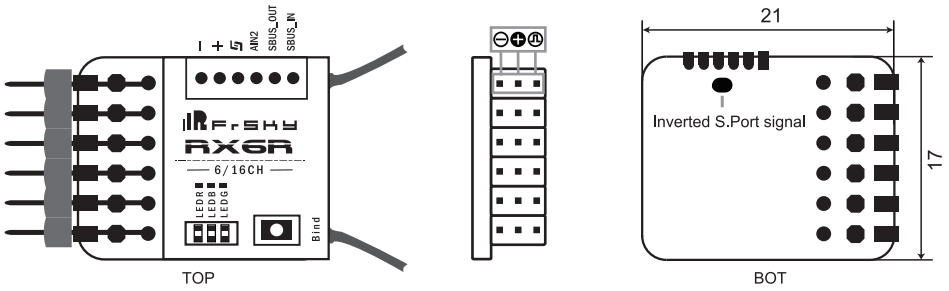
Introduction

Thank you for purchasing FrSky RX6R 6/16ch telemetry receiver. The RX6R features 6 PWM outputs with extremely high precision and low latency. The latency of PWM output is 9ms less than that of X series receivers in high speed mode. RX6R features redundancy function as well, so another receiver can be added as a back-up in case the first one fails. Last but not least, the RX6R and the whole RX-line has a 40% increase in range compared to the previous X series receivers. In order to fully enjoy the benefits of this system, please read the instruction manual carefully and set up the device as described below.

* The RX6R is an ACCESS compatible receiver, by flashing the ACCESS firmware it can be re-bound at any time without accessing the F/S button once it is registered to an ACCESS radio.

Overview



What's New

1. CH1~CH6 outputs high precision PWM signal (Precision: less than 0.5μs)

2. Under the same conditions, the effective communication distance of RX6R is about 1.4 times than that of X series receivers.

Specifications

- Dimension: 21*17*7mm (L × W × H)
- Weight: 2.5g / 2.9g (with two antennas)
- Number of Channels: 16CH (1~6CH from conventional channel output, 1~16CH from SBUS port).
- Operating Voltage Range: 3.5V~10V
- Operating Current: 100mA@5V
- Operating Range: >2km
- Compatibility: ACCST D16 / ACCESS mode
- Servo frame rate: 9ms (HS-- High Speed Mode) / 18ms (FS--Normal Speed Mode)

Instruction Manual for FrSky ACCST RX6R | Version 1.0

Smart Port (S. Port) is a signal wire full duplex digital transmission interface developed by FrSky Electronic Co., Ltd. All products enabled with Smart Port (including XJT module, XSR,X6R and X8R receiver, new hub-less sensors, new Smart Dashboard, etc), serial port user data and other user input/output devices can be connected without limitations for numbers or sequences at a high transmission speed.

Feature

- Small and High sensitivity (40% increase of the range compared to previous X series receivers)
- Higher precision PWM
- Low latency PWM output
- Lower power consumption
- Redundancy function supported
- Smart Port enabled and telemetry data transmission supported
- Battery voltage detection supported
- 2 detachable IPEX 4 connector antennas
- PCB protection with the comformal coating craftwork

Working state

Blue LED	Green LED	Red LED	Status
X	On	On	Bind
X	On	Flashing	Binding successfully
On	On	Off	Working under HS Mode
Off	On	Off	Working under FS Mode
X	Off	Flashing	Failsafe

Note:
1. X meanings neglect.
2. The default output of RX6R is standard SBUS signal (1-16CH). Hold Bind button for about 5 seconds, CH16 will output RSSI. Repeat the steps above, the value of Channel 16 will output CH16.

Binding procedure

Binding is the process of uniquely associating a receiver to a transmitter RF module. A transmitter RF module can be bound to multiple receivers (not to be used simultaneously). A receiver can only be bound to one RF module. Follow the steps below to finish the binding procedure.

1. Put the transmitter RF module into binding mode

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1.1 For Taranis Series transmitters, turn on the transmitter, go to the MENU-MODEL SETUP—PAGE 2, choose Internal or External RF-- Mode D16, then select Bind (OpenTX 2.2.2 and its improved versions are strongly recommended).

1.2 For Horus Series transmitters, turn on the transmitter, go to RF SYSTEM—Mode D16, choose Internal or External RF, and select BIND under STATE.

1.3 For transmitter modules (XJT as an example), choose D16 mode first, and turn on External RF on the transmitter while holding the F/S button on the module, release the button and the RED LED on XJT module will flash.

2. Power on the receiver while holding its F/S button. The RED LED on the receiver will flash, indicating the binding process is completed.

3. Exit the Bind mode and power off the receiver.

4. Power on the receiver, the Green LED is on, indicating the receiver is receiving commands from the transmitter. The receiver / transmitter module binding will not have to be repeated, unless one of the two is replaced.

Note: After binding procedure is completed, resupply the power and check if the receiver is truly communicating with the transmitter.

How to Switch FS mode/HS mode

1. The factory default setting is FS mode.

2. Connect CH1 and CH2 signal pins with the included jumper before Binding, the receiver will enter HS mode. The receiver will enter into FS mode without the jumper connected.

3. If Blue LED is on, RX6R is under HS mode.
If Blue LED goes out, RX6R is under FS mode.

Note: The SBUS output is 9ms, no matter HS/FS mode.

How to select output 1 ~ 6CH / 9 ~ 14CH

For both Taranis and Horus taransmitters, choose 1-8CH / 9~16CH after selecting Bind. If the receiver outputs 9 ~ 14CH, and you want to switch back to 1 ~ 6CH, follow the same procedure above. Here are the table of detailed information.

Selections on the Transmitter	Corresponding State on the Receiver
CH1 – 8 Telemetry ON	Output CH1 – 6 with telemetry
CH1 – 8 Telemetry OFF	Output CH1 – 6 without telemetry
CH9 – 16 Telemetry ON	Output CH9 – 14 with telemetry
CH9 – 16 Telemetry OFF	Output CH9 – 14 without telemetry

When combine two receivers to become a 12CH receiver, you need to disable telemetry on either one of the two receiver's.

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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 Model, about 30 meters.

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 Series transmitters, turn on the transmitter and power on the receiver, go to: MODEL SETUP/Internal RF/Range.

3. For Horus Series transmitters, turn on the transmitter and power on the receiver, go to: MDL/RF SYSTEM/INTERNAL RF (ON) /STATE (Range).

4. 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 D16 RF mode setting can be set via radio interface, which support no pulse, hold and custom three modes for each channel.
1. For Taranis Series transmitters, turn on the transmitter, go to: MODEL SETUP/Internal RF/Failsafe.

2. For Horus Series transmitters, turn on the transmitter, go to: MDL/FAIL SAFE.

3. Failsafe can be set on receiver via short pressing F/S button while moving a certain channel position to a preset value after binding.

Note: Failsafe setting via transmitter for channel output position just for D16 RF mode, and Failsafe setting via transmitter has higher priority to setting via receiver. A reasonable Failsafe setting can decrease falling risk and damage.

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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