

REDCON 2.4GHz Spread Spectrum (FASST COMPATIBLE)

Receiver Instruction Manual for R4204-SB and R6206-SB

Compatibility:

The REDCON 2.4GHz Spread Spectrum FASST Compatible Receiver is designed for use with FUTABA's FASST 2.4GHz transmitters; including the 3PM,3PKS,3VCS,3GR,4PK(S),TM7, TM8, TM10, TM14 and the T6EX-2.4G, 7C-2.4G, 8FG, 10CG, 12FG. The R4204-SB and R6206-SB receivers supply a more useful mode for users. Both the R4204-SB and R6206-SB support FUTABA's FASST air system and surface system. The R4204-SB supports 7-channel with continuous PPM (positive and negative) output, RSSI output and S.BUS output, R6206-SB supports 6 channel high speed PPM(HS) mode to optimize helicopter response control and S.BUS output.

Under S.BUS output mode, both R4204-SB and R6206-SB supply 12 proportional channels and 2 DG channels. Therefore, the R4204-SB or R6206-SB becomes 14-channel receivers when using S.BUS output.

Specifications:

Operating Current: 50mA max

Operating Voltage: 3.6 ~10V

Latency: *R4204-SB's description*

14mS for independent 4 channel output and S.BUS output @ FASST multi-channel mode

21mS for Continuous PPM output and RSSI output@ FASST multi-channel mode

16mS for independent 4 channel output and S.BUS output @ FASST 7ch mode

24mS for Continuous PPM output and RSSI output@ FASST 7ch mode

14mS for independent 3 channel output@ FASST surface system C1 CODE mode

R6206-SB's description

7mS for independent 6 channel (HS) output@ FASST multi-channel mode

14mS for independent 7 channel (LS) output and S.BUS output @ FASST multi-channel mode

8ms for independent 6 channel (HS) output@ FASST 7ch mode

16mS for independent 7 channel (LS) output and S.BUS output @ FASST 7ch mode

14ms for independent 3 channel output@ FASST surface system C1 CODE mode

Sensitivity: about -100dBm

Operation temperature:
-10~80 deg C

Setup:

Bind procedure:

- Turn on the FASST transmitter
- Connect the battery to the receiver while pressing the receiver's F/S button.
- The Dual-color LED's will continuously cycle through the following:
 - Red LED light (searching radio signal)
 - Green LED light (acquired the radio signal)
 - Red LED off (bind ok)
 - Green LED flashes 10 times (ID stored in memory)
 - Green LED lights solid (normal operation)

Note: FASST surface systems take a bit more time to complete the bind procedure.

Fail-safe setting:

There are two ways to set the Failsafe setting on the REDCON 2.4GHz Spread Spectrum FASST Compatible Receiver;

1. TX-failsafe feature: This method sets the failsafe on the FASST transmitter and has priority (works on channel 3 only under FASST 7ch mode or on multiple-channels under FASST multi-channel mode) while the receiver is on, just like FUTABA receivers (**only available on FASST air system**).
2. RX-failsafe feature: Turn on the FASST transmitter and then turn on the REDCON 2.4GHz Spread Spectrum Receiver, put all the sticks and switches to control inputs you want if the receiver loses signal and Press the F/S button down for about 5 - 6 seconds while the Green LED lights solid (Rx in normal operation), then release the button. You will see the Red LED will

flash for about 4 - 5 seconds. (Note: The Red LED will FLASH high speed to indicate the RX-failsafe is turned on OR FLASH low speed to indicate the RX-failsafe is turned off). If you press the F/S button a second time while the Red LED is flashing, the receiver will change its RX-failsafe status (on / off), then the LED will return to Green solid again. If you not press the F/S button, nothing will be changed and the LED will return to solid Green. If you want to cancel the RX-failsafe feature (not just turn it off), you can do so by binding the receiver again. After binding operation the receiver will be back to factory settings without any failsafe feature.

Note: If you do not set a failsafe setting, the receiver will hold all controls at the position of the last command received before signal was lost. When RX-failsafe is turned on, the receiver will initiate the RX-failsafe settings after loosing signal for over 1 second and the receiver will hold the last received positions until the failsafe takes over. When the RX-failsafe and TX-failsafe feature are both turned on, the receiver will use the TX-failsafe command.

We highly recommend you set failsafe feature before flying your models. An example of a minimal useful, failsafe setting would be to shut down the model's throttle, so that it does not fly or drive away uncontrolled.

Output mode setting (only available on FASST air system):

Turn off the transmitter, connect the battery to the receiver, you will see the Red LED light flashing. The RED LED flashes at high speed to indicate the receiver is in the special output mode OR a Low speed indicates the receiver is under (LS) low speed PPM normal output mode, press the F/S button for 5-6 seconds while the Green LED is off (Rx in signal searching status), then release the button. You will see the Green LED flash for about 4 - 5 seconds. (Note: The Green LED will FLASH high speed under special mode OR FLASH low speed under normal output mode). If you press the F/S button a second time while the Green LED is flashing, the receiver will change its **output** mode status (special/normal), if you do not press the F/S button the output mode will not be changed and the Red LED will flash at its original speed.

Note: Output mode function is described in the form below,

R4204-SB		R6206-SB	
normal	Ch1~CH4 independent PPM output	normal	Ch1~CH7 independent PPM output
special	CH1 Neg CPPM out(FUTABA trainer FUNC)*1	special	CH1~CH6 independent high speed(HS)PPM out for helicopter fast response control
	CH2 Pos CPPM out for special user*2		
	CH3 RSSI PWM out for FPV()*3		CH7 S.BUS output for compact system
	CH4 S.BUS output for compact system		

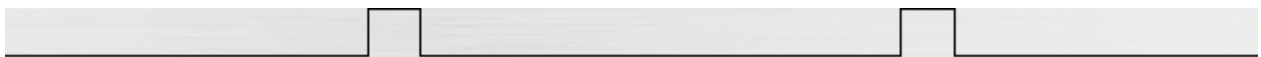
Note: *1 refer the signal description picture below



*2 refer the signal description picture below



*3 refer the signal description picture below



RSSI PWM out define: Pulse width from about 900uS~ 2100uS to indicate RSSI strength from -100dBm~-40dBm.

Important Note: If you are using analog servos in your model you must keep your receiver under the factory settings (normal output mode) or your analog servo will get hot and possibly burn out. As well you cannot use a non S.BUS servo on a channel while S.BUS signal output present.

LED status indicated under normal working status:

RED LED	GREEN LED	Status
flash	off	No signal searched
off	solid	Signal is very good
Sometime flash	solid	Signal is not very good
flash	flash	Signal is weak