Instruction Manual for FrSky ARCHER R8 PRO Receiver

Version 1.1

Introduction

The Archer R8 PRO has 8 high-precision PWM channel outputs and features excellent Anti-interference performance when it comes to spark-ignition on internal combustion models. It supports full-range signal strength with dual detachable antennas that assure optimal antenna reception and maximum range. In addition to all this, the R8 Pro can also be used as a redundancy receiver along with any other FrSky ACCESS capable receiver equipped with a SBUS port.

All of the Archer receivers are hyper-matched with the ACCESS protocol. They not only feature wireless firmware upgrades, increased range, and telemetry performance, the R8 PRO now supports more functions like configurable telemetry power, S.Port/F.Port switching and FLR output. Additional valuable features are under development to unlock the true potential of the ACCESS protocol.

Overview



Specifications

- Dimension: 47*26*15mm (L*W*H)
- Weight: 13g
- Number of Channels:
  - 8 high-precision PWM channels
  - 16 SBUS channels
  - 24 SBUS channels (Stay tuned)
- Operating Voltage Range: 3.5-10V
- Operating Current: ＜55mA@5V
- Control Range: Full range* with telemetry (*Full Range: ＞2km, range may vary based on local conditions.)
- Voltage Measurement Range via AIN2 (External device): 0-36V (Battery Voltage Division Ratio: 1:10)
- Compatibility: All FrSky ACCESS transmitters

Features

- ACCESS Protocol with Over The Air (OTA)
- Receiver redundancy
- 8 high-precision PWM channels
- SBUS IN &OUT (using standard servo connectors)
- S.Port / F.Port and AIN2 (on 4 pin socket)
- VFR (Valid Frame Rate) telemetry
- Anti-interference in spark-ignition

LED state

Green LED	Red LED	Status
On	On	Register
Flash	Flash	Register successfully
On	On	Bind
On	Off	Bind successfully
On	Off	Working normally
Off	On	Failsafe

Registration & Automatic binding (Smart Match™)

With the FrSky ACCESS protocol, the transmitter/transmitter module can bind receiver without using the "REG" button. Follow the step below to finish the Registration & binding procedure:

1. Put the transmitter/transmitter module into [Reg] status.

1.1 For Taranis X-Lite Pro as an example, turn on the transmitter, go to the MENU-MODEL SETUP-PAGE 2,choose Internal or External RF, and select [Reg].

2. Connect the battery to the receiver while holding the button on the receiver. The RED LED and GREEN LED on the receiver will be on, indicating into the [Reg] status. Select [ENTER] on the transmitter, The RED LED and GREEN LED on the receiver will flash, and the transmitter displays [Registration ok].

3. Turn off the receiver.

4. Move the cursor to select the receiver 1 [Bind].

5. Connect the battery to the receiver, the GREEN LED will flash, indicating into the [Bind] status. Select the RX, the GREEN will keep lit, and the transmitter displays [Bind successful].

6. The transmitter exit [Bind], GREEN LED will keep lit, RED LED will be off, indicating Working normally.

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How to Switch FS (20ms) mode/HS (7ms) mode

a) The factory default setting is FS mode.
b) To go to the receiver [Options], select the 7ms PWM or not.

Note: The SBUS output is 7ms, no matter HS/FS mode.

Warning: HS mode is only applied for digital servos. Other servos should select FS mode, otherwise servos will get hot and may burn out.

Warning: [Options] setting in flight will cause the failsafe.

About OTA function

-- For Taranis X-Lite Pro as an example, go to the SD CARD 2/7, and select the FW, press the enter button, select [Flash receiver OTA], power on the receiver, select the RX, go to the [ENTER], complete the flash process, the transmitter will display [Flash successful]. Re-power the receiver and wait for 3 seconds, the Green LED starts flashing indicates the receiver works properly at the momemnt.

Note: Please do not do the binding operation in the near range while the firmware upgrading in progress.

Note: Update the firmware after the receiver gets bound.

Range Check

A pre-flight range check should be done before each flying session. Reflections from nearby metal fences, concrete buildings or trees can cause loss of signal both during range check and during the flight. Under Range Check Mode, the RF power would be decreased and Range distance to 1/30 --1/10 that of Normal Mode.
* The signal is completely lost is recommended as the node to complete the range test.
1. Place the model at least 60cm (two feet) above non-metal contaminated ground (e.g. on a wooden bench). The receiver antenna should be in vertical position.
2. For Taranis X-Lite Pro as an example, turn on the transmitter and power on the receiver, go to: SETUP 2/13 /Internal RF/ Module [Rng].
3. For transmitter RF module, please refer to its manual.
Much more operation and instruction please refer to radio manual.

Failsafe

Failsafe is a useful feature which is for a preset channel output position whenever control signal is lost for a period.
Follow the steps to set Failsafe for channels necessary:
Failsafe for receiver supporting ACCESS can be set via radio interface, which support no pulse, hold and custom three modes for each channel.
1. For Taranis X-Lite Pro as an example, turn on the transmitter, go to: MODEL SETUP/Internal RF/Failsafe.
2. Failsafe can be set on receiver via short pressing F/S button while moving a certain channel position to a preset value after binding.

FCC STATEMENT

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
   1) This device may not cause harmful interference.
   2) This device must accept any interference received, including interference that may cause undesired operation.
2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FrSky is continuously adding features and improvements to our products. To get the most from your product, please check the download section of the FrSky website www.frsky-rc.com for the latest update firmware and manuals

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