

## **RP8D1 Manual**

### **Receiver RP8D1**

Thank you for purchasing the RP8D1 receiver – a small and light dual conversion 8 CH synthesized receiver! With high performance using the latest receiver technology.

### **Why a Synthesized Receiver?**

Synthesized receivers get rid of the inconvenience of using a crystal. Receivers with a crystal still use the technology of the 1970's where the user has to change the crystal to switch to a different frequency. Users are either stuck to one frequency or have to bring more (expensive) crystals to the flying field. In addition, every time the crystal is changed there is a chance of damaging the receiver. With a synthesized receiver, all you need to do is push the button to switch to any channel you are transmitting at. With Corona's technology in developing and manufacturing of R/C products, the RP8D1 8 CH Dual Conversion receiver becomes the smallest in the world. But do not only focus on its small size. Its high performance will also surprise you!

### **RP8D1's Features**

1. You can switch the frequency freely with the RP8D1 8 CH dual conversion synthesized receiver.
2. The 'one button' function makes it extremely easy to change frequency.
3. Despite the small size, the receiving range reaches as far as 1 mile!
4. The dual ceramic IF filters ensure ultra narrow selectivity, and can reject adjacent channel interference effectively.
5. The RP8D1 can identify the shift polarity of the transmitter (FUTABA, JR) automatically.
6. DSP technology filters noise intelligently and eliminates glitches effectively.
7. Failsafe function to put servos in a predetermined position in case of lost signal reception.

### **Specifications**

Size 1.8"x0.9"x0.5" (49x24x14mm)

Weight 0.32oz (9.2g)(with shrink wrap)

Sensitivity better than 2.0 $\mu$ V

Selectivity  $\pm$ 8kHz at 65dB down

Nr. of channels 8

RF technology Dual tuned RF circuitry

Analog filtering Dual 4 pole ceramic filter

Digital filtering DSP filtering with mild algorithm

Modulation FM/PPM

Shift polarity Positive or Negative (auto detect)

Case Shrink wrap

Operating Voltage 4.8V~6.0VDC

Operating Current 24mA.

# Setting up the receiver

The setup procedure has 3 functions:

## Mode I

- lock the receiver to the transmitter frequency

## Mode II

- disable failsafe

## Mode III

- enable failsafe

Failsafe ensures that the servos and/or ESC are set to a predetermined position within 0.5s after a loss of reception. Without failsafe servos will respond erratically resulting in a loss of aircraft control in case reception is lost.

## Set up process

1. Turn on transmitter with the antenna extended
2. Power up the receiver. The receiver LED will flash 2 times quickly
3. Press the scan button on the receiver for 2 seconds
4. The LED will flash 3 times meaning the receiver is ready for the set up process (should it blink 2 times, then press the button again for 2 seconds).

Keep a careful eye on the LED. The receiver will cycle through 3 modes successively.

It may be helpful to do the setup in a dark environment so you can better see the LED flashing.

## Mode I

- Short lit followed by a short dark period, repeated 3 times

sequence will repeat 3 times. Pressing the button in this mode will start the frequency locking process. If the button is not pressed, mode I will be entered.

### Locking to the transmitter frequency

1. Turn on the transmitter with the antenna extended.
2. Turn on the receiver. The LED will blink 2 times. If the LED remains lit then the receiver is receiving correct commands from a transmitter.  
If the LED goes out then the receiver is not receiving any correct commands, in which case you should set it up again...
3. To set it up, press the scan button for 2 seconds, then release it. The LED blinks 3 times now (should it blink 2 times, then press the button again for 2 seconds). While in mode III, press the button shortly.  
If the LED begins to blink quickly it means that the receiver is searching for a valid signal.  
Wait for 2-3 seconds for the search to complete. Once the receiver is locked to the transmitter, the LED will flash 2 times and then remain lit. If the LED goes out again, check the transmitter.
4. After the receiver has locked, if you don't change frequency, the receiver will work whenever you connect it to the power. No need to relock.

*Caution: when locking your receiver, please ensure only your own transmitter is working and put your receiver close enough to your transmitter.*

## Mode II

- Long lit followed by a long dark period, repeated 3 times

sequence will repeat 2 times. Pressing the button in this mode will disable the failsafe function. If the button is not pressed, mode II will be entered.

### Disabling the failsafe

1. Turn on the transmitter with the antenna extended.
2. Turn on the receiver. The LED will blink 2 times. If the LED remains lit then the receiver is receiving correct commands from a transmitter.
3. To set it up, press the scan button for 2 seconds, then release it. The LED blinks 3 times now (should it blink 2 times, then press the button again for 2 seconds). While in mode II, press the button shortly to start

the failsafe disabling process.

4. The LED will flash 2 times and then remain lit. The transmitter now does not control the receiver and the failsafe has been disabled. You must now restart the receiver.

### Mode III

- Short lit followed by a long dark period, repeated 3 times sequence will repeat 2 times. Pressing the button in this mode will enable the failsafe function. If the button is not pressed, mode III will be entered again.

If no button is pressed these 3 modes will repeat 10 times, then end with 2 short LED flashes.

### Enabling the failsafe

1. Turn on the transmitter with the antenna extended.
2. Turn on the receiver. The LED will blink 2 times. If the LED remains lit then the receiver is receiving correct commands from a transmitter.
3. Adjust the sticks and switches on the transmitter to the position that you feel will best protect your aircraft in the event of a loss of signal. Typically the throttle is decreased and a slight elevator input is required to maintain a controlled glide slope. You should notice as you set the sticks and switches that the receiver is responding indicating the transmitter and receiver are synchronized.

4. To set it up, press the scan button for 2 seconds, then release it. The LED blinks 3 times now (should it blink 2 times, then press the button again for 2 seconds). While in mode III, press the button shortly to start the failsafe enabling process.

5. The LED will flash 2 times and then remain lit. The transmitter now does not control the receiver and the failsafe has been enabled. You must now restart the receiver.

During this setting step do not turn off the transmitter. Otherwise the receiver will not record the position of sticks and switches and it will not retain a failsafe setting. Should this occur you will notice the LED flashing twice and then going dark indicating that you will have to start the process over.

#### *Caution:*

1. Restart the receiver when the set up process of disabling or enabling the failsafe is completed.
2. While in Mode I, Mode II or Mode III you can cut power to cancel the setting process. Do not cut power in the process of locking receiver, disabling failsafe or enabling failsafe. Otherwise your receiver may be damaged.
3. After enabling failsafe, please read just the transmitter settings of sticks and switches for the correct flight conditions.

### Installing the receiver

1. Plug in all the servos/ESC. Pay attention to the polarity of the connectors. Please consult the labels on the case for the channel numbers and polarity.

Caution: If the polarity of the plugs is wrong, it can damage the servos/ESC.

2. If not using an ESC with a built in battery eliminator circuit (BEC), plug a 4.8V battery/switch harness into any unused channel. If you are using all the channels for servos, use a Y harness to connect the battery and servo to 1 channel.
3. Wrap the receiver in foam to isolate it from vibration and secure it in the aircraft with for instance a rubber band.
4. Unwind the antenna fully. Do not coil or cut the antenna.