



Release note for Paladin PL18 EV transmitter firmware/Paladin PL18 EV 软件版本更新记录

Software version 软件版本	1.0.28	Date 日期	06/2022
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一、概述

该版本是基于 FlySky Paladin PL18EV firmware 1.0.20 版本固件修改而来的，本次迭代主要是对 AFDHS 3 高频库进行一次更新适配，支持增强版接收机特有功能，另外使用新的编程混控（曲线调节）替代原仅支持线性调节的混控设置，并新增所有通道输出均可调节曲线和双比率设置。

二、更新内容

► 新增功能：

1. 适配增强版接收机可实现支持多接收对码，可同时对码多个接收机使用，支持分别设置主 / 副接收机的起始通道。

----- 多个拖挂任意配、多通道无线扩展免插线；

在 Routine 18CH 下双向通信时，可设置为多接收模式，主接收可对码一个（有回传，支持外接传感器），不勾选副遥测功能时，副接收入口可对码多个接收机同时使用（无回传），勾选副遥测副接收可对码一个（有回传，不支持外接传感器）。

2. 新增编程混控功能，替换原混控功能，可实现曲线调节混控关系。

----- 更直观更灵活的混控调节，功能更强大了。

（1）主动可定义为任意功能（包括辅助功能）或者控件（摇杆、旋钮、开关），被动可定义为任意通道。

（2）主动定义为功能时可选择对应功能微调是否作为主动带入运算。

（3）使用多点的方式调节混控比率，最多 11 个点可调，并支持整条曲线 Y 轴偏移。

（4）可设置混控开关开启 / 关闭的延迟。

3. 新增功能比率，替换原比率与曲线功能，实现全部通道可调曲线。

----- 更直观调节界面，功能更强大了。

（1）可设置中位 / 最低点为调节基准点，设置中位为基准点时可分别调节左右的比率和 EXP。

（2）可快捷进入双比率设置界面。

4. 新增双比率设置，替换原比率曲线中双重开关功能，配合功能比率菜单可实现多重比率切换使用。

----- 功能更强大，设置更灵活。

（1）可设置 10 组双比率，每组可定义不同功能，多组双比率定义同一功能时最好一组开启有效。

（2）可设置生效模式为作业模式还是移动模式，或者 2 个模式都生效。

5. 适配增强版接收机实现多种 RF 系统可选，实现高频性能的调节。

----- 匹配不同应用场景选择不同对码方式，实现距离、延迟、抗干扰能力、通道个数的可调。

（1）对码时可选择 Routine 18ch（综合最强 18 通道）、Lora 12ch（抗干扰最强 12 通道）或 Fast 8ch（快速响应 8 通道）模式。

6. 适配增强版接收机可分别调节每个通道 PWM 信号频率，可实现 SR 和 SFR 窄频信号设置，与高频同步设置。

----- 连接的舵机支持情况下，使用高频率 PWM 信号输出可大大提高设备的响应速度。



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- (1) 设置为 SFR 模式，PWM 输出频率可达 1000Hz 左右，相比模拟舵机的速度提升了 20 倍。
7. 适配增强版接收机可实现支持 BVD 电压检测，并且使用校准设置来调整显示的测量电压值。
----- 选用支持 BVD 功能的接收机，电压回传可不借助外接传感器，接收机 BVD 接口连接电池供电端即可实现。
8. 适配增强版接收机可实现设置 Newport 接口，支持 PWM/i-BUS/S.BUS/PPM 协议任意切换。
----- 一个接口多种用途，多用途时只需要选 Newport 功能接收机即可。当需要通道扩展 / 传感器使用时可选择任意 Newport 接口设置为对应设备支持的接口即可配合使用。
9. 支持通过遥控管家 V3.0 升级接收机的固件。
----- 只要支持配合使用的接收机都可以通过遥控器连接遥控管家实现最新版本固件升级。
10. 新增支持开机安全检查功能，检测报警条件可每个模型分别设置。
----- 开机开启高频时 / 切换模型时可判断预设的开关安全位置，若不在安全位置会报警提示并且不触发模型控制，给模型安全增加一层保障。
11. 新增支持所有模型可添加到模型组合设置，替换原 2 个模型一个组合的方式。添加到组合的模型可以很方便的通过一个 3 档开关切换。
----- 可实现多个模型切换控制，例如可一个开关切换不同时段分别控制挖机、装卸机、卡车；另外当模型较大不变插线时可以把不需要同时控制的模块使用不同的接收机，对码组别中其它模型，通过开关切换控制模型上不同模块。

► 修改功能：

1. 开机界面进行了重新设计：修改为具有工程车专业元素的彩色页面。
2. 修改关机流程，关机保存执行完毕后才关闭屏幕，解决了关机后立马开机不能点亮屏幕的 BUG。
3. 修改 PWM 转换器配置菜单，并支持配置更多接收机为转换器。
(1) 支持配置为转换器的接收机：FGr8B、FTr8B、FGr12B、FTr12B、FGr4B、INr6-HS、FGr4 和 FTr10；
(2) 在配置界面可设置 PWM 转换器的起始通道和接口 PWM 频率。
4. 接收机失控保护设置修改，增加了无输出的失控保护模式。
5. 修改控件分配、微调分配和开关分配界面的启用禁用开关图标，使用“--”表示控件无分配的状态。
6. 修改油门曲线设置菜单，调节方式改为同新功能比率的调节方式。
7. 优化高频设置菜单，去掉不适配本机的高频头选项；优化接收机设置菜单，使其更好适配经典



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版和增强版接收机功能。

8. 优化启用 / 禁用图标：将履带混控、防抱死刹车和模型计时器的功能启用图标改为可表达当前状态且有更好点击指示作用的状态开关。

9. 修改帮助中心：增加各个推广平台二维码，以便更方便快捷寻找产品信息。

10. 修复了模型数据传导时不能导出模型图片设置和接收机设置的 BUG。

▶ 特殊变化：

1. 失控保护的默认模式修改为无输出模式，接收机断开可能会触发模型上哗哗响设备，而旧版不具备此功能（旧版断开未设置失控保护仍然保持失控前的控制命令）。

2. 对码设置修改需要重新对码才生效，未重新对码成功模型还响应上一次对码接收机并使用上一次对码时的配置通信。

3. 不同模型下对码了同一接收机若对码设置不同，则接收机仅响应最后对码模型，之前的对码自动失效。

三、注意事项

1. 此版固件部分功能与旧版相比结构和逻辑不同，所以结构发生变化的将无法进行跨版本继承，（如：编程混控，功能比率，双比率设置）只支持部分数据跨版本继承。

2. 本版本更新了高频库，升级发射机固件后需要同步更新高频固件、接收机固件后才能使用，更新方法如下：

（1）升级装机的高频头 FRM301：本次固件更新后，发射机第一次开机增加了开机向导，用户按提示操作即可升级高频头，但如高频未连接或者其它故障更新失败，则需用户通过发射机功能菜单 > [高频设置] > [高频模块固件更新] 升级。注意：发射机需正常开机，高频正常连接且开启状态下，高频类型设置为 FRM301 时，菜单列表中才有 [高频模块固件更新] 功能。

（2）升级接收机：

①发射机固件打包几款接收机的固件（FGr12B、FGr8B、FTr10、FTr16S、FGr4 和 FTr4/FGr4S/FGr4P），可直接让接收机进入更新状态后，通过发射机的 [接收机设置] 菜单中 [接收机固件更新] 功能，选择对应的接收机型号去更新；

②所有 AFDHS 3 系列接收机都可以通过电脑端软件《遥控管家 V3.0》 / 《FlySky Assistant V3.0》在线更新，可以按软件界面提示进行更新操作。（注意：使用《遥控管家 V3.0》 / 《FlySky Assistant V3.0》在线更新接收机必须先更新发射机固件为最新后再更新接收机固件；若发射机固件需退回旧版本，先退回接收机再退回发射机。）



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I. Overview

This version is updated based on FlySky Paladin PL18EV Firmware 1.0.20. This iteration is mainly an updated adaptation of the AFDHS 3 RF library, supporting enhanced receiver features. In addition, the new programming mixer **curve adjustment** function is used to replace the original mix settings that only support linear adjustment. All channel outputs now have curve adjustment and dual ratio settings.

II. Updated Contents:

► New Features:

1. The enhanced receiver can support multi-receiver binding. Multiple receivers can be bound simultaneously. The starting channel of the primary/secondary receiver can be set, respectively. ---Multiple trailers can be configured freely. In the multi-channel wireless expansion, you do not need to plug in a line.

In Routine 18CH two-way communications, you can set to multi-receiver mode. The primary receiver can bind one **transfer back, with supporting the connection of sensor**. When you do not select the secondary telemetry function, the secondary receiver entrance can bind multiple receivers at the same time **no transfer back**. When you select the secondary telemetry and secondary receiver, one can be bound **transfer back, without supporting the connection of sensor**.

2. New programming mixer function replaces the original mixing function, to realize curve adjustment mixing relation.

----- More direct and flexible mixing adjustment with more powerful function.

(1) Users can actively define any function **including auxiliary functions** or control **stick, knob, or switch**. Users can passively define any channel.

(2) When the active definition is a function, you can choose whether the corresponding function trim can be used as the active operation.

(3) You can use the multi-point to adjust the mixing ratio, and up to 11 points can be adjusted. It supports the offset of the whole curve Y-axis.

(4) You can set the delay of mixing switch on/off.

3. New function ratio replaces the original ratio and curve function, to achieve all channels are in the adjustable curve.

----- More direct adjustment interface with more powerful function.

(1) You can set the median/lowest point as the adjustment reference point. When you set the median as the reference point, you can adjust the ratio and EXP on the left and right, respectively.

(2) You can quickly enter the dual ratio setting interface.

4. New dual ratio setting function replaces the original dual switch function in the ratio curve. With the function ratio menu, you can realize multiple ratio switching.

----- More powerful function and more flexible settings.



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(1) You can set 10 groups of dual ratios. Each group can be used to define different functions. It is best to enable one group when multiple groups of dual ratio define the same function.
(2) You can set the valid mode to operation mode or mobile mode, or both.

5. This can adapt to the enhanced receiver to achieve a variety of optional RF systems, to achieve adjustment of high frequency performance.

----- Match different application scenarios to choose different bind modes, to achieve adjustment in terms of distance, delay, anti-interference ability, and number of channels.

(1) In binding, you can choose Routine 18ch **comprehensive strongest CH18**, Lora 12ch **anti-interference strongest CH12** or Fast 8ch fast **response CH8**.

6. The enhanced receiver can be adjusted separately for each channel PWM signal frequency. This can achieve the synchronous settings of SR and SFR narrow frequency signals, and high frequency signals.

----- If the connected servo is supported, the use of high frequency PWM signal output can greatly improve response speed of the device.

(1) When it is set to SFR mode, PWM output frequency can be up to 1000 Hz. It increases by 20 times compared to the speed of the analog servo.

7. The enhanced receiver can support BVD voltage detection, using the calibration settings to adjust the displayed measured voltage value.

----- When you choose a receiver that supports BVD function, the external sensor is not required for voltage return. You can use the receiver BVD interface to connect to the battery supply side to achieve the function.

8. The enhanced receiver can be set with the Newport interface, supporting switching between PWM, i-BUS, S.BUS, and PPM protocol.

-----One interface can implement multiple functions. Users need to select a receiver with only the Newport to release multiple functions. When you need channel extension/sensor, you can select any Newport interface to be set with the interface supported by the corresponding device.

9. Upgrade of the receiver firmware through FlySky Assistant V3.0 is supported.

----- If the receiver is supported, you can use the remote controller to connect to the FlySky Assistant to upgrade to the latest firmware.

10. The power-on security check function is newly supported, and the detection alarm conditions can be set separately for each model.

-----The preset security position of the switch can be known in case of RF enabled upon power-on/switching of models. If it is not in the security position, an alarm is reported without triggering the model control. There is an additional security guarantee for the model.

11. All models can be newly added to the model combination settings, replacing the original way



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of 2 models as one combination. Models added to the combination can be easily switched by a 3-position switch.

----- There are multiple switching controls for models. For example, a switch can be switched to different time periods for excavators, loaders, trucks, respectively. In addition, when the model is larger without changing the plugged line, you can use different receivers for modules that do not need to be controlled at the same time. For other models in the binding group, you can switch to control different modules on the model.

► Modified functions: modified functions of the original version

1. The power-on interface is redesigned: changed to a color page with professional elements of engineering vehicles.
2. Modified shutdown process. The screen is closed after the save execution is completed in shutdown. This fixes the bug that the screen cannot be displayed upon immediate power-on after shutdown.
3. Modified the PWM converter configuration menu and supports the configuration of more receivers as converter.
 - (1) Receivers supporting the configuration as converters: FGr8B, FTr8B, FGr12B, FTr12B, FGr4B, INr6-HS, FGr4, and FTr10;
 - (2) You can set the starting channel and interface PWM frequency of the PWM converter in the configuration interface.
4. Modified the receiver failsafe setting, adding the failsafe mode in case of no output.
5. Modified the enable-disable switch icon in the control assignment, trimming assignment and switch assignment interface. Use "--" to indicate the state of a control not assigned.
6. Modified the throttle curve setting menu. The adjustment method is changed to the same adjustment method as the new function ratio.
7. Optimized the RF setting menu. Removed the option of an RF head not suitable for this machine. Optimized the receiver setting menu, making it more suitable for the functions of classic and enhanced receivers.
8. Optimized the enable/disable icons: changed the enable icons of track mixer, anti-lock brake and model timer to the status switch which can express the current status with better indication for selection.
9. Modified the help center: added QR code of each promotion platform to make it more convenient to find product information quickly.



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10. Fixed the bug that the model picture settings and receiver settings fail to be exported when model data is transferred.

► Special changes:

1. The default mode of failsafe is modified to no output mode. Receiver disconnection may trigger beeping devices on the model, while the old version does not have this function **in the old version, disconnection does not have the failsafe function, keeping the control command before failsafe.**

2. Changes of the bind settings will take effect after re-binding. If the model does not re-bind successfully, it will respond to the receiver that was bound previously, and use the configurations of the previous binding for communications.

3. For binding of the same receiver in different models, if the binding settings are different, the receiver responds only to the last binding model, and the previous binding is automatically invalid.

III.Note

1. The structure and logics in this firmware part of this version differ from those of the old version. Therefore, cross-version inheritance may fail **such as programming mixer, function ratio, and dual ratio setting** when the structure changes. Only part of the data cross-version inheritance is supported. After updating the firmware of the RF and the firmware of the receiver, you need to re-bind before use. Previous bind information is invalid.

2. In this version, the RF library is updated. After upgrading the transmitter firmware, you need to update the RF firmware and receiver firmware simultaneously. The update method is as follows:

(1) Upgrade the installed RF head FRM301: after this firmware is updated, the power-up guidance is added when the transmitter is powered on for the first time. Users can upgrade the RF head by following the instructions. If the RF is not connected or the update fails due to other errors, user needs to upgrade through choosing the transmitter function menu > **RF Setting > RF Module Firmware Update**. Note: The **RF Module Firmware Update function** will be available in the menu list in the following conditions: the transmitter is normally turned on, the RF is normally connected and enabled, and the RF type is set to FRM301.

(2) Upgrade the Receiver:

① The transmitter firmware is packed with the firmware of several receivers FGr12B, FGr8B, FTr10, FTr16S, FGr4 and FGr4/FGr4S/FGr4P. You can directly let the receiver enter the update state and then select the corresponding receiver model to update by choosing Receiver Firmware Update function in the Receiver Setting menu of the transmitter.

② All AFDHS 3 series receivers can be updated online through the computer software **FlySky Assistant V3.0**. You can follow the software interface prompts to complete the update. (Note: To update the receiver online with FlySky Assistant V3.0, you must update the transmitter firmware



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to the latest version before updating the receiver firmware. If the transmitter firmware needs to roll back, you need to perform the receiver rollback and then the transmitter rollback.)