitter ; Press and hold the button for 2 second to turn off the transmitter.

Low Voltage Alarm

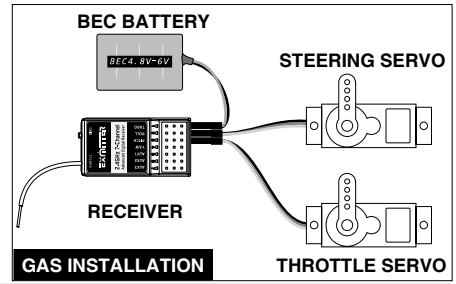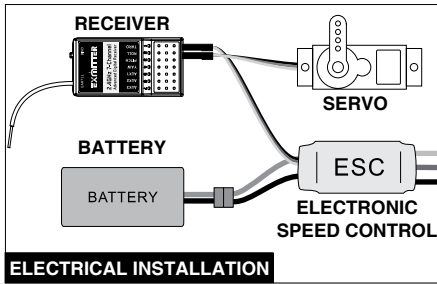When the battery voltage drops below 4.3 volts, an alarm will sound and the voltage LEDs will flash.
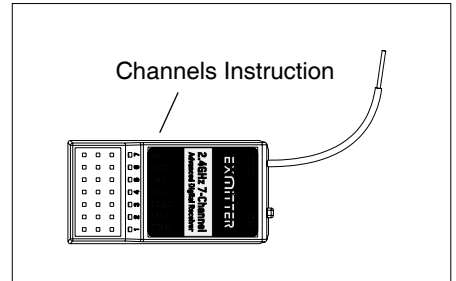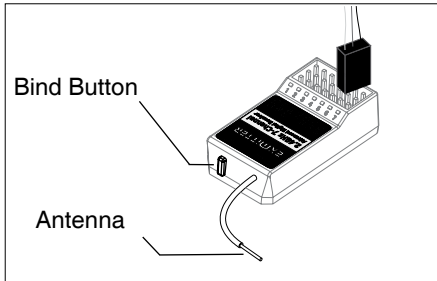
Retreatable Antenna

The EX6 comes with a retreatable antenna. When transporting, you can rotate it down at rear place to save space.

Install Your Receiver

RECEIVER
SERVO
BATTERY
ESC
ELECTRONIC SPEED CONTROL
ELECTRICAL INSTALLATION

BEC BATTERY
BEC4.8V~6V
STEERING SERVO
RECEIVER
GAS INSTALLATION
THROTTLE SERVO

⚠ **CAUTION:** Do not cut the antenna.

Receiver Connection & Binding

Bind Button

Antenna

Channels Instruction

Binding is the process of programming the receiver to recognize the GUID (Globally Unique Identifier) code of a single specific transmitter. When a receiver is bound to a transmitter, the receiver will only respond to that specific transmitter. If you need to rebind for any reason, please follow these steps:
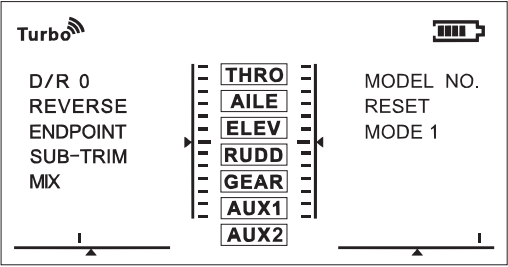1. With the transmitter switched ON
2. Power on the receiver,then press the bind button in 3 seconds.
3. Loose the bind button and wait for about 5 seconds.
4. The receiver LED will keep flashing, means it is binding.
5. After the receiver LED stop flashing, it means the binding is done.

Failsafe Setting

The EX7 comes with the receiver failsafe set to NONE. In the event of loss of signal the motor will stop and the vehicle will willdrift. If the signal is regained normal function will return. If you wish to program the failsafe to a custom setting, just follow these simple steps:
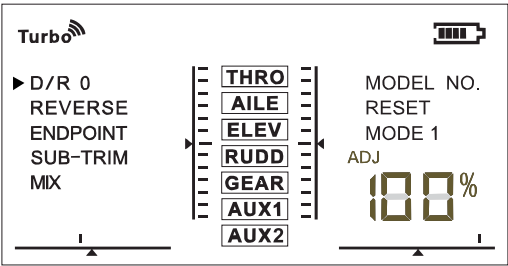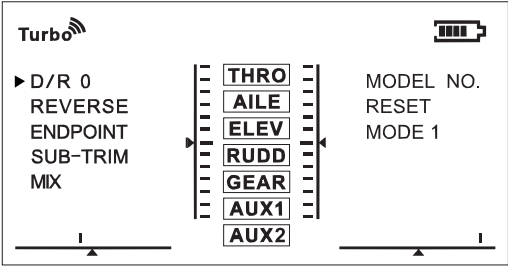1. While binding(LED flashing), keep sticks at position that you want the vehicle to stay when failsafe
2. When binding done(LED stop flashing), the system will remember the position you set for failsafe.

EXMITTER EX6 Digital Radio System

Menu Functions

```
Turbo                    [▮▮▮]
D/R 0        ┌──THRO──┐   MODEL  NO.
REVERSE      │  AILE  │   RESET
ENDPOINT   ▶ │  ELEV  │ ◀ MODE 1
SUB-TRIM     │  RUDD  │
MIX          │  GEAR  │
             │  AUX1  │
             └──AUX2──┘
```

The EX7 comes with a digital LCD screen displaying a 3-level menu.
Press Menu button to turn on/off background light of the screen.
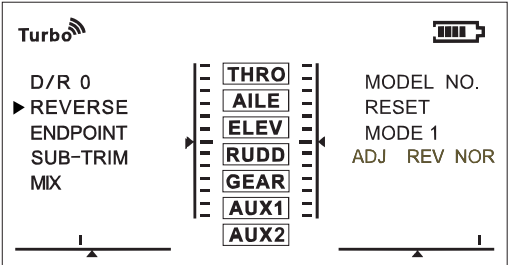Following below instructions you are able to operate settings to EX7.

D/R Setting

```
Turbo                    [▮▮▮]
▶D/R 0       ┌──THRO──┐   MODEL  NO.
REVERSE      │  AILE  │   RESET
ENDPOINT   ▶ │  ELEV  │ ◀ MODE 1
SUB-TRIM     │  RUDD  │
MIX          │  GEAR  │
             │  AUX1  │
             └──AUX2──┘
```

```
Turbo                    [▮▮▮]
▶D/R 0       ┌──THRO──┐   MODEL  NO.
REVERSE      │  AILE  │   RESET
ENDPOINT   ▶ │  ELEV  │ ◀ MODE 1
SUB-TRIM     │  RUDD  │   ADJ
MIX          │  GEAR  │   100%
             │  AUX1  │
             └──AUX2──┘
```

D/R function allows you to adjust the travel volume of channels, its volume is based on Endpoint function.
The D/R function includes two preset position "1" and "0". When you switch D/R channel to position 0, your travel adjustment is based on 100% volume. When you switch D/R channel to position 1, your travel adjustment is based on 50% volume.
The D/R function setting is based on the current model. When you set D/R under Model No.1, the setting will only work under Model No.1.

NOTICE: After you finish setting of D/R and return back to main menu, next time when you enter D/R function setting, it will remember the setting status you saved last time.
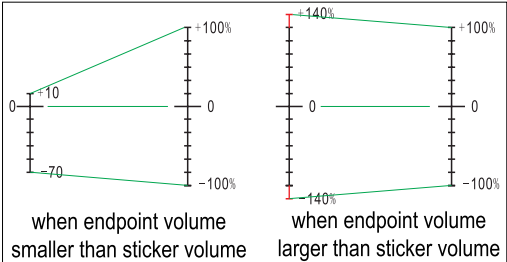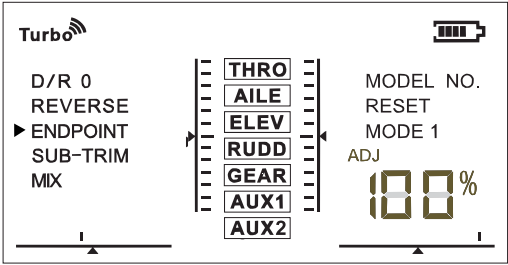
Channel Reverse

```
Turbo                    [▮▮▮]
D/R 0        ┌──THRO──┐   MODEL  NO.
▶REVERSE     │  AILE  │   RESET
ENDPOINT   ▶ │  ELEV  │ ◀ MODE 1
SUB-TRIM     │  RUDD  │   ADJ  REV  NOR
MIX          │  GEAR  │
             │  AUX1  │
             └──AUX2──┘
```

Channel reserve function allows you to reserve any of the 7 channels.

The reserve function setting is based on the current model. When you set reserve under Model No.1, the setting will only work under Model No.1.

NOTICE: After you finish setting and return back to main menu, next time when you enter reserve function setting, it will remember the setting status you saved last time.

Endpoint Setting

when endpoint volume smaller than sticker volume

when endpoint volume larger than sticker volume

Endpoint function allows to adjust max travel volume from -140% to 0%, 0% to 140%. Endpoint setting works on Channel THRO, AILE, ELEV, RUDD, GEAR, AUX1, AUX2. When you set endpoint volume smaller than sticker volume, the travel volume of the particular channel will be adjusted according to the smaller endpoint. For example, if you set max endpoint to +10%, when the sticker moves to +50%, the actual volume will be only +5%.
It is the same case when you set endpoint volume higher than sticker volume, shown as above illustration at right side.
The setting is based on the current model. When you set D/R under Model No.1, the setting will only work under Model No.1.

NOTICE: After you finish setting of endpoint and return back to main menu, next time when you enter endpoint function setting, it will remember the setting status you saved last time.

Sub-Trim
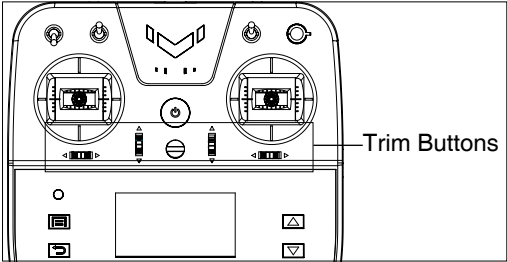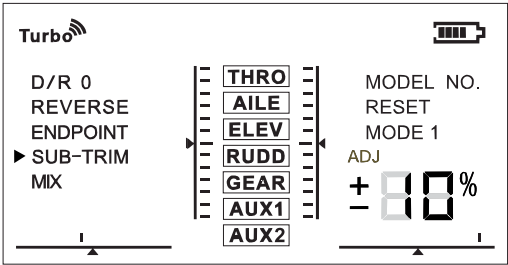
Trim Buttons

Sub-trim function allows to adjust channel servo travel center point from -30% to +30%. Sub-trim can be accumulated with trimming by adjusting trim buttons on transmitter.

CAUTION: Do not use too much sub-trim otherwise you may damage the servo.
NOTICE: After you finish setting of endpoint and return back to main menu, next time when you enter endpoint function setting, it will remember the setting status you saved last time.

Digital Trims

The EX7 comes with digital trims. Each time a trimmer is moved the servo output will change one step. If the trimmer is held, the output will scroll in that direction until the trimmer is released or the output reaches its end.
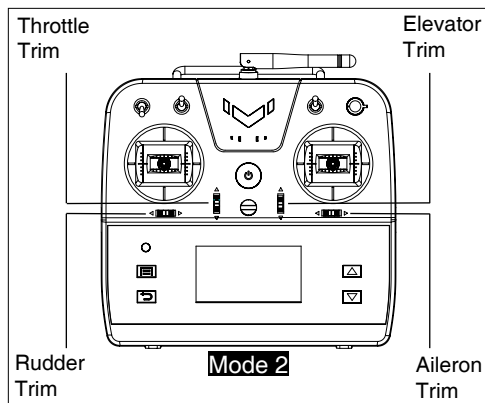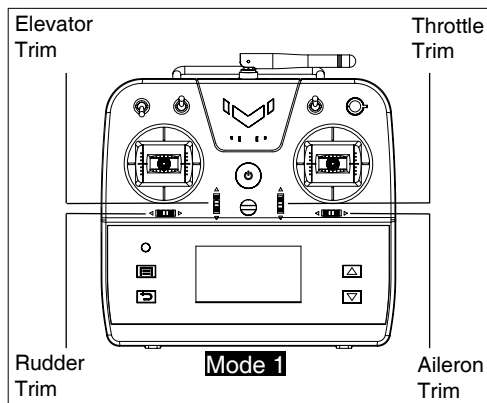
Mixing Modes

Mixing modes allow you to mix several channels to be controlled together, changing one channel to be a new functional channel.
EX7 comes with 3 different preset mixing modes. Follow below steps to set each mode.

DUALAILE mixes channel 2 and channel 6. When controlling channel 2, channel 6 will relatively react. Channel 2 only reacts to movement of stick, endpoint setting and sub-trim setting. When you adjust endpoint or sub-trim setting of channel 2, it will apply to channel 6 too.

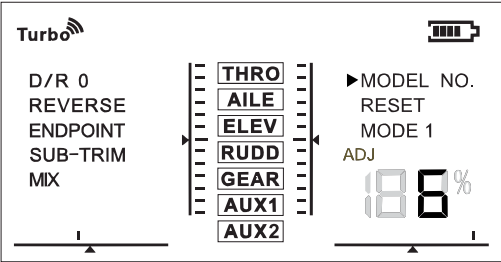ELEVON mixes channel 2 and channel 3. When controlling one channel, the other one channel will relatively react.

V-TAIL mixes channel 3 and channel 4. When controlling one channel, the other one channel will relatively react.

NOTICE: In mixing mode, reverse function is still individual for each channel. If you need for reverse setting, you need to set it individually on channel 2 and channel 6 with different direction
NOTICE: In mixing mode, adjustments of endpoint, sub-trim and digital trim will only apply to mixed status.

Model Select

Turbo

D/R 0
REVERSE
ENDPOINT
SUB-TRIM
MIX

THRO
AILE
ELEV
RUDD
GEAR
AUX1
AUX2

▶MODEL NO.
RESET
MODE 1
ADJ

6 %

EX7 comes with 6 model memory able to store.
Setting adjustments apply to the current selected model only, including reset operation.

Multi-button Function Settings

EX7 allows you to adjust more setting for further usage, which requires multi-button operations.
Follow below instructions to achieve the function settings.

K8   K4

K7   K3

K5   K6   K2   K1

OK   LCD   UP

BACK   DOWN
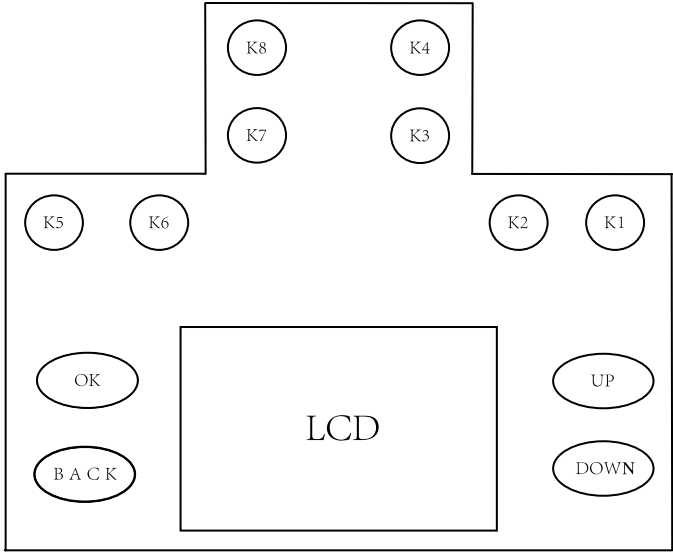
1. Potentiometer Calibration
Holding button K1 & K5 while powering on -- Start "beep-beep-beep" meaning it is calibrating -- After beeping, holding K2 & K6 to exit calibration -- There will be "beep-beep" / "beep" based on left throttle mode / right throttle mode.

2. Turbo Switch
Holding OK & K4 & K8 while powering on -- Turbo🛜 on as 20dbm.
Holding OK & K3 & K7 while powering on -- Turbo🛜 off as 14dbm.

3. Logo on/off
Holding BACK & UP while powering on -- Display / hide EXMITTER logo.
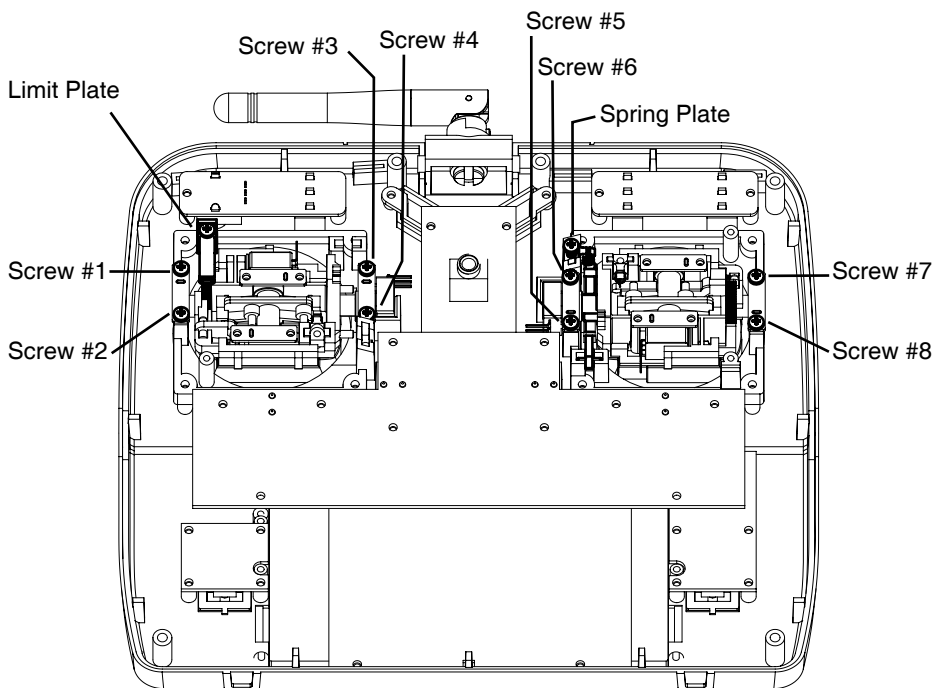
4. Mode1 / Mode 2 Switch
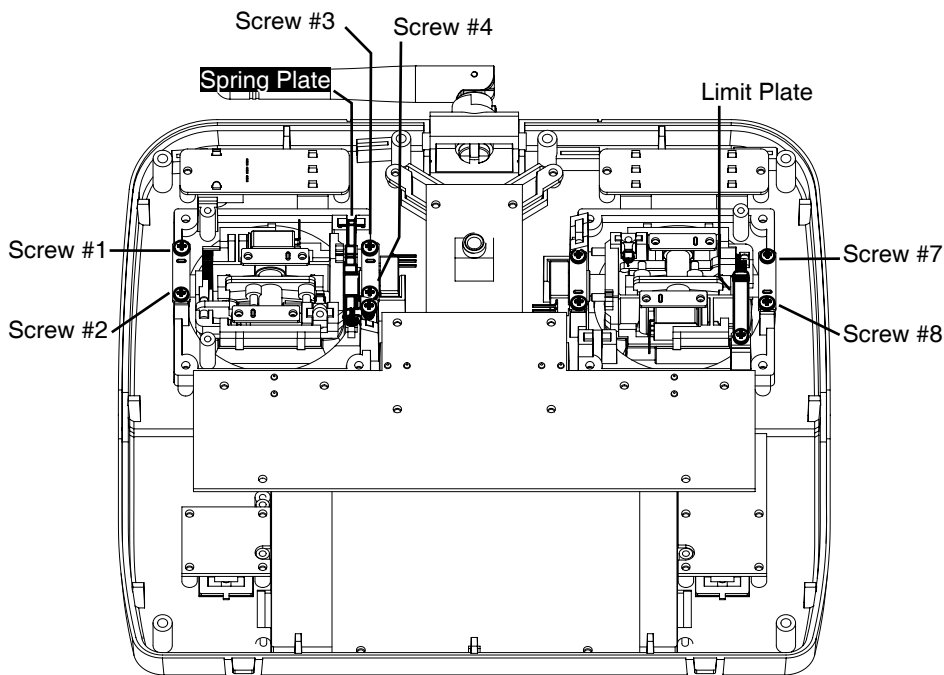Holding OK & DOWN & K6 while powering on -- Saved as Mode 2(left throttle).
It comes with "beep--beep" sound when setting as mode 2.
Holding OK & DOWN & K2 while powering on -- Saved as Mode 1(right throttle).
It comes with "beep--" sound when setting as mode 1.
After switch setting of mode 1 / mode 2, you also need to switch the sticks mechanically following below steps.

NOTICE: The mode 1/2 mechanical swich is using mode 1 swiched to mode 2 as example instruction. To switch from mode 2 to mode 1, just reverse the order of spring plate and limit plate.

1. Loosen screws on back plate and remove the back plate.
2. Loosen screws #1 - #8.
3. Loosen spring plate and limit plate, place them in the other ends as shown in picture, with 180 degrees rotation.
4. Tighten spring plate and limit plate. The screws tightness decide the feeling of hangdling throttle stick and elevator stick.
5. Tighten screws #1 - #8.
6. Assemble the back plate and tighten by screws.

FHSS Radio Control System

FHSS is an advanced radio control system with better performance of anti-interference. EX6 comes with FHSS system, its faster frequence prevents interference signal from catching up. Therefore using this system allows the radio to work in a more stable environment.

Perform Range Check

EXMITTER EX6 Digital Radio System 11

As a precaution, an operational ground range check should be performed before the first flight each time out.

Performing a range check is a good way to detect problems that could cause loss of control such as low batteries , defective or damaged radio components or radio interference. This usually requires an assistant and should be done at actual flying site you will be using.

Firstly, turn on the transmitter. Then install the fully charged battery in to the vehicle and hold it in place with hook-and-loop strap. Connect the battery and install the hatch.

Remember, carefully not to "bump" the throttle stick. Otherwise the propeller will rotate and possibly cause damage or injury.

With the antenna on the transmitter collapsed(not extended),begin walking away from the model operating the controls in a predictable pattern(for example, turn elevator up, and then down. Turn aileron and rudder right, and then left). While moving the control surfaces, also vary motor rpm.

Remind your assistant to alert you if the controls fail to respond or if they move suddenly or erratically. You should be able to matain control up to a distance of approximately 100 feets(30 meters).

If the controls respond erratically or if anything else seems wrong, make certain all the servo wires are securely connected to the receiver and that the transmitter and receiver batteries are fully charged. If you can not find a mechanical problem with the model, it is slightly possible that there is radio interference somewhere in the area.One option would be to try another range check at an alternate flying site.

After the range check, fully extend the anternna.

2.4GHz Trouble Shooting Guide

Problem	Possible Cause	Solution
The system is not connected	Your transmitter and receiver are too close	Take transmitter 1 to 3 meters away from receiver
	You are around metal objects	Try in an area with less metal around
	The model selected is not the model bound to	Check the selected model and ensure you are bound to the specific one
	The model is not the bound one	Rebind your transmitter and receiver
The receiver not responding during operation	Low battery voltage	Charge your battery
	Loose or damaged wires or connectors between battery and receiver	Check the wires and connection between the battery and receiver. Repair or replace wires and/or connectors

Company Name: Volantexrc Co.,Ltd.
Item Name: Radio Controller
Item Number: EX7

CE

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