



# **4 CHANNEL RADIO CONTROL SYSTEM INSTRUCTION MANUAL**



## **PRECAUTION:**

- **Please carefully read this manual before operating.**
- **Keep the manual for further help.**





**Thank you for purchasing SMARTTECH products.  
You can contact with model experts or us for technical assistance.**

### **PRECAUTIONS:**

- 1.This radio system is only applied to models.The products we mentioned in this manual are only applied to models.**
- 2.We are not responsible for reconstruction ,regulation, or parts' change of product out of our factory.**
- 3.You will assume whole responsibility for your operation . We can not assume responsibility for loss due to contrived reasons.**

- Any reprinting of this manual is not allowable.**
- We hold the right to revise content without prior notice due to specification change.**
- If you find any faults , omission , or mis-interpretation in this manual,we welcome your suggestion .**
- We can not assume any responsibility for personal operations.**



## contents

● SIGN MEANING .....	3
● USE PRECAUTIONS.....	4
● USE PRECAUTIONS FOR NC BATTERY.....	6
● STORAGE/DISPOSAL PRECAUTIONS.....	7
● OTHER PRECAUTIONS.....	7
● CONTRUCTION OF TRANSMITTER (RIGHT THROTTLE).....	8
● CONTRUCTION OF TRANSMITTER (LEFT THROTTLE).....	9
● INTRODUCTION OF TRANSMITTER.....	10
● CONTRAST DIAGRAMS OF TRANSMITTER AND HELICOPTER (RIGHT THROTTLE).....	11
● CONTRAST DIAGRAMS OF TRANSMITTER AND HELICOPTER (LEFT THROTTLE).....	12
● LINKAGE SKETCH MAP FOR RECEIVER OF MIXER, MOTOR AND SERVO .....	13

## SPECIFICATIONS

NO.:30121

4CH transmitter:1PC

receiver:1PC

servo:2PCS (600g/cm)



quartz crystal:1 pair

instruction manual:1PC






## SIGN MEANING

For securely operating the transmitter, please pay attention to following signs.  
The contents which are marked with following signs is extremely important for your safety.

- 1.SIGN MEANING**
-  **PROHIBITED MATTERS**
  -  **ENFORCEMENT MATTERS**

## 2.SIGN (As the following figure )

SIGNS	MEANING
 <b>DANGER</b>	Failure to observe the matter discussed in such an item and mis-operating possibly poses a serious death or severe injury for user and other .
 <b>WARNING</b>	Failure to observe the matter discussed in such an item and mis-operating poses a possibility of death or sever injury for user and other ,and damage to equipment or property.
 <b>CAUTION</b>	Failure to observe the matter discussed in such an item and mis-operating doesn't always pose a sever injury for user and other, but it is unavoidable to injure and damage to the equipment or property.



## USE PRECAUTIONS

### WARNING PROHIBITED MATTERS

- **Never use the same frequency at the same time.**  
Otherwise, it may cause signal disturbance and run out of control. \*Through different modes from frequency conversion (AM.FM.), it may occur the same trouble.
- **Never operate outdoors in rainy or windy days.**  
If water gets into the unit, it may cause short circuit, damage internal circuit. The functions will fail and the model will be out of control.
- **Never fly your model in the following situation.**
  - close to other radio control (Approximately in 3Km)
  - residentials, schools, hospitals and place where people gather.
  - close to high voltage wires, high buildings, and communications setting.Otherwise, the model will fall down due to signal disturbance or obstacles.  
It is possible to cause death, severe injury, and damage to property.
- **Do not fly the model when you are not in good physical condition.**  
The mis-judgement may result in accidents, due to no focus on energy;  
It is easy to fall down due to mis-operating.

### WARNING ENFORCEMENT MATTERS

- **Fully extend the antenna.**  
Otherwise, it will cause helicopter to fall down due to transmitting distance shortened.
- **Test the transmitter before flying your model.**  
The model will fall down due to abnormal situation of the transmitter .  
\* Test all rudders of the helicopter model before flying . Do not fly your helicopter model if rudders function is abnormal .
- **Use the designated SMARTECH crystals while changing the frequency.**  
If use other crystals, it will shorten arrived distance of electric wave, and the helicopter will fall down due to absolute failure of operations.
- **Make sure that the transmitter antenna is not loose. Otherwise, the transmitter can not send out signal.**



**⚠ CAUTION    ⓧ PROHIBITED MATTERS**

- **Do not set the transmitter upright while putting it on the ground when operating.**
  
- **Do not touch the motor when flying.**  
**Danger of burn due to high temperature.**

**⚠ CAUTION    ⚠ ENFORCEMENT MATTERS**

- **When power is on :**  
**The control rod of throttle for transmitter is "OFF",**  
**1.Switch on power of the transmitter first**  
**2.Switch on power of mixer's receiver secondly**
- **When power is off :**  
**1.Shut off power of the mixer's receiver first**  
**2.Shut off power of the transmitter follows**
- **When adjusting the transmitter,the motor should stop running.**  
**Otherwise,the propeller will cause personal injury.**



## USE PRECAUTIONS OF NC BATTERY

### **WARNING** **ENFORCEMENT MATTERS**

- Please charge the NC batteries before flying.  
The performance will be affected due to low battery level.
- Please use SMARTECH (Sold separately) charger. Do not overcharge batteries.

### **CAUTION** **PROHIBITED MATTERS**

- Do not bump into the anode or cathode ports of the NC battery.  
If bumping, the batteries will abnormally warm up and cause fire.
- Do not let NC batteries fall off or intensively bump into other objects.
- Do not mix-use new and old batteries.
- Do not use unchargeable batteries.
- Please use SMARTECH charger or the intelligent charger made by our factory.

#### **(ELECTROLYTE OF THE NC BATTERY)**

The electrolyte of the NC battery is very strong alkaline solution. If the electrolyte sprays into eyes, it will cause danger of blindness. If such things come out, please rinse immediately, and then consult the doctor. In addition, if the electrolyte sprays into skin and clothes, it will injure your skin. Please rinse immediately.





## PRECAUTIONS FOR STORAGE AND DISPOSAL

### WARNING ENFORCEMENT MATTERS

- Keep the transmitter, batteries, and model away from reach of children. To avoid sudden operations or touch or arbitrarily discard batteries, please never let children touch them. Otherwise, it will cause personal injury, and even chemical personal injury.
- Do not discard batteries into fire, heat up batteries, and do not decompose or reconstruct them. To avoid rupture, high temperature, and peculiar smell or leak, you should not dispose of batteries as above illustrated. Otherwise, it may cause personal injury, burn, and blindness.
- Discharge batteries or remove them for storing after use. Please charge batteries before flying. If not discharging NC batteries before charging them, the memory effect of batteries will be affected and flying time of the model will be shortened. It possibly cause helicopter's crash.

### CAUTION PROHIBITED MATTERS

- Do not store the transmitter in the following places.  
In hot places : more than 40°C ; In cool places : less than -10°C  
In places where sunlight directly irradiates.  
In excessively moist places  
In shaky places  
In dusty places  
In the place which is close to heat source or in vaporous places  
If storing of the transmitter in above places, it will be distorted or damaged.

### CAUTION ENFORCEMENT MATTERS

- If not used for a long time, remove batteries from the transmitter before storing the transmitter in a dry place. Otherwise, the performance and lifetime of the transmitter will be affected due to batteries' leakage.

---

## OTHER PECULIAR PRECAUTION

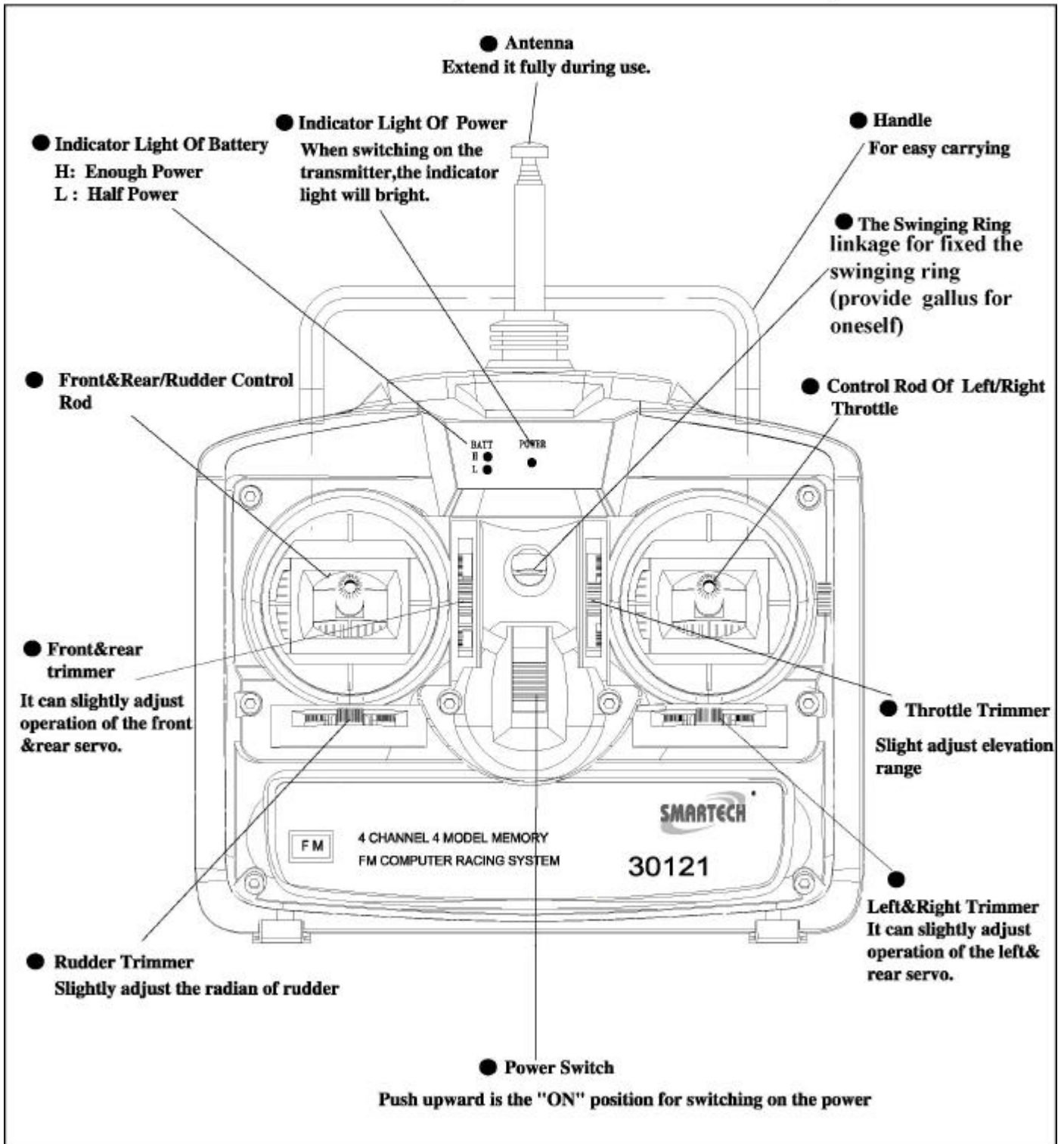
### CAUTION PROHIBITED MATTERS

- Do not spray waste oil or fuel into the plastic part. Otherwise, the performance will be affected due to plastics' erosion.



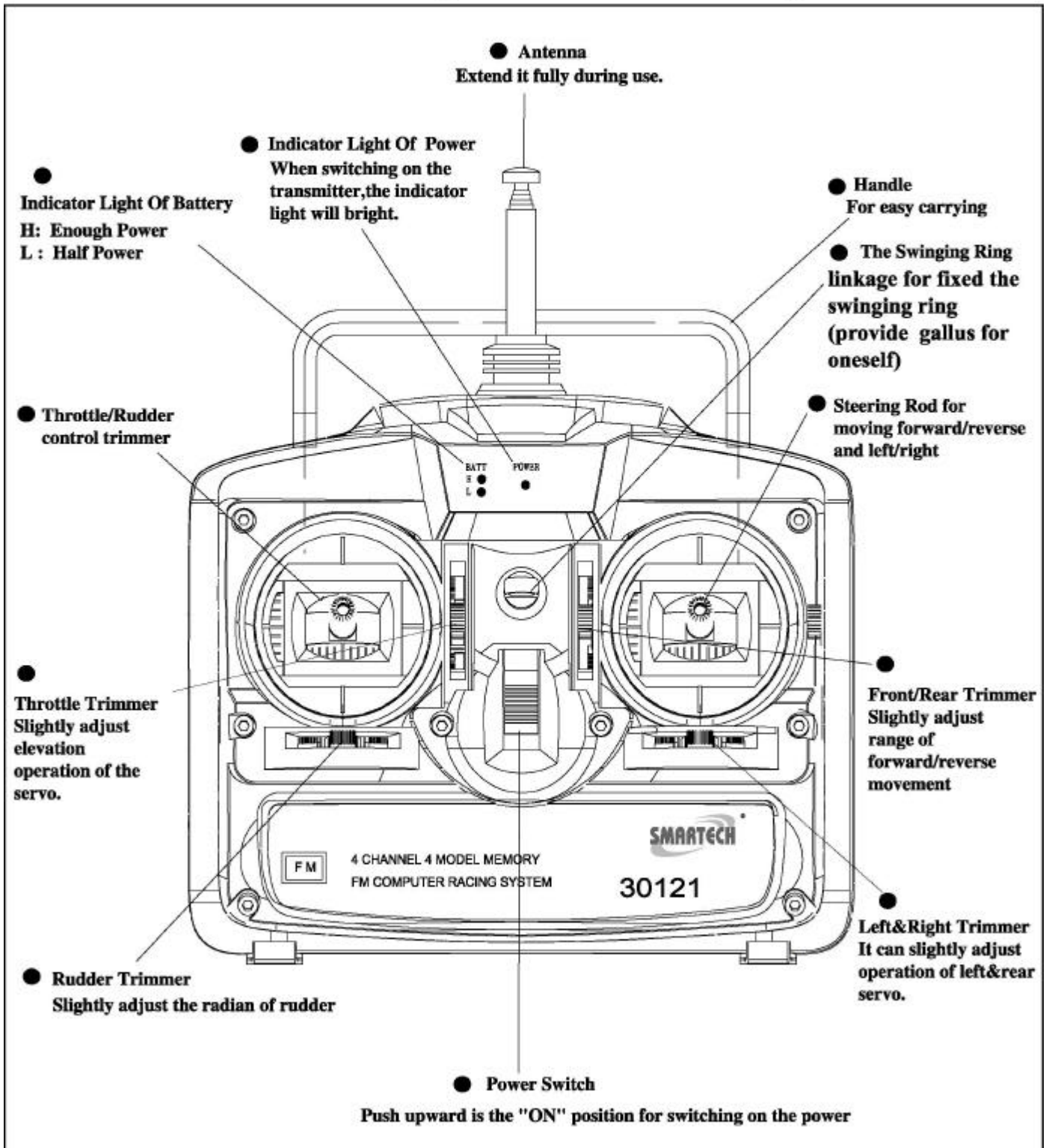


## ILLUSTRATION OF TRANSMITTER'S STRUCTURE(RIGHT THROTTLE)





## ILLUSTRATION OF TRANSMITTER'S STRUCTURE(LEFT THROTTLE)

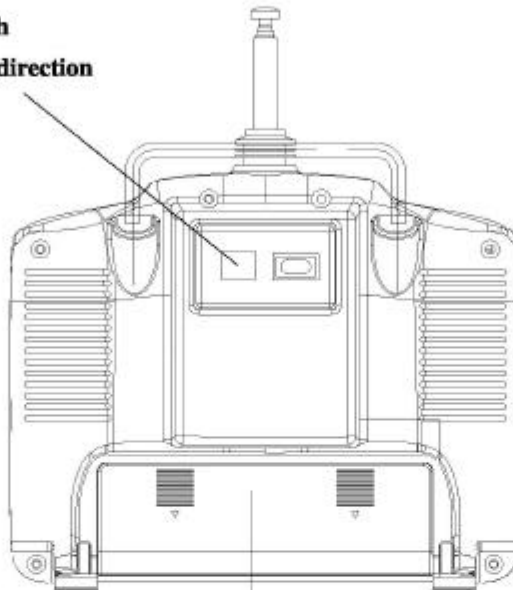




## STRUCTURE INTRODUCTION OF TRANSMITTER

### ● Channel Forward/Reverse switch

This switch can change running direction of servo.



### ● Battery Case's Cover

Take out the battery case's cover.  
Please use eight 1.5V dry battery or  
eight 1.2V NC battery. While setting  
battery, take care the polarity of the battery.

### NOTICE

### COMPLUSORY ITEM

- Do not charge unchargeable batteries. If charging them, it may cause battery explosion or personal injury.

- While converting or changing channels, please keep your body away from the model. Otherwise it may cause personal injury or damage to property due to sudden movement of the model.

- Do not arbitrarily configure the setting of the charger.

Please apply to the special charger or intelligent charger available from our factory.



## CONTRAST DIAGRAM OF OPERATIONS FOR TRANSMITTER AND HELICOPTER(RIGHT THROTTLE)

The nose goes down and the helicopter goes ahead.			Push up the Front&Rear/ Rudder control rod.
The nose goes up and the helicopter goes backward.			Push down the Front&Rear/ Rudder control rod.
The body moves to the left.			Move the Left&Right /Throttle control rod to the left.
The body moves to the right.			Move the Left&Right /Throttle control rod to the right.
The nose turns to the left.			Move the Front&Rear /Rudder control rod to the right.
The nose turns to the right .			Move the Front&Rear /Rudder control rod to the left.
The helicopter goes up.			Push up the Left&Right /Throttle control rod
The helicopter goes down.			Push down the Left&Right /Throttle control rod



## CONTRAST DIAGRAM OF OPERATIONS FOR TRANSMITTER AND HELICOPTER(LEFT THROTTLE)

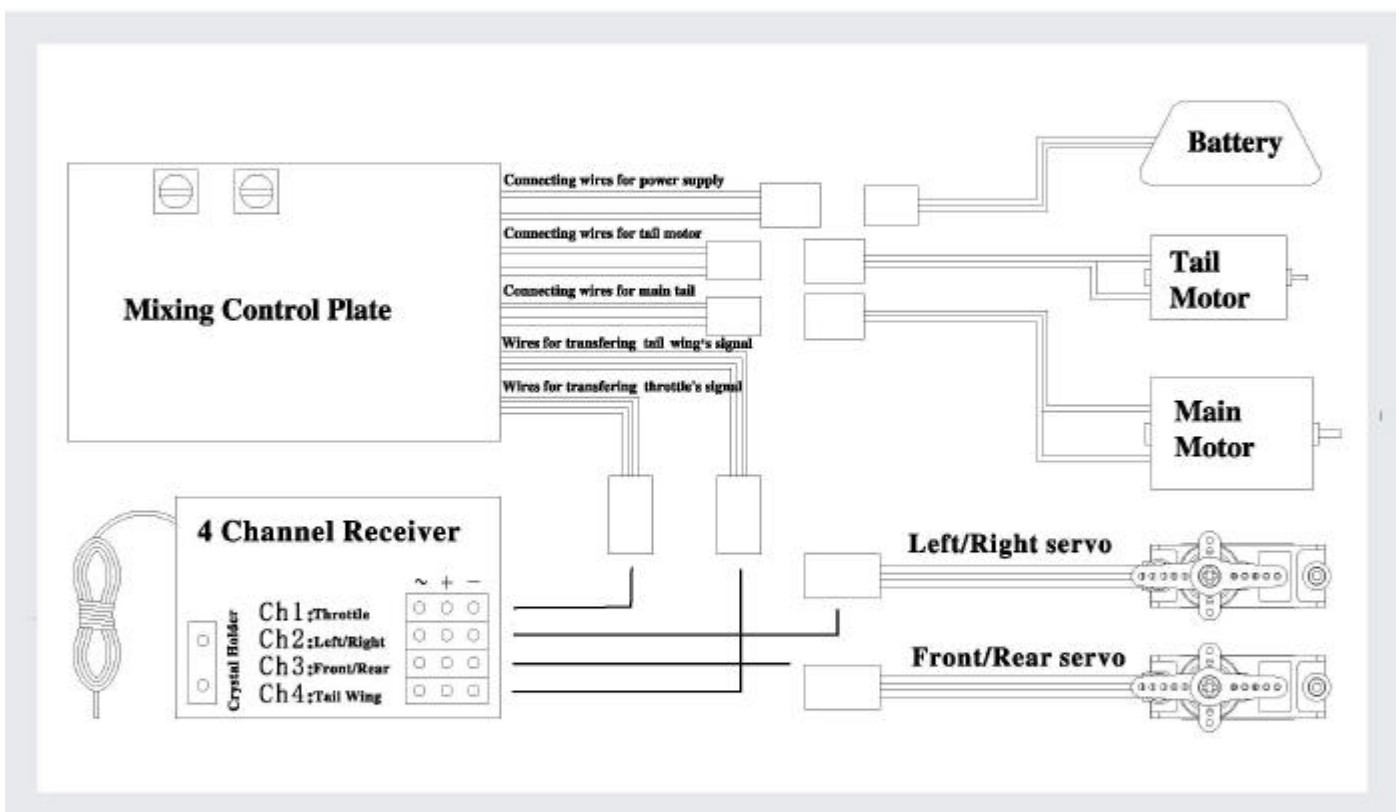
The nose goes down and the helicopter goes ahead.			Push up the Front&Rear/ Left&Right control rod.
The nose goes up and the helicopter goes backward.			Push down the Front&Rear/ Left&Right control rod.
The body moves to the left.			Move the Front&Rear/ Left&Right rod to the left.
The body moves to the right.			Move the Front&Rear/ Left&Right control rod to the right.
The nose turns to the left.			Move the Throttle/ Rudder control rod to the left.
The nose turns to the right.			Move the Throttle /Rudder control rod to the right.
The helicopter goes up.			Push up the Throttle /Rudder control rod
The helicopter goes down.			Push down the Throttle /Rudder control rod





## ASSEMBLY SKETCH MAP FOR RECEIVER OF MIXER ,MOTOR AND SERVO

- Switch on the power of the transmitter.
- Connect up the left/right servo and front/rear servo.



- Connect the main/tail motor.
- Connect the power.

### NOTICE

To avoid personal injury and property damage due to sudden movement of the helicopter ,please keep your head and hands away from the helicopter while operating.

**NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV  
INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS  
EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY  
TO OPERATE THE EQUIPMENT.**