

# Receiver RP82L

## Features

1. Switch the frequency freely with the RP82L 8CH dual conversion synthesized receiver.
2. The 'one button' function makes it extremely easy to scan automatically and lock transmitter frequency.
3. With excellent receiving function, the receiving distance reaches as far as 1 mile.
4. The dual ceramic IF filters ensure ultra narrow selectivity, and can reject adjacent channel interference effectively.
5. Identify the shift polarity of the transmitter (FUTABA, JR) automatically.
6. DSP technology filters noise intelligently, also improves anti-interference function, and more suit for using in complex environment.
7. Failsafe protecting function to put servos in a predetermined position in case of lost signal reception.



## 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.

## Setting 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

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

**Mode III** - Short lit followed by a long dark period, repeated 3 times

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

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

**Mode III** sequence will repeat 2 times. Pressing the button in this mode will enable the failsafe function. If the button is not pressed, mode I will be entered again.

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

#### **Mode I : 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 I**, 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 you're your Receiver close enough to your transmitter.**

#### **Mode II : 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 : 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 Model 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 readjust 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.

## Specifications

Size:	49x24x14mm
Weight:	9.2g (with shrink wrap)
Sensitivity:	better than 2.0 $\mu$ V
Selectivity:	$\pm$ 8kHz at 65dB down
No. of channels:	1-8
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.