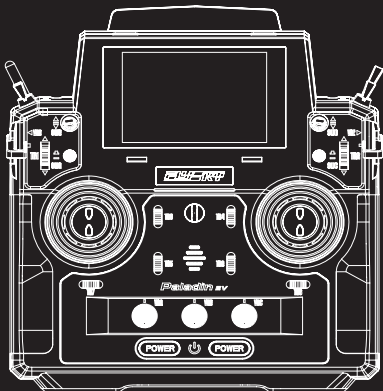


Paladin ***PL18 EV***

2.4GHz
AFHDS 3



Quick Start Guide

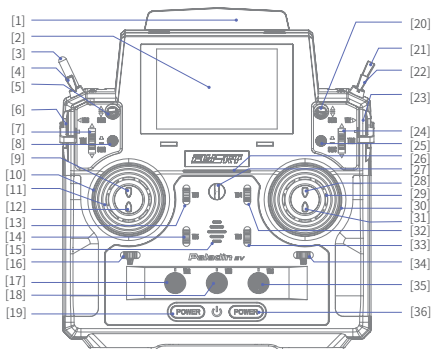
Precautions!

For your own safety: make sure to download and read the Disclaimer & Warning documentation from the Flysky website before using this product.

Flysky Website : www.flysky-cn.com

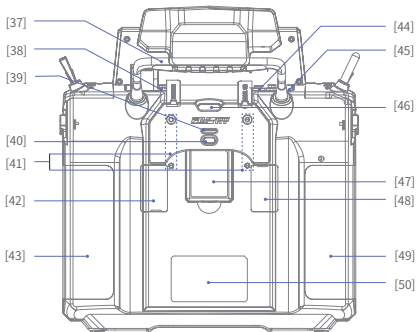
1. The ce warns that the installation of the antenna used in this transmitter must be kept in distance from all the personnel and shall not be used or used with any other transmitter. The end user and the installer must provide antenna installation instructions and transmitter operating conditions to meet the requirements for rf exposure compliance.
2. Hereby, [ShenZhen FLYSKY Technology Co., Ltd.] declares that the radio equipment type [Paladin PL18 EV] is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address:
www.flyskytech.com/info_detail/10.html

Front View



- | | | |
|-----------------------------|--------------------------|------------------------------|
| [1] Antenna | [13] TR3 Trim | [25] SWC Self-locking button |
| [2] Display Screen | [14] TR5 Trim | [26] Status Indicator |
| [3] SWF Position Switch | [15] Speaker | [27] Lanyard Eye |
| [4] SWE Position Switch | [16] TR7 Trim | [28] SWL Button |
| [5] SWB Position Switch | [17] VRA Knob | [29] VRG Knob |
| [6] VRD lever | [18] VRB Knob | [30] Right Stick |
| [7] TR1 Trim | [19] Power Switch | [31] SWK Button |
| [8] SWA Self-locking button | [20] SWD Position Switch | [32] TR4 Trim |
| [9] SWJ Button | [21] SWH Position Switch | [33] TR6 Trim |
| [10] Left Stick | [22] SWG Position Switch | [34] TR8 Trim |
| [11] VRF Knob | [23] VRE lever | [35] VRC Knob |
| [12] SWI Button | [24] TR2 Trim | [36] Power Switch |

Back View



[37] Carry Handle

[38] Bluetooth Module Connector

[39] FRM301 Status Indicator

[40] FRM301 Button

[41] Screw Holes For Fixing RF Module

[42] Gimble Tension Adjustment/
Stick Mode Switching Adjustment

[43] Grip

[44] Micro USB Port

[45] DSC 3.5mm Trainer Jack (PPM)

[46] Press to Release FRM301

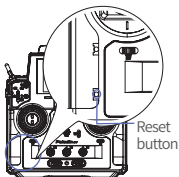
[47] FRM301 RF Module

[48] Gimbal Tension Adjustment/Stick
Mode Switching Adjustment

[49] Grip

[50] Wireless Charging Input Area

- For more information about the Paladin EV transmitter, please read the user manual.

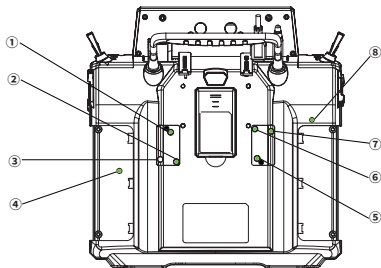


The **Reset** button is on the lower left part of the transmitter as shown. You need to tear apart the grip to find it. To press it by using a long thin tool, such as a smaller screwdriver.

In case of the transmitter can not be powered off by pressing the two Power Switches, please reset the transmitter with the reset button.

! After resetting, the settings which set before resetting may be invalid.

Gimbal Adjustment Instructions



Setup:

By adjusting the tension screws on the back of the transmitter, gimbal stick can be either self-centering or non-self-centering, as well as changing stick tension preference.



Attention

When the counterclockwise adjustment is made, the entire range of movement of the screw is about 6 circles(the tightest to the loosest). Be cautious not to adjust it too far or the screw will fall out.

Adjusting the screws

① . ⑤	Gimbal stick self-centering/ non-self-centering adjustment	② . ⑥	Gimbal stick vertical tension adjustment
③ . ⑦	Gimbal stick horizontal tension adjustment	④ . ⑧	Gimbal stick vertical friction adjustment

Take right gimbal as example.

Non-Self-Centering to Self-Centering

1. Use a Phillips screwdriver to adjust the screw ① counterclockwise , then the gimbal stick changes to self-centering.
2. Adjust screw ④ counterclockwise to adjust the frictional strength.
3. If you need to adjust the strength of the center, adjust screw ③ or ② to the middle, and strengthen the clockwise force, and vice versa as needed.

Self-Centering to Non-Self-Centering

1. Use a Phillips screwdriver to adjust the screw ① clockwise until it is tightened so that the gimbal stick changes to non-self-centering.
2. Adjust the screw ④ clockwise to strengthen or reduce the frictional strength.
3. If you need to adjust the strength of the return, adjust screw ③ to change the strength of center to the median position, and to strengthen the strength clockwise, otherwise it's to reduce.

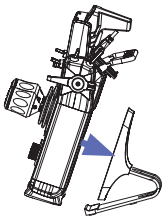
Charging Modes

PL18EV can be charged in two ways:

1. Plug the micro USB cable into the charging port for charging.

2. Use the wireless charging dock to charge it (as shown in the figure).

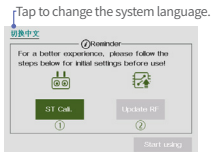
Note: Please charge it within a safe value, (4h@5V Micro USB /7h@2A Wireless Charging) because overcharging may cause damage to the battery. To prolong the service life of the battery, properly discharge the fully charged battery before long-term storage, and charge it regularly to prevent over-discharging damage during storage; It is recommended that the lithium battery be charged to 40-50% of its capacity for preservation. For example, it is recommended that the storage voltage of lithium battery is 3.85V in case of preservation. You need to check the voltage value of the battery every 3~6 months. If it is lower than 3.85V, please recharge it until the battery reaches the said voltage value before representation.



❗ Please use the standard charging cable of this transimmitter to charge it. Improper use may cause damage to the battery and affect its service life.

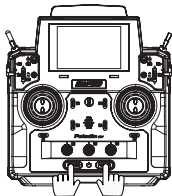
Powering On

Note: After the transmitter firmware is updated, the system will automatically power on and the wizard interface will appear. Follow the prompts on the interface to set the stick calibration(ST Cali.) and Update RF, then click Start.



Otherwise, please follow the steps below to power on:

1. Check to make sure that the battery is fully charged;
2. Press and hold both Power Switches until the screen lights on, and the transmitter LED lights on in cyan.
3. Follow the pop-up prompts accordingly to power on the transmitter.
 - Whether to turn on the transmit function. If RF is not required for this power-up, the transmit function can be switched off.
 - Whether the switch is in a safe position. (A red background on a control indicates that the position needs to be adjusted.) Check the position of the control according to the prompts and move it to the correct position.



Powering Off

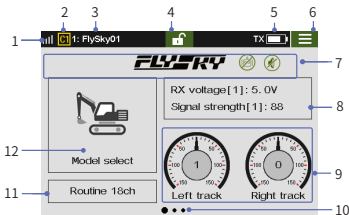
1. Power off the receiver first.
2. Press and hold both Power Switches until the screen dims with the prompt "Shut down...Please waiting for!", then it executes the shutdown procedure.

! Always power off the receiver before the transmitter, failure to do so can result out-of-control. Unreasonable setting of the Failsafe may cause accidents.

Home Interface Introduction

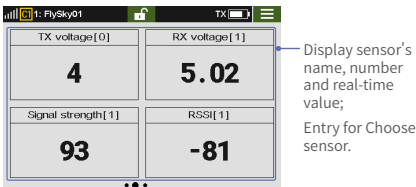
Support 4 home interfaces (5 home interfaces when the RF system is set to R. 18CH-DS), and can swipe left and right to switch the home interface cyclically. Descriptions are as following:

Home1

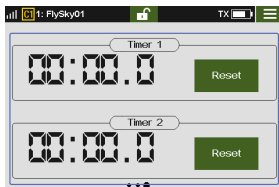


- | | |
|--|--|
| [1] Display signal strength / RX is not connected / RF is disabled | [7] Status Column (🔊 Sound, 📶 Vibration, 📶 A.B.S are enabled, the corresponding icon displays on this area.) |
| [2] Condition | [8] Sensor |
| [3] Model Name | [9] Dashboard (Display real-time values of two channels) |
| [4] Lock/Unlock | [10] Flip Page Icon |
| [5] Transmitter Power | [11] Display RF System information; entry for Binding setting |
| [6] Function Menu Icon | [12] Display model image; entry for Models |

Home2

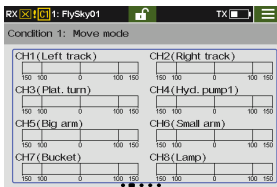


Home3



Display Timer
Tap Reset to reset the timer.

Home4



Display real-time values of each channel.
Swipe up and down to view.

Home5

Home 5 is displayed only when the R. 18CH-DS of RF system is selected, which is used to display the digital switch status.













Display digital switch status (S1~S8)

Swipe up and down to view all switch states. Tap to switch the switch state.

If the RF system is set to R. 18CH-DS and the DS Type is set to 2-Position DS, the digital switch status of S1~S22 is displayed.



The Introduction about the Icons of the Function Interface

	The screen is locked, you can only swipe left or right to switch home interfaces.		The screen is unlocked.
	Function is disabled		Function is enabled
	Touch to restore functions default settings		For all conditions
	Click to assign controls such as switches		For the current condition.
	To increase the value		To decrease the value

Language

This transmitter has 2 languages available.

Setup:

1. On Home interface, tap  to enter the function menu.
2. Tap System to enter, then touch Language.
3. Click your preferred language option, then tap  to return.

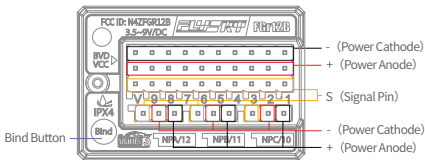


Binding

The transmitter and receiver have been pre-bound at the factory, however, if you need to bind a new receiver or rebind the original receiver, follow the steps below.

Take FG12B receiver as example, the overview of FG12B receiver is the

following.



Notes:

1. Different receivers have different binding methods. For specific information, please visit the FLYSKY official website to check the receiver manual or other relevant information.
2. Flysky AFHDS 3 classic version receiver models: FTTr10, FGr4, FGr4S, FGr4P, FTTr4 and FTTr16S. Other Flysky AFHDS 3 receivers are enhanced version receivers.

This system provides a binding wizard function. When you enter the binding interface for the first time, the binding wizard interface will appear. Follow the prompts on the interface or refer to the manual for binding.


Click Bind setting >> on the binding wizard interface to enter. This system supports four RF systems including Routine 18ch, Classic 18ch, R. 18CH-DS, and Shared model for binding with the receiver. The details are as follows:

RF System: Routine 18ch

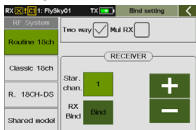
Routine 18ch system is used to bind with enhanced version receivers, with moderate communication distance, providing 18-channel communication, Two way and one way binding. It supports binding with one receiver, two receivers or more receivers to meet different application needs.

Steps for binding with one receiver:

Setup:

1. Tap  (on Home interface)> RX setup > Bind setting to enter the menu.
2. Select **Two way** communication according to the receiver and communication requirements if needed. If checked, it is two-way communication; and then set the appropriate starting channel. Click **Bind** to put the transmitter into the binding state.
3. Put the receiver into binding mode.
4. The LED of the receiver stops flashing and is solid on, indicating that the binding process is finished.
 - When the transmitter enters binding state in one-way mode, after the receiver LED becomes slow flashing, then put the transmitter to exit the binding, state. At this time, the receiver LED is solid on, indicating, the binding is successful.
5. Check to make sure the transmitter and receiver are operating normally, repeat steps if any problems arise.

Binding with a receiver

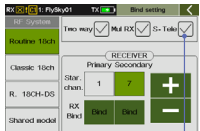


Steps for binding with two receivers:

Setup:

1. Two way, Mul RX and S-Tele are checked (if Mul RX is ticked, S-Tele will be checked by default).
2. Set the starting channel of the Primary receiver.
 - The default starting channel is 1. You can set the appropriate starting channel as needed. If it is set to 1 (i.e. Primary receiver CH1 corresponds to transmitter CH1), click **Bind**, the transmitter enters the binding state, and then put the primary receiver into the binding state to finish the binding.
3. Set the starting channel of the Secondary receiver.
 - The default is 1. You can set the appropriate starting channel as needed. If it is set to 7 (i.e. secondary receiver CH1 corresponds to transmitter CH1), click **Bind**, the transmitter enters the binding state, and then put the secondary receiver into the binding state to finish the binding.
4. Check to make sure the transmitter and receiver are operating normally, repeat steps if any problems arise.

Binding with two receivers



If S-Tel(Secondary Telemetry) is selected, only one secondary receiver should bind with the transmitter; and the secondary receiver only returns its own information.

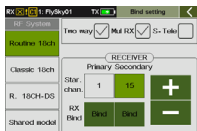
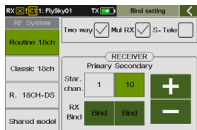
Steps for binding with more than two receivers:

Setup:

1. Tick Two way and Mul RX, and do not Tick the S-Tele.
2. Refer to step 2 of "Steps for binding with two receivers" to finish the binding between the transmitter and the primary receiver.
3. Binding with the Secondary receiver, before binding, you must set the Custom port protocol and Starting channel of the secondary receiver 1. After binding, you cannot change it.
 - Set the Newport protocol through the Custom port protocol function. And refer to step 3 of "Steps for binding with two receivers" to set the start channel and finish binding with the secondary receiver 1.
4. And so on, bound more Secondary receiver with the transmitter.
5. Check to make sure the transmitter and receiver are operating normally, repeat steps if any problems arise.

Note: For more than two receivers,

- To ensure the accuracy of the data returned from the primary receiver, bind the primary receiver only.
- More receivers can bind with the transmitter as a Secondary receiver, and the receiver does not return information (same as one-way connection).



- For binding more receivers, you can set different starting channel or the same starting channel for the Secondary receiver. When the same starting channel is set, the output signal is the same.

RF System: Classic 18ch

Classic 18ch system is used to bind with classic version receivers, providing 18-channel communication, Two way and one way binding. It supports binding with one receiver.

Refer to Routine 18ch for binding steps.

RF System: R.18ch-18ch

Bind with an enhanced version receiver with DS function, such as FGr12B receiver (firmware version V1.0.22). This RF system is a Two way and supports binding with 1 receiver or 2 receivers (1 primary receiver and 1 secondary receiver).

In this system, the digital switch mode can be set to 3-position DS or 2-position DS.

- If set to 3-position DS, it will add eight 3-position digital switch channels, thereby providing communication for up to 26 channels. It supports PPM1-DS (Nautic futaba), PPM2-DS (Nautic graupner) or PWM digital switch channels (i.e., channels S1 to S8).
- If set to 2-position DS, it will add twenty-two 2-position S.BUS-DS (Truck modified) protocol digital switch channels, rendering the original channels 15 and 16 non-functional, thereby providing communication for up to 38 channels. The newly added channels are S1 to S22. Please note that at this time, channels 15 and 16 still have data output, transmitting signals for S1 to S22; avoid using channels 15 and 16 for PWM, S.BUS, i-BUS, and i-BUS2 protocol signals.

Refer to Routine 18ch for binding steps.

RF System: Shared model

This mode is the binding mode for shared model applications. If you need a model to be controlled by multiple transmitters, then you can bind multiple transmitters through this RF system with the classic version receiver in case of setting Sharing ID2 or enhanced version receiver in case of setting Sharing ID1 separately, providing 18-channel communication. This RF system is a two-way communication and supports binding with a receiver.

Steps as following(take enhanced version receiver as example):

Setup:

1. Tap Shared model, and set sharing model to Sharing ID1.
2. Tap Bind to put the transmitter 1 into binding state.
3. Put the receiver into binding state, when the LED of the receiver stops flashing and is solid on, indicating that the binding process is finished. Then power off the transmitter 1.
4. Refer to the steps above, finish the binding between the transmitter 2 and the receiver, and then turn off the transmitter 2.
5. Refer to the above steps 3~4, bound the receiver with more transmitters if needed.
6. Turn on the transmitter 1 and power off the transmitter 2, at the time, the transmitter 1 and receiver will connect normally; then turn off the transmitter




1 and power on the transmitter 2, at the time, the transmitter 2 and receiver will connect normally. If there is any abnormality, repeat the above steps to re-bind.

After binding is complete, the model will be controlled by the transmitter that the receiver initially connects with. If need to be controlled by other transmitters, first power off the transmitter that is currently connected to the model (or switch it to another model), and ensure that the failsafe settings have been properly set.

Note: When multiple transmitters are powered on, there is a slight probability of that the receiver will be controlled by different transmitters. It recommends that do not power on multiple transmitters at the same time.

! After the transmitter has updated a firmware, it is unable to bind to the receiver, the receiver firmware may need to be updated forcibly.

Follow the steps below to put the receiver into the forced update mode.

1. Power on the receiver while pressing the Bind button for over ten seconds until the LED operates in three-flash-one-off manner repeatedly, then release the Bind button.
2. On the Home interface, tap  > RX setup > Receiver update to enter the menu, after selecting the corresponding model, click Update, then click OK on the pop-up menu to enter the updating state.
3. After the update is finished, it will automatically return to the previous interface.




PWM Frequency

The receiver's output frequency of PWM signals can be regulated. Theoretically, the higher the frequency, the faster the signal is refreshed, and the faster the servo responds to the signal change. However, some servos may not support PWM signals. You may need to take into account the servo's performance when doing such settings.

The interface of this function may vary with binding modes. For enhanced version receivers, the PWM frequency of each channel can be set separately, and the options include analog servo (50 Hz), Digital servo (333 Hz), SR (833 Hz), SFR (1000 Hz) and Custom.


In addition, each channel can also be set as a ON/OFF Switch. After setting, this channel will be used as a power switch to turn on or off the device controlled by this channel.

If a classic version receiver is bound, all channels are set together, and cannot be set to SR (833 Hz) and SFR (1000 Hz).


 When SR (PWM frequency: 833 Hz) and SFR (PWM frequency: 1000 Hz) are selected, the overall system delay will be decreased, but the pulse range of PWM signals is changed. Please make sure the servo supported the corresponding frequency is a digital servo and the setting is correct. Otherwise the servo may not work properly, or even get damaged.

Take the single-channel setting of the enhanced version receiver as an example.

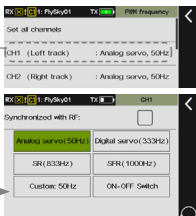
Setup:

1. Tap  (Home interface) > RX setup > PWM frequency to enter the menu.
2. Click the item according to the actual state of the adapted servo. Then tap the corresponding function item as

needed.

3. If you choose Custom, then use +/- to set an appropriate value.
4. If you choose Synchronized with RF, then touch the check box on the right. The PWM output is synchronized with the timing of the (RF) radio signal reception after it is checked.
5. If you want to use the channel as a power switch, click ON/OFF Switch, then click  to return.

Enhanced Version Receiver



Classic Version Receiver



Failsafe



The system provides the following several settings:

- To set failsafe judgment time. The system supports setting the failsafe judgment time.
- Set to disable the signal output of i-BUS-out and PPM protocol connectors in case of out-of-control, i.e., no output at i-BUS-out & PPM connectors in case of out-of-control.
- You can set failsafe values channel by channel, there are three modes that can be set, including No output, Hold, and Fixed value.
- To set all channels. With this function, you can set the output value of all channels that have been set to a fixed value after out-of-control.

Failsafe Judgment Time

Used to set the failsafe judgment time, the setting range is from 250ms to 1000ms, and the default judgment time is 300ms.

Setup:

1. Tap  (Home interface) > RX setup > Failsafe to enter the menu.
2. Tap failsafe judgment time to enter.
3. Click +/- to set the appropriate value, then click  to return.



Set i-BUS-out & PPM to no output

After Set i-BUS-out & PPM to no output is selected, regardless of failsafe setting, these two types of failsafe signals are always no output. By default, the system is in the enabled status.

Setup:

Tap the box next to right of the function, when it is not ticked (☐), it indicates that the function is disabled.

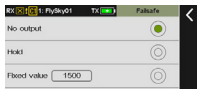



Setting a Channel

Used to set the output signal states of channels 1~18 respectively: No output means there is no output in case of out-of-control; Hold means the last channel value is kept in case of out-of-control; Fixed value means that you can set the failsafe output value by moving the control, then the value set will output.

Setup:

1. Tap a desired channel to enter.
2. Tap the desired function options. If the fixed value is selected, move the Stick(Switch, Knob or LSW) to the



desired position and hold it, and click  to finish.

If the receiver is bound with the transmitter in 3-position DS mode of R. 18CH-DS, the failsafe setting is as follows:

- When the signal is parsed as PWM:

You can set the failsafe value of newly added S1~S8 channels respectively. The setting steps are the same as above.

- When the signal is parsed as PPM1-DS (Nautic futaba), PPM2-DS (Nautic graupner) :

If Set i-BUS-out & PPM to no output is not enabled, PPM1-DS (Nautic futaba) and PPM2-DS (Nautic graupner) connectors will keep the last output values in case of out-of-control;

If Set i-BUS-out & PPM to no output is enabled, there will be no output in case of out-of-control.



Set All Fixed Value Channels

Used to set the output value of all channels that have been set to a fixed value after out-of-control.

Setup

1. Tap Set all channels, a prompt menu will pop up.
2. Move all controls corresponding to channels with fixed values and hold if needed.
3. Tap Yes to finish.



Specifications

Paladin (PL18 EV)

Product Model	PL18 EV
Number of Channels	18; 26 (3-position DS of R. 18CH-DS); 38 (2-position DS of R. 18CH-DS)
Compatible Receivers	FGr12B(receivers with AFHDS 3 protocol)
Compatible RC Models	Engineering vehicles, simulation boats, etc.
RF	2.4GHz ISM
Maximum Power	<20dBm (e.i.r.p.) (EU)
RF Protocol	AFHDS 3
Resolution	4096
Low Voltage Alarm	Lower than 3.65V
Data Connector	Micro USB, BLUETOOTH, DSC 3.5mm Trainer Jack(PPM)
Charging Port	Micro USB or wireless charging
Antenna	Two bulit-in antennas
Input Power	1S (3.7V)*4300mAh(bulit-in)
Online Update	Yes
Temperature Range	-10°C ~ +60°C
Humidity Range	20% ~ 95%
Color	Black
Language	Chinese or English
Dimensions	120*195*213mm
Weight	1012g
Certification	CE, FCC ID: N4ZFT1800

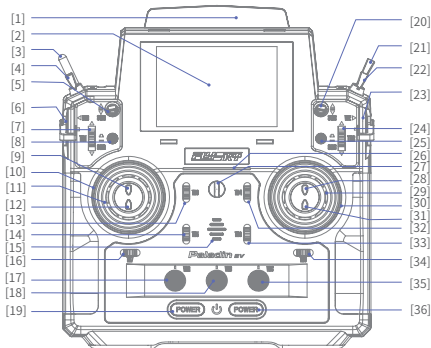
注意事项！

开始操作前请务必在 Flysky 官网下载并阅读《免责声明 & 警告》了解安全注意事项，并在 Flysky 官网下载阅读使用说明书。

Flysky 官网地址：www.flyskytech.com

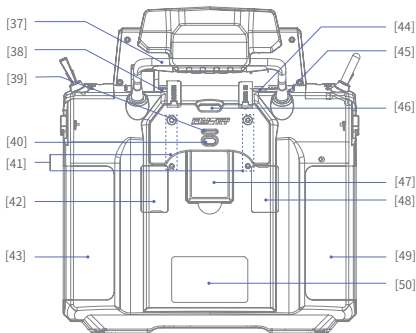
1. 本发射机所用天线的安装必须与所有人员保持距离，不得与任何其他发射机共用或一起使用。必须向最终用户和安装人员提供天线安装说明和发射机操作条件，以满足射频暴露合规要求。
2. 特此，【ShenZhen FLYSKY Technology Co., Ltd.】声明无线电设备【Paladin(PL18 EV), FT18 EV】符合 RED2014/53/EU.
3. 欧盟 DoC 声明全文可在以下互联网地址：www.flyskytech.com/info_detail/10.html 获取。

前视图



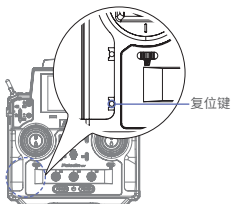
- | | | |
|---------------|---------------|---------------|
| [1] 天线 | [13] TR3 微调按键 | [25] SWC 自锁按键 |
| [2] 显示屏 | [14] TR5 微调按键 | [26] 发射机状态指示灯 |
| [3] SWF 档位开关 | [15] 喇叭 | [27] 吊环 |
| [4] SWE 档位开关 | [16] TR7 微调按键 | [28] SWL 按键 |
| [5] SWB 档位开关 | [17] VRA 旋钮 | [29] VRG 摇杆旋钮 |
| [6] VRD 拨杆 | [18] VRB 旋钮 | [30] 右摇杆 |
| [7] TR1 微调按键 | [19] 电源键 | [31] SWK 按键 |
| [8] SWA 自锁按键 | [20] SWD 档位开关 | [32] TR4 微调按键 |
| [9] SWJ 按键 | [21] SWH 档位开关 | [33] TR6 微调按键 |
| [10] 左摇杆 | [22] SWG 档位开关 | [34] TR8 微调按键 |
| [11] VRF 摇杆旋钮 | [23] VRE 拨杆 | [35] VRC 旋钮 |
| [12] SWI 按键 | [24] TR2 微调按键 | [36] 电源键 |

后视图



- | | |
|--------------------------|--------------------------|
| [37] 提手 | [44] Micro USB 接口 |
| [38] 蓝牙模块接口 | [45] DSC3.5mm 教练接口 (PPM) |
| [39] FRM301 指示灯 | [46] 按压弹出 FRM301 |
| [40] FRM301 按键 | [47] 高频模块 FRM301 |
| [41] 高频头转接件固定孔 | [48] 总成座松紧度调节 / 摇杆模式切换调节 |
| [42] 总成座松紧度调节 / 摇杆模式切换调节 | [49] 手胶 |
| [43] 手胶 | [50] 无线充电感应区 |

● 关于 Paladin EV 发射机的更多操作请阅读使用说明书。



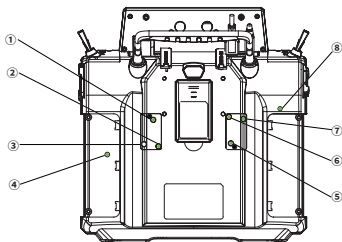
复位键位置：位于发射机正面左下部，需拨开手胶才能看到。按压复位键需借助较为细长的工具。

复位键功能：当按电源键无法关闭发射机时，需要用此键复位发射机。

⚠ 小心

• 复位发射机后，本次开机时的设置可能失效。

总成座调节说明



功能设置：

用户可调节螺丝孔螺丝实现总成座纵向回中与不回中切换、不回中时拨动摩擦力、调节摇杆自回中时回中弹力，请参照以下步骤：

螺丝说明：

① . ⑤	调节总成座摇杆是否回中	② . ⑥	调节总成座纵向摇杆弹力
③ . ⑦	调节总成座横向摇杆弹力	④ . ⑧	调节总成座纵向摇杆摩擦力

以右边摇杆为例



注意 螺丝总行程约为 6 圈（最紧到最松），逆时针调节时请不要过调，否则可能导致螺丝脱落。

不回中 - 回中

1. 请用十字螺丝刀逆时针调节①号螺丝使摇杆变为回中状态；
2. 逆时针调节④号螺丝调整摩擦力度；
3. 如还需调整回中力度，请操作③或②号螺丝调节回中力度，顺时针力度加强，反之减弱。

回中 - 不回中

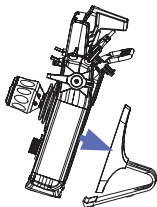
1. 请用十字螺丝刀顺时针调节①号螺丝直至拧紧，使摇杆变为不回中状态；
2. 顺时针调节④号螺丝加强摩擦力度；
3. 如还需调整回中力度，请操作②号螺丝调节回中力度，顺时针力度加强，反之减弱。

充电方式

PL18EV 可通过两种方式对其进行充电：

- Micro USB 线插入充电口充电
- 使用无线充电底座对其进行充电（如图所示）

注：在安全值内（4h@5V*2A/7h@2A 无线充）对其进行充电，过充可能会导致电池损坏；为延长电池使用寿命，长时间放置请注意不要满电，应适当放电后再进行放置，并且应定期充电防止电池过放损坏。建议将锂电池充到 40%~50% 的容量保存。例如建议锂电的保存电压为 3.85V，且间隔 3~6 个月需检查电池的电压值，若低于 3.85V，请重新充电至此电压值后再继续保存。

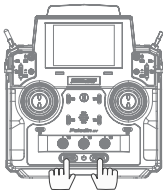
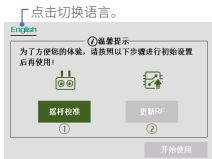


- ❗ 请使用本款发射机标配的充电线对其进行充电，使用不当可能造成电池损坏影响使用寿命。

开机

注：发射机更新固件后系统自动开机，出现开机向导界面，依照界面提示分别设置[摇杆校准]和[更新 RF]之后，点击[开始使用]即可。除此之外则请按以下步骤进行开机：

1. 检查系统状态，确保电池电量充足；
2. 同时按住发射机两个电源键，直至屏幕亮起，此时 LED 灯为青色；
3. 依屏幕提示操作至开机成功。
 - 是否开启高频，若此次开机无需使用高频，可在此界面关闭高频。
 - 开关是否位于安全位置（控件红色表示位置需调整）。拨至安全位置即进入主页界面。



关机

请按以下步骤进行关机：

1. 断开接收机电源；
2. 同时按住发射机两个电源键，屏幕显示关机界面，提示“正在关机中 ... 请稍候！”，待系统保存数据后自动关机。

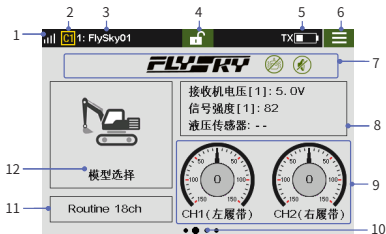
! 关闭前，请务必先断开接收机电源，然后关闭发射机。如果强行关闭发射机，将会导致遥控设备失控。失控保护设置不合理可能引起事故。

主页介绍

支持 4 个主页（当 RF 系统设置为 [R. 18CH-DS] 时为 5 个主页），可左右滑

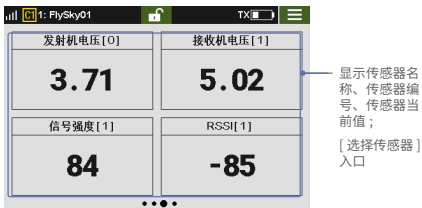
动循环切换主页。介绍如下：

主页 1

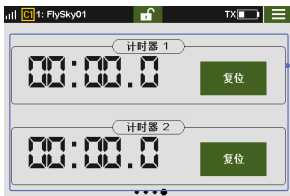


- [1] 显示信号强度或未接入接收机或未开启高频
- [2] 工作模式
- [3] 模型名称
- [4] 锁屏键
- [5] 发射机电量
- [6] 功能菜单键
- [7] 状态栏 (系统声音、振动、履带混控和防抱死刹车功能开启后, 在此显示)
- [8] 传感器
- [9] 仪表盘 (显示两个通道实时值)
- [10] 翻页标签
- [11] 显示 RF 系统信息; 对码设置入口
- [12] 显示模型图片; 模型设置入口

主页 2



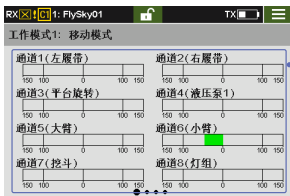
主页 3



显示计时器

点击 [复位] 可复位相应计时器。

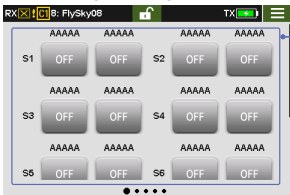
主页 4



显示各通道实时值
上下滑动查看。

主页 5

RF 系统选择为 [R. 18CH-DS] 时，才显示主页 5，用于显示数字开关状态。



显示数字开关状态 (S1~S8)

可上下滑动查看所有开关状态；
点击可以切换开关状态。

若 RF 系统设置为 [R. 18CH-DS]
且“数字开关模式”设置为 [2 档
DS]，则此处显示 S1~S22 数字开
关状态。



功能图标相关界面介绍

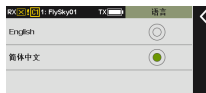
	触屏锁定，仅可左右滑动切换主页，其他不可操作		表示此功能或此界面可操作
	表示此功能在禁用状态		表示此功能在开启状态
	当前界面功能恢复默认值		表示设置针对所有模式
	点击可进行开关等控件分配		表示设置仅针对当前模式
	点击增加数值，长按可迅速增加数值。		点击减少数值，长按可迅速减少数值。

语言

本发射机支持两种语言。

功能设置：

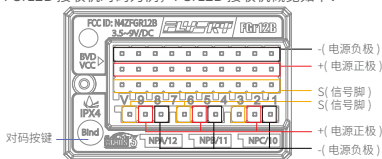
1. 点击主页 ，进入功能菜单界面；
2. 滑动显示屏，点击 [系统设置] 进入功能界面，点击 [语言选择]，进入设置界面；
3. 根据需要选择语言，点击  返回。



对码

本发射机和接收机在出厂前已对码成功。如果您需要重新对码时，请按照如下步骤进行对码。

以与 FGr12B 接收机对码为例，FGr12B 接收机概览如下：



注：

1. 不同的接收机对码方式不同，具体对码方式请访问 FLYSKY 官网查询接收机说明书或其他相关资料；
2. 富斯 AFHDS 3 经典版接收机型号：FTr10、FGr4、FGr4S、FGr4P、FTr4 和 FTr16S；其他富斯 AFHDS 3 接收机均为增强版接收机。


本系统提供对码向导功能，首次进入对码界面时，即出现对码向导界面，按照界面提示操作即可或参考使用说明书描述操作。

对码向导界面点击 [对码设置 >>] 进入对码设置界面。本系统支持 [Routine 18ch]、[Classic 18ch]、[R. 18CH-DS] 和 [Shared model] 4 种 RF 系统与接收机对码，具体介绍如下：

RF 系统：Routine 18ch

Routine 18ch 系统对码增强版接收机，提供 18 通道通信。支持单双向对码，支持对码 1 个接收机，2 个接收机或多个接收机，以满足不同应用需要。

对码 1 个接收机步骤如下：

1. 点击主页  > [接收机设置] > [对码设置]，进入功能菜单界面；
2. 根据接收机与通信要求选择是否双向通信，勾选即双向；设置合适的起始通道。点击 [对码]，使发射机进入对码状态。
3. 使接收机进入对码状态；
4. 当接收机指示灯变为常亮时，表示对码成功；
 - 单向对码时，在接收机 LED 灯变为慢闪后，将发射机退出对码状态，此时接收机 LED 灯常亮，表示对码成功。
5. 检查发射机、接收机是否连接正常，如有异常，重复以上步骤重新对码。

对码 1 个接收机界面



对码 2 个接收机操作步骤如下：

1. 确认勾选[双向通信]、[多接收]和[副遥测]（勾选[多接收]时，[副遥测]默认同步勾选）；
2. 设置主接收机的起始通道；
 - 默认为1，可根据需要设置合适的起始通道。如设置为1（即主接收机CH1对应发射机CH1），点击[对码]，发射机进入对码状态，然后使主接收机进入对码状态，完成对码；
3. 设置副接收机的起始通道；
 - 默认为1，可根据需要设置合适的起始通道。如设置为7（即副接收机CH1对应发射机CH7），点击[对码]，发射机进入对码状态，然后使副接收机进入对码状态，完成对码。
4. 检查发射机、接收机是否连接正常。如有异常，重复以上步骤重新对码。

对码 2 个接收机界面



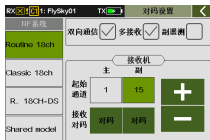
勾选 [副遥测]，此时仅支持对码一个副接收机，并且副接收机只回传其自身的信息。

对码 2 个以上接收机操作步骤如下：

1. 勾选[双向通信]和[多接收]，不勾选[副遥测]；
2. 参照“对码2个接收机”操作步骤2，完成发射机与主接收机对码；
3. 对码副接收机1，对码前须先设置副接收机1的接口协议和起始通道，对码完成后不可更改；
 - 通过[自定义接口协议]功能设置 Newport 接口协议，参照“对码2个



接收机"操作步骤3, 设置起始通道后完成与副接收机1对码;



- 依次类推, 对码更多个副接收机;
- 检查发射机、接收机是否连接正常。如有异常, 重复以上步骤重新对码。

注: 对于多接收机模式,

- 为确保主接收机回传数据的准确性, 建议对码唯一主接收机;
- 可以对码多个副接收机, 副接收机不回传信息 (同单向模式);
- 对码多个副接收机, 可设置不同的起始通道也可设置为相同的起始通道, 设置相同的起始通道时, 输出的信号相同。

RF 系统: Classic 18ch

对码经典版接收机, 提供 18 通道通信。支持单双向对码, 支持对码 1 个接收机。对码步骤参考 Routine 18ch 部分。

RF 系统: R. 18CH-DS

对码具有 DS 功能的增强版接收机, 如 FGr12B 接收机 (固件版本 V1.0.22)。此 RF 系统为双向通信, 支持对码 1 个接收机或 2 个接收机 (1 主 1 副)。

此系统下, 可设置数字开关模式为 [3 档 DS] 或 [2 档 DS]。

- 若设置为 [3 档 DS], 将增加 8 个 3 档数字开关通道, 从而提供 26 通道通信。支持 PPM1-DS (Nautic futaba)、PPM2-DS (Nautic graupner) 或 PWM 数字开关通道 (即 S1~S8 通道)。
- 若设置为 [2 档 DS], 将增加 22 个 2 档 S.BUS-DS (Truck modified) 协议数字开关通道, 原 15、16 通道分配功能将无效, 从而提供 38 通道通信。新增的通道即 S1~S22 通道。请注意, 此时 15、16 通道仍有数据输出, 传输 S1~S22 的信号, 请勿使用 PWM/S.BUS/i-BUS/i-BUS2 协议中的 15、16 通道信号。

对码步骤参考 Routine 18ch 部分。

RF 系统：Shared model

此模式为共享模型应用的对码模式，如您需要一个模型被多个发射机控制时，可通过此 RF 系统使多台发射机分别对码经典版接收机（共享模式设置为 [共享 ID2]）或增强版接收机（共享模式为 [共享 ID1]），提供 18 通道通信。此 RF 系统为双向通信，支持对码 1 个接收机。

对码步骤如下（以增强版接收机为例）：


1. 点击[Shared model]，共享模式设置为[共享ID1]；
2. 点击[对码]使发射机1进入对码状态；
3. 使接收机进入对码状态，当接收机LED灯变为常亮时，表示对码成功，然后关闭发射机1；
4. 参考前面步骤，使发射机2与接收机完成对码，然后关闭发射机2；
5. 参考步骤3~4，依次类推，对码更多的发射机；
6. 打开发射机1且关闭发射机2，此时发射机1可以正常控制接收机输出；然后打开发射机2且关闭发射机1，此时发射机2可以正常控制接收机输出。如有异常，重复以上步骤重新对码。



对码完成后模型会被接收机最先找到的发射机控制，如需要其它发射机控制，请先关闭正在连接模型的发射机（或切换模型），并确保失控保护已合理设置。

注：多台发射机开启情况下，有很小概率接收机会收到不同发射机的控制，为了安全请避免多台发射机同时开启的情况。

❗ 发射机在更新完后，如无法与接收机对码，需强制更新接收机固件。接收机进入强制更新步骤如下：

1. 接收机按下对码按键，上电 10 秒钟后指示灯三闪一灭，松开对码按键；
2. 点击主页  > [接收机设置] > [接收机固件更新]，在选择对应的接收机后点击 [更新]，在弹出的菜单上点击 [确定] 即可进入更新状态。
3. 更新完成后自动返回上一级界面。



PWM 频率

可调节接收机输出 PWM 信号的频率。理论上频率越高信号刷新速度越快，舵机响应信号变化就越快。但是部分舵机不支持识别频率过快的 PWM 信号，故此项设置应考虑舵机性能设置。



此功能根据对码模式设置不同而界面有所不同，对于增强版接收机，支持每个通道单独设置 PWM 频率，可选项包括 [模拟舵机 (50Hz)]/[数字舵机 (333Hz)]/[SR (833Hz)]/[SFR(1000Hz)]/[自定义]。此外，每个通道还支持设置为 [电源开关]，设置后，此通道将作为电源开关使用，即可开启或关闭此通道所控设备。

对于经典版接收机，则仅支持对所有通道一起设置，且不支持设置为 SR (833Hz) 和 SFR(1000Hz)。

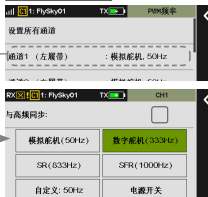
❗ 当选用 SR (PWM 频率 833Hz)、SFR(PWM 频率 1000Hz) 时整个系统的延时会减小，但此时 PWM 信号脉冲区间已经发生了变化。请确保适配的舵机为支持相应频率的数字舵机并且设置匹配，否则可能导致舵机无法正常工作，甚至损坏舵机。

以增强版接收机单独通道为例：

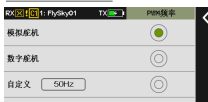
功能设置：

1. 点击主页  > [接收机设置] > [PWM 频率]，进入功能菜单界面；
2. 点击要设置的功能项进入下一级设置界面，根据需要选择点击对应功能项；
3. 若选择 [自定义]，点 [+] / [-] 设置合适的频率值；
4. 若选择“与高频同步”，则点击右侧功能框，出现“√”即与高频同步，勾选后 PWM 输出与（RF）无线信号接收的时序同步；
5. 若要将通道作为电源开关使用，则点选 [电源开关] 即可，点击  返回即完成。

增强版接收机界面



经典版接收机界面



失控保护



对于失控保护功能，PL18 EV 提供了如下几种设置方式：

- 设置失控保护判断时间。系统支持设置“失控保护判断时间”。
- 可设置失控时关闭 i-BUS-out 和 PPM 协议接口信号输出，即失控时 i-BUS-out&PPM 接口为无输出状态；
- 可按通道设置每一个 PWM 通道失控保护数值，可设为 3 种模式，无输出 / 固定值 / 保持；
- 设置所有固定值的通道功能，即设置所有已经设置为固定值的通道失控后的输出值。

失控保护判断时间

用于设置失控保护判断时间。设置范围为250ms~1000ms，默认300ms。

功能设置：

1. 点击主页  > [接收机设置] > [失控保护] 进入功能界面；
2. 点击 [失控保护判断时间] 进入设置界面；
3. 点击 [+] / [-] 设置合适的时间，点击  返回。



i-BUS-out&PPM 信号无输出

此功能选择后，不管各通道失控保护如何设置，这两类信号失控保护始终为无输出，系统默认开启状态。

功能设置：

点击选项右侧的选项框，未勾选 (☐) 即未开启，失控后按通道设置：固定值或者保持最后输出值。




设置单独通道

可分别设置通道 1~18 输出信号状态：[无输出] 表示无信号输出；[保持] 表示失控时保持输出最后信号；[固定值] 可以通过移动控件来设置失控保护输出值。

功能设置：

1. 选择需要设置的通道，进入下一级界面
2. 选择合适功能项；若选择固定值，则将通道所对应的控件（摇杆、开关、旋钮

或逻辑开关) 拨到需要的位置并保持，同时点击  即完成设置。



若接收机以 R. 18CH-DS 3 档 DS 模式与发射机对码后，失控保护设置如下所述：

- 当信号解析为 PWM 时：
可分别设置 S1~S8 新增通道的失控保护值。设置步骤同上。
- 当信号解析为 PPM1-DS (Nautic futaba) 、PPM2-DS (Nautic graupner) 时：
若 [i-BUS-out&PPM 信号无输出] 未开启，则失控后，PPM1-DS (Nautic futaba) 、PPM2-DS (Nautic graupner) 接口保持最后输出；
若 [i-BUS-out&PPM 信号无输出] 已开启，则失控后，PPM1-DS (Nautic futaba) 、PPM2-DS (Nautic graupner) 接口无输出。



设置所有固定值通道

用于设置所有已经设置为固定值的通道失控后的输出值。

功能设置：

1. 点击 [设置所有固定值通道], 系统弹出提示界面；
2. 将所有固定值通道对应的控件拨到需要的位置并保持；
3. 点击 [是] 即完成。



规格参数

Paladin (PL18EV)

产品型号	PL18 EV
适配接收机	FGr12B (AFHDS 3 协议接收机)
通道个数	18; 26(R. 18CH-DS 3 档 DS 模式); 38(R. 18CH-DS 2 档 DS 模式)
适配模型	工程车或仿真船等
无线频率	2.4GHz ISM
发射功率	< 20dBm (EU)
无线协议	AFHDS 3
通道分辨率	4096
低电压报警	< 3.65 V
数据接口	Micro USB、BLUETOOTH、DSC3.5mm 教练接口 (PPM)
充电接口	Micro USB 或无线充
天线类型	内置双天线
输入电源	1S (3.7V) *4300mAh (内置)
在线更新	支持
温度范围	-10°C ~ +60°C
湿度范围	20% ~ 95%
机身颜色	黑色
系统语言	中文或英文
外形尺寸	120*195*213 mm
机身重量	1012g
认证	CE, FCC ID: N4ZFT1800

本说明书中的图片和插图仅供参考，可能与实际产品外观有所不同。产品设计和规格可能会有所更改，恕不另行通知。

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