

4 & 6通道发射机使用说明书

4&6 CHANNEL TRANSMITTER INSTRUCTION MANUAL

E sky[®]



PPM-FM

数 码 比 例 无 线 控 制 系 统
DIGITAL PROPORTIONAL RADIO CONTROL SYSTEM

注意
使用本产品前请先阅读此说明书本书请妥善保管以备不时之需

Caution
Please read this manual carefully before operation
and keep the manual for after reference

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EK2-0406A



EK2-0406



EK2-0404



EK2-0404D

为能安全使用本产品，请注意以下各点

To ensure safe use, observe the following precautions.

特殊符号说明 MEANING OF SPECIAL MARKINGS

本手册部分有下列符号的请特别注意安全。

Pay special attention to the safety at the parts of this manual that are indicated by the following marks.

危险 DANGER

如果不按正确操作方法操作可能会导致操作者严重受伤,甚至致命的危险。

Procedures which may lead to a dangerous condition and cause death or serious injury to the user if not carried out properly.

警告 WARNING

如果不按正确的操作方法可能会导致操作者严重外伤、重伤或者致命的情况。

Procedures which may lead to a dangerous condition or cause death or serious injury to the user if not carried out properly, or procedures where the probability of superficial injury or physical damage is high.

注意 CAUTION

如果不按正确操作方法可能会轻伤的危險，但一般不会导致操作者重伤。

Procedures where the possibility of serious injury to the user is small, but there is a danger of injury, or physical damage if not carried out properly.

符号:
Symbol:



禁止
Prohibited



强制
Mandatory

航行时的注意 PRECAUTIONS DURING FLIGHT

! 警告 WARNING

禁止事项 PROHIBITED

禁止相同的频率同时使用。

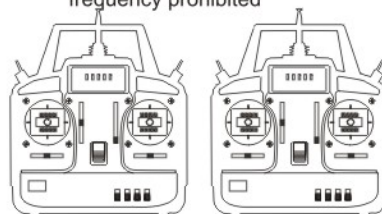
避免因频率发生干扰而导致模型产品坠毁或损坏。

*使用不同的调制方式用同一种相同频率会产生干扰，导致模型产品坠落或损坏。

Do not fly simultaneously on the same frequency. Interference may cause a crash. Use of the same frequency will cause interference even if the modulation method (FM, PCM) is different.

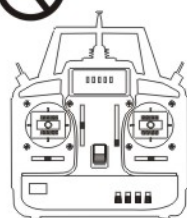


禁止相同的频率同时操作。
Simultaneous flight on the same frequency prohibited



不要在夜晚、下雨或刮风的时候使用。发射机会因环境影响导致对控制造成干扰，以免发生意外。

Do not fly in rainy or windy days, or at night. Water will penetrate into the transmitter and cause faulty operation, or loss of control, and cause a crash.



使用时要把天线全部拉出，如果天线拉出太短，那么发射机的有效信号强度也会减弱，从而影响到控制距离。

Extend the antenna to its full length. If the antenna is too short, the effective range of the radio waves will become shorter.



使用时要把天线全部拉出
Extend to full length

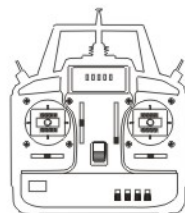


*在开始飞行之前，检查每个伺服器相匹配的操纵杆的方位。如果伺服器不能往正确的方向或于不正常状态下，请不要使用。

Before starting the engine, check the direction of control lever which matched to each servo. If the servo does not move in the proper direction or the operation is abnormal, please do not operate.



检测
Test



强制事项 MANDATORY

启动电源开关时：

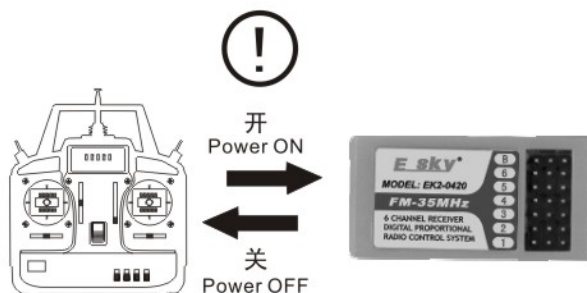
1. 把发射机油门（第三通道）操纵杆以及微调打到最小的位置，
2. 然后打开发射机电源开关，
3. 再连接接收机电源。

切电源时：

在模型产品停止时先切断接收机电源后关闭发射机。

*操作顺序若相反的话，会有失控危险。

*最小位置：机器或发动机运行时的最小速度。



When turning on the power switch:

- 1.set the transmitter throttle stick(3rd CH)and throttle trim to the lowest position.
- 2.turn on the transmitter power switch
- 3.then turn on the receiver power switch.

When turning off the power:

First turn off the receiver power switch, then turn off the transmitter power switch.

*If the operation order is opposite, the transmitter would be out of control.

*Minimum position: the minimum speed when the machine or transmitter is operating.

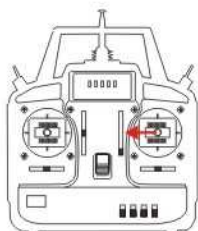
发射机与直升机的基本操作知识

TRANSMITTER OPERATION AND THE WORK OF HELICOPTER

在使用之前，请仔细了解发射器的操作与每个伺服器的运行。（下面的说明中，以发射机为重点）

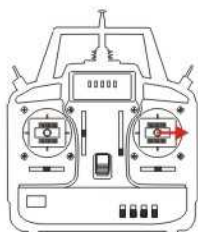
Before using, please know the operation of transmitter and the movement of each servo carefully. The following instruction take the transmitter as the keystone.

制式1（右手油门）
Model 1 (right throttle)



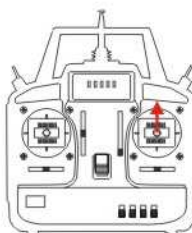
当副翼操作杆移向左边时，倾斜盘向左边倾斜。直升机飞向左边。

When the aileron stick is moved to the left, the swashplate also tilt to the left, and the helicopter moves to the left.



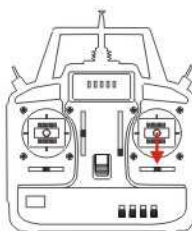
当副翼操作杆移向右边时，倾斜盘也应该向右边倾斜。直升机飞向右边。

When the aileron stick is moved to the right, the swashplate also tilt to the right, and the helicopter moves to the right.



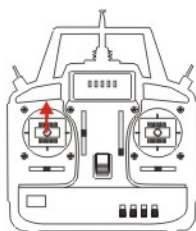
当油门杆向上推时，电机（发动机）动力和主翼的速度增加，直升机上升。

When the throttle stick is pushed upward, the speed of the motor and main rotor increases, as a result, the helicopter lifts up.

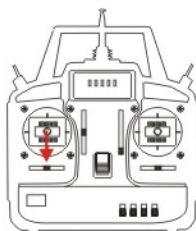


当油门杆向下推时，电机（发动机）的动力和主翼的速度减少，直升机下降。

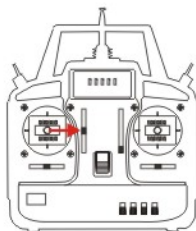
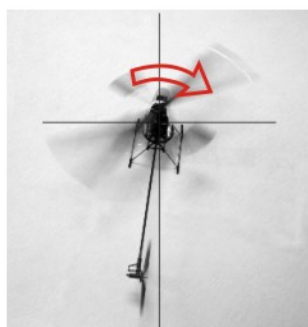
When the throttle stick is pushed downward, the speed of motor and main rotor decreases, as a result, the helicopter descends.



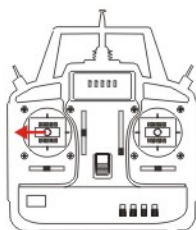
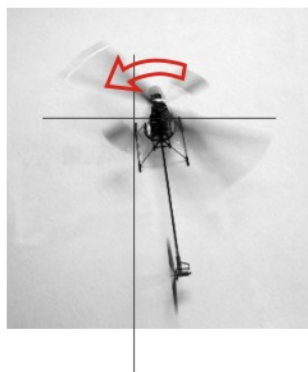
当升降杆推向前方时，直升机的前端会向下倾，结果直升机向前飞，速度减低。
When the elevator stick is pushed forward, the nose of helicopter will tilt downward, as a result, the helicopter moves forward and its speed decreases.



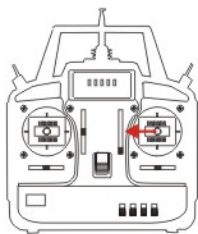
当升降杆推向后方时，直升机的前端会向上倾，直升机向后飞，速度增加。
When the elevator stick is pushed backward, the nose of the helicopter will tilt upward, then the helicopter moves backward and its speed increases.



当方向舵移向右边时，直升机的尾部向左边移动，直升机的头部向右转。（请注意直升机的前端）
When the rudder stick is moved to the right, the tail of helicopter moves to the left and the nose of the helicopter turns to right. Please pay attention to the nose of helicopter.

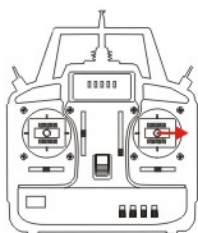


当方向舵移向左边时，直升机的尾部向右边移动，直升机的头部向左转。（请注意直升机的前端）
When the rudder stick is moved to the left, the tail of helicopter moves to the right and the nose of the helicopter turns to left. Please pay attention to the nose of helicopter.

制式2（左手油门）
Model 2 (left throttle)

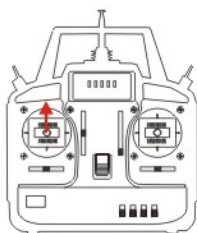
当副翼操作杆移向左边时，倾斜盘也应该向左边倾斜。直升机飞向左边。

When the aileron stick is moved to the left, the swashplate also tilt to the left, and the helicopter moves to the left.



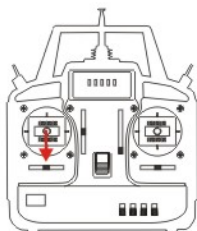
当副翼操作杆移向右边时，倾斜盘也应该向右边倾斜。直升机飞向右边。

When the aileron stick is moved to the right, the swashplate also tilt to the right, and the helicopter moves to the right.



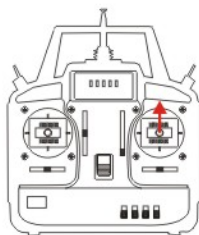
当油门杆向上推时，电机动力和主翼的速度增加，直升机上升。

When the throttle stick is pushed upward, the speed of the motor and main rotor increases, as a result, the helicopter lifts up.



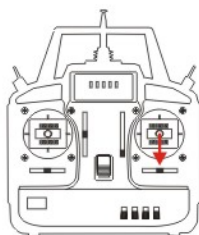
当油门杆向下推时，电机的动力和主翼的速度增加，直升机下降。

When the throttle stick is pushed downward, the speed of the motor and main rotor increases, as a result, the helicopter descends.



当升降杆推向前方时，直升机的前端会向下倾，结果直升机向前飞，速度减低。

When the elevator stick is pushed forward, the nose of helicopter will tilt downward, as a result, the helicopter moves forward and its speed decreases.



当升降杆推向后方时，直升机的前端会向上倾，直升机向后飞，速度增加。

When the elevator stick is pushed backward, the nose of the helicopter will tilt upward, then the helicopter moves backward and its speed increases.

制式 2 中方向舵的操作方式和制式 1 是相同的

The rudder stick operation for Model 2 is the same as Model 1

飞行前的调节 ADJUSTMENTS BEFORE FLYING

每个控制器的操纵杆，副翼，方向舵的中位在出厂前已设置好，如需要请根据您的遥控产品作自行调整。

The meso-position of each operating stick, aileron and rudder had already set in the factory, you can adjust it according to your needs. If need adjustment, you can adjust according to your remote products.



声明 Caution

如果你是一个初学者，请根据配套手册和相关图案进行基本联接和调整，确保遥控准确无误。

If you are a novice, please connect and adjust each part according to the corresponding manual and pictures to ensure the proper operation.

各部位名称/操纵方法 NAME AND OPERATION OF EACH PART

发射机 EK2-0406A TRANSMITTER EK2-0406A

规格型号:

1. 通道数: 六通道
2. 频率波段: (35MHz, 36MHz, 40MHz, 41MHz, 72MHz)
3. 充电插口: 有
4. 教练开关: 有
5. 教练线插口: 有
6. 3D开关: 有
7. 高频模块: 内置
8. 使用电源: 1.5V*8 "AA" 电池
9. 编码方式: PPM
10. 调制方式: FM
11. 射频功率: ≤10mW
12. 静态电流: ≤250mA
13. 伺服器倒置开关: 有
14. 电压显示方式: LED
15. 低电压告警: 无
16. 尺寸: 185*205*55mm
17. 重量: 575g
18. 外壳颜色: 黑色
19. 天线长度: 115mm
20. 认证证书: CE, FCC, RoHS
21. 使用范围: 直升机

SPECIFICATION

1. Channel: 6 channel
2. Frequency band: 35MHz, 36MHz, 40MHz, 41MHz, 72MHz
3. Charger port: Yes
4. Trainer switch: Yes
5. Trainer port: Yes
6. IDEL switch: Yes
7. H.F.M.: Inner set
8. Power resource: 1.5V*8 "AA" Battery
9. Program type: PPM
10. Modulation type: FM
11. R F power: ≤10mW
12. Static current: ≤250mA
13. Servo reverser: Yes
14. Voltage display type: LED
15. Low voltage warning: NO
16. Size: 185*205*55 mm
17. Weight: 575g
18. Color: black
19. Antenna length: 115mm
20. Certificate: CE, FCC, RoHS
21. Use range: Helicopter



陀螺仪锁定开关: 这个为镜尾陀螺仪专用。打上为非锁定, 打下为锁定。

Gyro switch: it is specially used to lock the head lock gyro. Up means unlocked, down means locked.



伺服器倒置开关: 出厂前倒置开关已调好, 没有必要时无须再调。右手开关: 下下上上左手开关: 下下上上



倒飞开关: 开关往后打是正常飞行, 注意在起飞前得先确认倒飞开关是打回。



天线: 注意在飞行时天线要拉到最长, 当然天线拉的越长信号越好。



螺距行程直线微调: 在中速飞行3D时调整它的螺距, 也就是调整中立点的pitch值。



电池盒: 注意正负级别, 切勿装反。The battery box: note its positive and negative. Never assemble it in the reverse direction.



电源开关: 往上按打开关电源开关。



教练开关
Trainer switch



充电插口
Charging jack



教练线插口
Trainer jack



晶体接插孔: 在装晶体时要特别小心, 因接插孔比较深。

Crystal jack: please watch out when assembling the crystal as the hole is comparatively deep.



螺距行程曲线微调: 在正常飞行时调整它的螺距的pitch值。



油门微调: 注意在飞行时或在调机子时, 油门微调一定要打与最低。



升降操纵杆: 向上打为方向操纵杆: 往左方向前进, 向下打为后退。



方向舵操纵杆: 向左打为方向舵: 往左方向前进, 向右打为后退。



副翼操纵杆: 向左打为副翼: 向左倾斜, 向右打为副翼: 向右倾斜。



油门操纵杆: 向下打于最低油门为零, 向上打为加速。



LED 指示灯: 灯全亮时说明电池电量最多, 只亮最后一个红灯时说明电量快用净, 需马上跟换。

各部位名称/操纵方法 NAME AND OPERATION OF EACH PART

发射机 EK2-0406
TRANSMITTER EK2-0406

规格型号:

- 1.通道数:6通道
- 2.充电插口:有
- 3.频率波段:(35MHZ,36MHZ, 40MHZ,41MHZ,72MHZ)
- 4.模拟线插口:有
- 5.教练开关:有
- 6.高频模块:内置
- 7.使用电源:1.5V*8 "AA" 电池
- 8.编码方式:PPM
- 9.调制方式:FM
- 10.射频功率:≤0.8mW
- 11.静态电流:≤250mA
- 12.伺服器倒置开关:有
- 13.电压显示方式:LED
- 14.低电压警告:无
- 15.尺寸:185*205*55mm
- 16.重量:565g
- 17.外壳颜色:黑色
- 18.天线长度:115cm
- 19.认证证书:CE,FCC,RoHS
- 20.教练线插口:有
- 21.3D开关:有

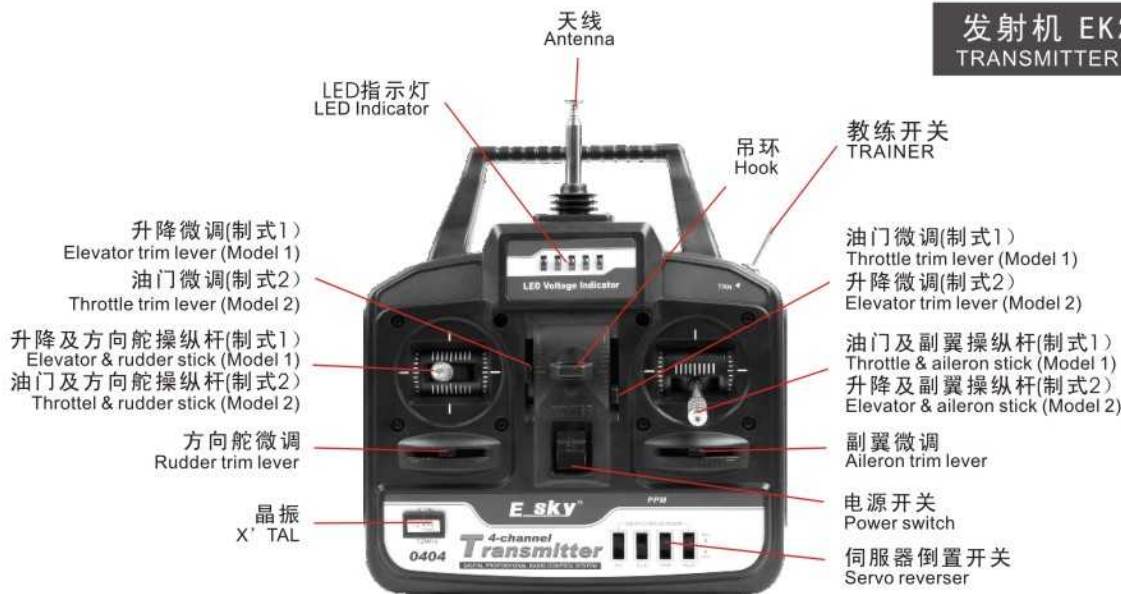
SPECIFICATION

- 1.Channel:6 channel
- 2.Charger port:Yes
- 3.Frequency band:(35MHZ,36MHZ, 40MHZ,41MHZ,72MHZ)
- 4.Simulator port:Yes
- 5.Trainer switch:Yes
- 6.H.F.M.:inner set
- 7.Power resource:1.5V*8 "AA" Battery
- 8.Program type:PPM
- 9.Modulation type:FM
- 10.RF power:≤0.8mW
- 11.Static current:≤250mA
- 12.Servo reverser:Yes
- 13.Voltage display type:LED
- 14.low voltage warning:NO
- 15.Size:185*205*55mm
- 16.Weight:565g
- 17.Color:black
- 18.Antenna length:115cm
- 19.Certificate:CE,FCC,RoHS
- 20.Trainer port:Yes
- 21.IDEL switch:Yes

电源开关: 往上按打
开电源开关。
Power switch: push it
upward教练线插口
Trainer jack教练开关
Trainer switch充电插口
Charging jack晶体接插孔: 在装
晶体时要特别小心,
因接插孔比较深。
Crystal jack:
please watch out when
assembling the crystal
as the hole is
comparatively deep.电池盒: 注意正负
级别, 切勿装反。
The battery box: note its
positive and negative,
Never assemble it in the
reverse direction.倒飞开关: 开关往后
打是正常飞行, 注意
在起飞前得先确认倒
飞开关是打回。
IDEL switch: push the
switch backward is normal
flight. Note: make sure the
switch had returned before
flying.天线: 注意在飞行时
天线要拉到最长, 当
然天线拉的越长信号
越好。
Antenna: Please note that
the antenna should be
pushed to its full length
before flying, the longer,
the better.升降操纵杆: 向上打为 方向操纵杆: 往左方向
前进, 向下打为后退, 向左, 往右方向向右
Elevator steering rod: up
means forward and down
means backward.方向舵操纵杆: 向左打为 方向操纵杆: 往左方向
前进, 向右打为向右, 向左, 往右方向向右
Rudder steering rod: turn
left and the aileron leans
to the left, turn right and
the direction turn to right副翼操纵杆: 向左打为 方向操纵杆: 往左方向
前进, 向右打为向右, 向左, 往右方向向右
Aileron steering rod: turn
left and the aileron leans
to the left, turn right and
the aileron leans to the
right.油门操纵杆: 向下打于
最低油门为零, 向上
打为加速。
Throttle steering rod:
when pushing it down to
the lowest, the throttle is
0, and pushing it up
means speed-up.伺服器倒置开关: 出厂前
倒置开关已调好, 没有
必要时无须再调。
右手开关: 下下上上
左手开关: 下下上上
The servo reverser switch:
the switch has been adjusted in the
factory, it does not need to be
adjusted any more if there is no
necessary.LED 指示灯: 灯全亮
时说明电池电量最多,
只亮最后一个红灯时
说明电量快用净, 需
马上跟换。
LED indicating light: when
all the lights are on, it
indicates that the quantity
of electric charge is fullest,
when only one red light is
on, it indicates that the
battery almost used up and
it needs change immediately.油门微调: 注意在
飞行时或在调机子
时, 油门微调一定
要打与最低。
Throttle trim: Note that the
throttle trim must be pushed
down to the lowest when
flying or adjusting the plane.

各部位名称/操纵方法 NAME AND OPERATION OF EACH PART

发射机 EK2-0404
TRANSMITTER EK2-0404



规格型号:

- 1.通道数:4通道
- 2.充电插口:有
- 3.频率波段:(35MHZ,36MHZ, 40MHZ,41MHZ,72MHZ)
- 4.模拟线插口:有
- 5.教练开关:有
- 6.高频模块:内置
- 7.使用电源:1.5V*8 "AA" 电池
- 8.编码方式:PPM
- 9.调制方式:FM
- 10.射频功率:≤0.8mW
- 11.静态电流:≤250mA
- 12.伺服器倒置开关:有
- 13.电压显示方式:LED
- 14.低电压警告:无
- 15.尺寸:185*205*55mm
- 16.重量:560g
- 17.外壳颜色:黑色
- 18.天线长度:100cm
- 19.认证证书:CE,FCC,RoHS
- 20.使用范围:飞机,4CH直升机

SPECIFICATION

- 1.Channel:4 channels
- 2.Charger port:Yes
- 3.Frequency band:(35MHZ,36MHZ, 40MHZ,41MHZ,72MHZ)
- 4.Simulator port:Yes
- 5.Trainer switch:Yes
- 6.H.F.M.:inner set
- 7.Power resource:1.5V*8 "AA" Battery
- 8.Program type:PPM
- 9.Modulation type:FM
- 10.RF power:≤0.8mW
- 11.Static current:≤250mA
- 12.Servo reverser:Yes
- 13.Voltage display type:LED
- 14.low voltage warning:NO
- 15.Size:185*205*55mm
- 16.Weight:560g
- 17.Color:black
- 18.Antenna length:100cm
- 19.Certificate:CE,FCC,RoHS
- 20.Use range:Airplane, 4CH helicopter



伺服器倒置开关:出厂前倒置开关已调好,没有必要时无须再调。右手是开关:上下上下左手是开关:上上下下



LED 指示灯:灯全亮时说明电池电量最多,只亮最后一个红灯时说明电量快用净,需马上更换。



天线:注意在飞行时天线要拉到最长,当然天线拉的越长信号越好。



晶体接插孔:在装晶体时要特别小心,因接插孔比较深。



电池盒:注意正负级,切勿装反。



油门微调:注意在飞行时或在调机子时,油门微调一定要打与最底。



升降操纵杆:向上打为方向操纵杆:往左方向前进,向下打为后退。



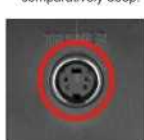
方向舵操纵杆:往左方向前进,往右方向后退。



副翼操纵杆:向左副翼向左倾斜,向右副翼向右倾斜。



油门操纵杆:向下打于最底油门为零,向上打为加速。



教练线插口



教练开关



充电插口



电源开关:往上按打开电源开关。

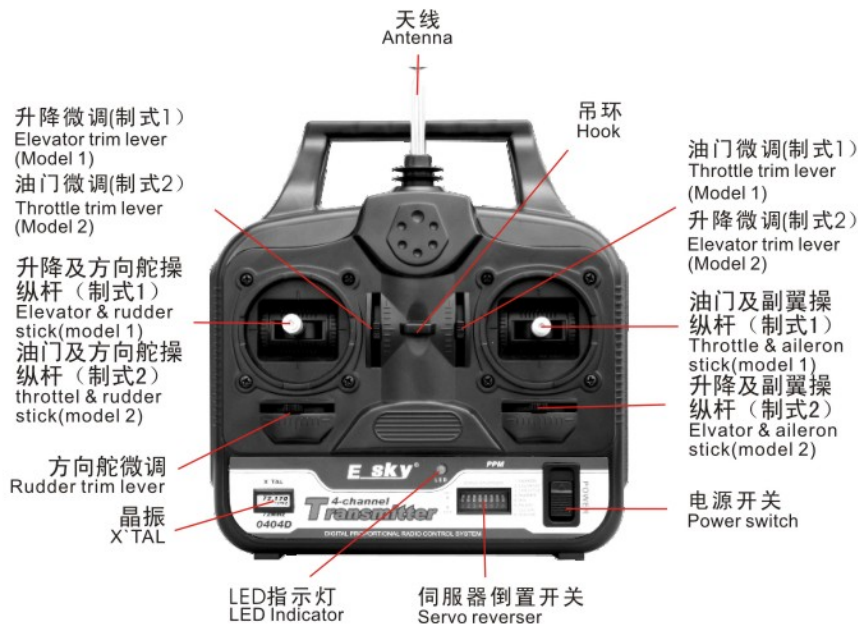
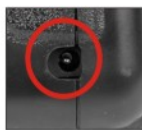
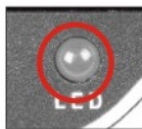
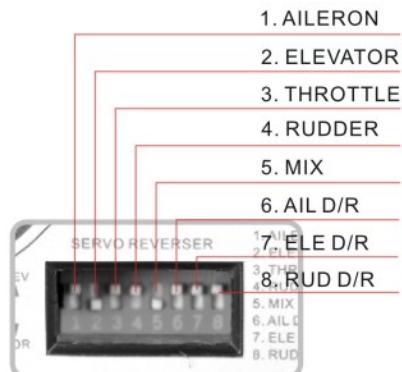
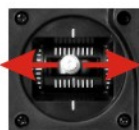
各部位名称/操纵方法 NAME AND OPERATION OF EACH PART

规格型号:

1. 通道数: 四通道
2. 充电插口: 有
3. 频率波段: (35MHz, 36MHz, 40MHz, 41MHz, 72MHz)
4. 高频模块: 内置
5. 使用电源: 1.5V*8 "AA" 电池
6. 编码方式: PPM
7. 调制方式: FM
8. 射频功率: $\leq 1\text{mW}$
9. 静态电流: $\leq 180\text{mA}$
10. 伺服器倒置开关: 有
11. 升降舵大小动开关: 有
12. 尾舵大小动开关: 有
13. 混控开关: 有
14. 电压显示方式: LED
15. 低电压警告: 无
16. 方向舵微调: 有
17. 油门微调: 有
18. 尺寸: 189*97*218mm
19. 重量: 519g
20. 外壳颜色: 黑色
21. 天线长度: 975mm
22. 使用范围: 飞机, 4CH直升机
23. 认证证书: CE, FCC, RoHS
24. 模拟线插口: 有

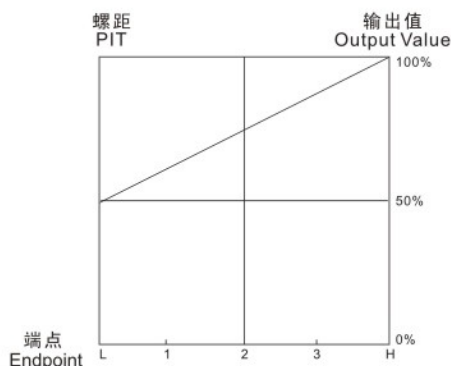
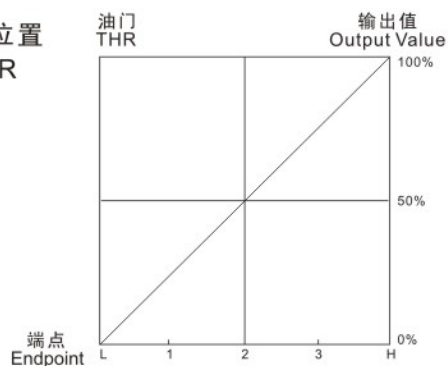
SPECIFICATION

1. Channel: 4 channels
2. Charger port: Yes
3. Frequency band: (35MHz, 36MHz, 40MHz, 41MHz, 72MHz)
4. H.F.M: Inner set
5. Power resource: 1.5V*8 "AA" Battery
6. Program type: PPM
7. Modulation type: FM
8. RF power: $\leq 1\text{mW}$
9. Static current: $\leq 180\text{mA}$
10. Servo reverser: Yes
11. Elevator switch: Yes
12. Tail servo switch: Yes
13. Mixing control switch: Yes
14. Voltage display type: LED
15. Low voltage warning: NO
16. Rudder trim: Yes
17. Throttle trim: Yes
18. Dimension: 189*97*218mm
19. Weight: 519g
20. Shell color: black
21. Antenna length: 975mm
22. Use range: Airplane, 4CH helicopter
23. Certificate: CE, FCC, RoHS
24. Simulator port: Yes

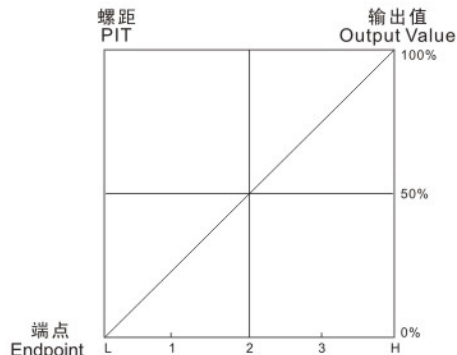
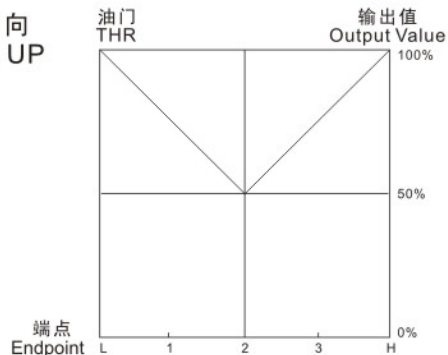
发射机 EK2-0404D
TRANSMITTER EK2-0404D电源开关: 往上按
打开电源开关。
Power switch: push it
upward充电插口
Charging jack教练线插口
Trainer jackLED指示灯
LED indicating light升降操纵杆: 向上打为
前进, 向下打为后退。
Elevator steering rod: up
means forward and down
means backward.方向舵操纵杆: 向左打
向左, 向右打向右。
Rudder steering rod: turn
left and the direction turn
to the left, turn right and
the direction turn to right.副翼操纵杆: 向左副翼
向左倾斜, 向右副翼
向右倾斜。
Aileron steering rod: turn
left and the aileron leans
to the left, turn right and
the aileron leans to the
right.油门操纵杆: 向下打于
最低油门为零, 向上
打为加速。
Throttle steering rod:
when pushing it down to
the lowest, the throttle is
0, and pushing it up
means speed-up.晶体接插孔: 在装晶
体时要特别小心, 因
接插孔比较深。
Crystal jack:
please watch out when
assembling the crystal
as the hole is
comparatively deep.天线: 注意在飞行时
天线要拉到最长, 当
然天线拉的越长信号
越好。
Antenna: Please note that
the antenna should be
pushed to its full length
before flying: the longer,
the better.电池盒: 注意正负级
别, 切勿装反。
The battery box: note its
positive and negative.
Never assemble it in the
reverse direction.油门微调: 注意在飞行
时或在调机子时, 油门
微调一定要打与最低。
Throttle trim: Note that the
throttle trim must be pushed
down to the lowest when
flying or adjusting the plane.

油门/螺距曲线图 Throttle/pitch curve diagram

正常位置
NOR



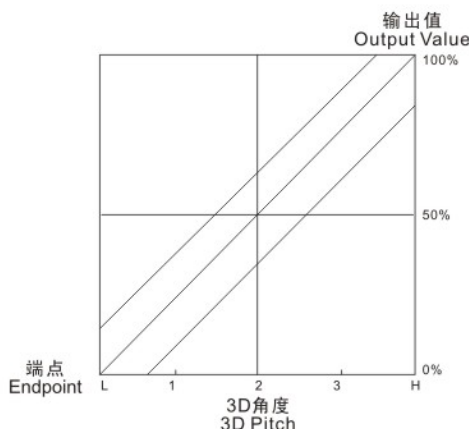
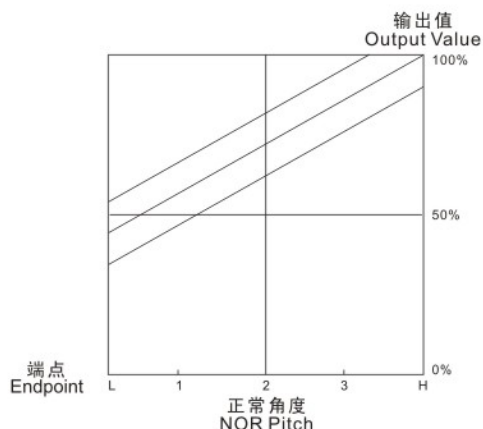
反方向
IDEL UP



螺距行程直线微调 Hovering Pitch knob

旋扭是在旋停状态下通过转变曲线的中心点（上或下）来调整主旋翼的旋转速度。

The hovering pitch knob function is to shift the center point of curve either upward or downward to adjust totor RPM at the hover position.

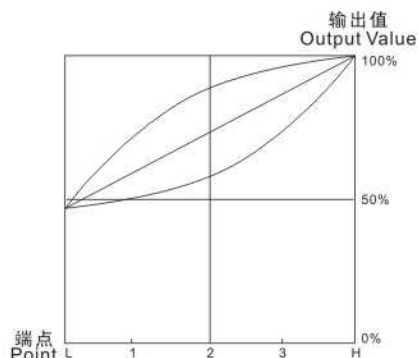


螺距行程曲线微调 PITCH TRIM KNOB

螺距微调旋钮是对PITCH变换通道的一种调整首先旋钮打到“0”位置（最小），然后主要是通过上下转变来调整主旋翼的速度。
The pitch trim knob is a trimmer for the pitch channel. This knob should be set to “0” at first, then adjust the rotor RPM by shifting it upward or downward.

不同的工厂有不同的设置，如果角设置是在正确的情况下，那儿只需要一点小小的调整就可以了。

As the setting of each manufacturer is different, only small trim adjustment will be required if the pitch curve had set properly.



调整程序 Adjustments

在做任何调节之前，请把发射机前面所有的开关调到最小（正常）位置。

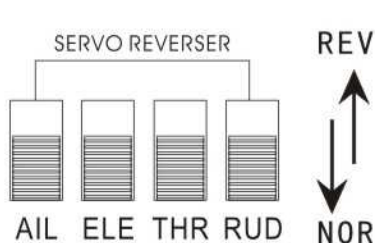
Before any adjustment, please set all the switches in the front of the transmitter to the lowest(normal) position.

打开发射机和接收机电源开关，做下列的调节：

Turn on the power switch of the transmitter and the receiver, then make the following adjustments:

1. 检查每个伺服系统的设置位置，如果伺服器的操作方向错误，请转换它的伺服倒置开关。（不需改变连接，操作方向也会相应改变）

Check the direction of each servo, If a servo operates in the wrong direction, switch its SERVO REVERSER switch (the direction of operation can be changed without changing the linkage.)



通道显示
AIL: 副翼 (通道1)
ELE: 升降舵 (通道2)
THR: 油门 (通道3)
RUD: 方向舵 (通道4)

Channel display
AIL: Aileron(channel 1)
ELE: Elevator(channel 2)
THR: Throttle(channel 3)
RUD: Rudder servo(channel 4)

方向操作显示
REV: 反方向
NOR: 正

Rudder operating display
REV: Reverse
NOR: Normal

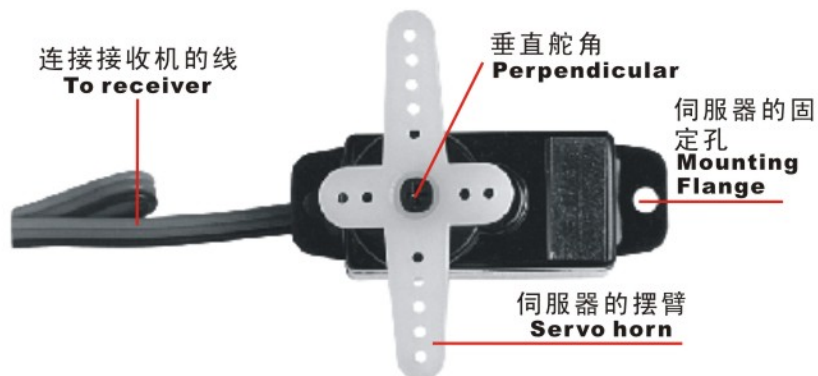
2. 同时检查机身控制面的中位位置（副翼，升降舵，方向舵等）如果中位改变，请重新设置和调试，伺服器的摆臂和舵角成90度垂直。

3. 检测机身各个方向的操作是否正常，如果机身上操纵方向不对，请调整发射机上面的舵机反向开关设置（针对6CH发射机）

2. Check the aileron, elevator and rudder neutral adjustment, if the neutral position changed, please reset and readjust it, make the servo horn to be perpendicular to the servo.

3. Check to see whether the operation of each direction is normal, if not, please adjust the SERVO REVERSER switch (For 6CH transmitter).

4. 最后检测舵机各个方向的行程曲线大小，如行程偏小，请把摆臂拉杆连接往外调，如行程偏大，请把摆臂往内调。
5. 所有的连接都连好后，重新检查操作方向，设置，等等。



4. At last, check the range curve of each servo direction, turn the servo horn rod outward if the range is too small and turn it inward while the range is too large.
5. After finishing all the connections, recheck the operating direction and setting etc.

镍镉 / 镍氢电池的充电 NI-CD/NI-MH BATTERY CHARGING

<< 警告 >> WARNING

请用适配充电器充电。如果充电过时，过热，等情况可能会导致燃烧等情况。镍镉/镍氢电池请使用TWF原厂的充电器，或快速充电器进行充电，充完后应及时切断电源。

Please charge with an adapter, overcharge or overheating may cause burn or fire etc. or combustion. Please charge Ni-CD/Ni-MH battery with original TWF charger or quick charger, and power off the charger in time after finishing the charging.

<< 警示 >> CAUTION

*航行以外时间，必须断开航行用电池如果仍然保持连接，可能会有意外发生。

When not using the battery charger, disconnect it from the AC outlet, or it may cause accident.

镍镉 / 镍氢电池的充电 CHARGING THE NI-CD/NI-MH

- 1 连接到发射机充电插孔充电
- 2 用220V的交流充电器充电
- 3 检查充电信号灯是否亮
- 4 充好电后，及时切断电源

1. Connect the charger connector to the transmitter charging jack.
2. Connect the charger to a 220V outlet
3. Check the charging LED light.
4. At the end of charging ,disconnect the charger from the AC outlet.



充电器
Charger

连接发射机上的充电器接口
Connect the transmitter charging jack.

镍镉 / 镍氢电池处理时的注意事项 NI-CD/NI-MH BATTERY CHARGING PRECAUTIONS

警告 WARNING

一定要实行的事项 MANDATORY

*发射机用镍镉 / 镍氢电池在行航船前，务必要充电。如果行航中没有电量，会有乱跑之危险。

Always charge the Ni-cd/Ni-MH battery before each run .

If the battery is powerless during the run , it may lead to a danger of out of control.

* 对发射机用镍镉 / 镍氢电池进行充电，需另外购买TWF原厂的专用充电器或是发射器用的快速充电器。

充电时若超过规定值，容易因异常发热破裂、漏液等造成烫伤、火灾受伤、爆炸等危险。

It is necessary to charge the Ni-CD/Ni-MH battery with TWF special charger or quick charger which sold separately. If the charger is charged other than specified, overcharging may cause burns, fire, injury, blindness, etc. due to overheating, breakage, electrolyte leakage, etc.

禁止事项 Red Green

燃料、废油、排气等请勿直接接触电池的包装塑胶部分一旦附着，容易侵蚀塑胶而破损。

Please do not make the fuel, waste oil and exhaust contact the plastic parts of the batteries. If does, the plastic will be damaged by corrosion.

❗ 电池更换方法 **Battery Replacement**

将电池的“+”“-”极正确地插入，极性错误时会造成发射机不能使用。
不使用时，请取出电池，万一有液体漏出时，请立即更换电池（作报废处理）

Always be sure that the batteries are loaded in the correct polarity order. If the batteries are loaded incorrectly, the transmitter will be unworkable. Please take the battery out during the suspended period, please clean it with dry cloth if there is some liquid leaking out from the battery.

<电池警告表示> **Battery Alarm Display**

当发射机电池量指示灯（LED）的绿色灯消失只剩红色或红灯闪烁时，请立即更换电池或对电池进行充电。

When the green lamp of the battery voltage indicator(LED) goes off or the Red LED flashes, please exchange the batteries or charge them immediately.

术 语 表 **GLOSSARY**

（副翼）AILERON (Ail)

控制机翼左右两边的操纵杆，它用来控制飞机的转向。

Control surface at the left and right sides the main wing of an aircraft. It usually controls turning of the aircraft.

（通道）CHANNEL

控制系统的通道表示，也可以叫作伺服器操作的数字表现。

Represents the number of control systems. It can also represent the number of servos that are operated.

（向下）DOWN

升降舵向下的意思，升降舵向下指示的通道表示。

Means down elevator. It is the direction in which the trailing edge of the elevator is pointing down.

（升降舵）ELEVATOR (ELE)

控制飞机向下或向上的水平稳定器，用来控制升降。

Control surface that moves up and down the horizontal stabilizer of an aircraft. It usually controls up and down.

（调制方式）MODULATION METHOD

无线电控制的两种调制方式：AM（调幅）和FM（调频）。飞机的无线电装置通常使用FM。另一种方式是脉冲编码调制数字信号叫“PCM”。

Two modulation methods are used with radio control: AM (amplitude Modulation) and FM (Frequency Modulation). Radio sets for aircraft mainly use FM. Another Method that encoding and transmitting the modulated signals is called “PCM”

（空档）NEUTRAL

空档，不运转时发射杆回到中心位置时的状态。

Means the neutral position. It is the state in which a transmitter stick returns to the center when not operated.

（正常）NORMAL (NOR)

舵机的回转运行，是正常面。其反面是反向。

For the servo reversing function, it is the normal side. the opposite side is the reverse side.

(平衡器) PROPORTIONAL

现在的无线电控制操作是平衡杆运动，无线电控制机器就叫平衡器。

Because today's radio control sets control servos in proportion to stick operation, radio control equipment is called proportional.

(方向舵) RUDDER (RUD)

操纵尾部控制飞机的方向。

Tail control surface that controls the direction of the aircraft.

(相反) REVERSE (REV)

舵机的回转运行，这里用来表示反面，其反面是正常面。

With the servo reversing function, this is used to mean the reverse side. The opposite side is the normal side.

(连杆) ROD

连接舵机和机身控制的结构。

A bar that connects the servos and the fuselage control surfaces.

(伺服器设置) SERVO MOUNT

机身的伺服器设置

Fuselage base for installing a servo to the fuselage.

(操纵杆) STICK

发射器操作杆。

Rod for operating the transmitter.

(油门) THROTTLE (THR)

控制空气气流吸入量和马达-（发动机）的运转速度。当加大油门时，会吸进大量的气流，速度加快。当减小油门时，则速度降低。

Part that controls the air mixture at the engine intake. When opened (throttle high side), a large air mixture is sucked in and the engine speed increases. When closed (throttle low side), the engine speed decreases.

(教练开关) TRAINER

教学航空器安全飞行的装置，航行器正确飞行的指导装置。

A device that fine adjusts the neutral point of each servo for safe flying. It is a mechanism that corrects bad tendencies of the aircraft.

(向上) UP

升降舵上升，描述升降舵一直升高到最高点。

Means up elevator. Direction in which the trailing edge of the elevator is pointing up.



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