

## JMP Combo Receiver

The JMP Combo receiver has been developed for the lightest models, powered by a single Li-Ion Polymer cell or 2 to 4 Nickel-Cadmium cells.

The receiver has three outputs : two for magnetic actuators, and one electronic speed control for the main propulsion motor. A mixer function is included in the actuator outputs.

The actuator outputs accept up to 400mA loads and are able to run small electric motors in both directions, for example for a blimp.

The ESC output is rated at 1.5 A (2.5 A peak)

The antenna matching circuitry of the JMP Combo receiver is designed so that a shortening of the antenna in case of a small model or the lengthening of the antenna for increased control range, do not require retuning of the receiver.

An undervoltage detection circuit switches off the motor under 3 Volt, and prevents Lithium battery damage.

### Operation

- 1) Switch on the transmitter first, the throttle stick being in the idle position.
- 2) Then switch on the receiver.

After one second, the receiver automatically identifies the throttle channel and its direction. It is programmed to identify four configurations, found in most available transmitters :

Channel No.				
1	Throttle	Aileron*	Aileron*	Aileron*
2	Aileron*	Throttle	Elevator	Elevator
3	Elevator	Elevator	Throttle	X
4	X	X	X	Throttle

\* The aileron stick is used for rudder in 3-channel models.

X The 4th channel option outputs channel marked « X »

Once the identification is done, the actuators begin to « sing ».

### Warnings :

- 1) Wrong polarity of the battery or a short circuit of one of the outputs is likely to damage the receiver.
- 2) It is advised to keep a minimum distance of 50 mm. between the receiver and electrical noise generators such as motor and battery.
- 3) Keep the antenna away from the rest of the electrical installation and any carbon structure.
- 4) A comparative range test with and without the motor running is recommended before the first flight of your model.

### Specifications :

Functions : 1 ESC, 2 actuators, mixer, motor switch-off if < 3V\*

Dimensions : 30 x 12,7 x 6 mm.

Weight : 1,72 g. (bare), 2,3 g. (with micro-crystal and 500 mm. antenna)

Selectivity : 10 kHz

Ground range : 100m. minimum.

Battery voltage : 2,0 to 5,5V.

Current drain : 6 mA + actuator drain.

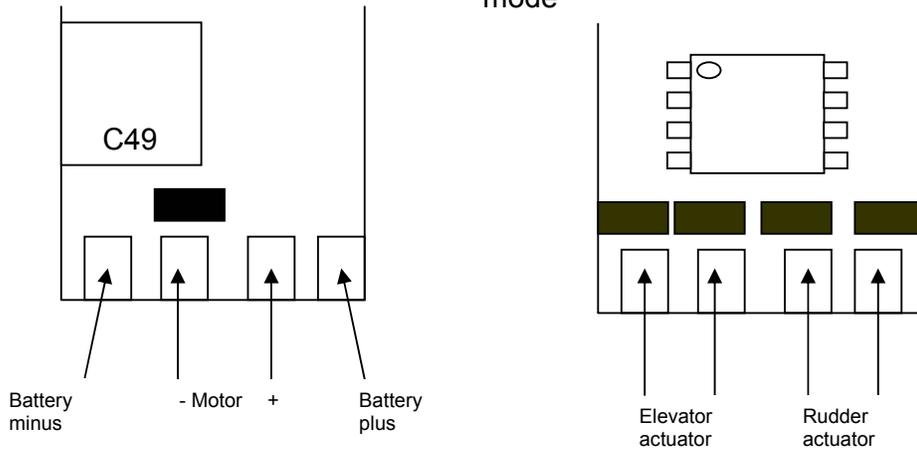
Actuator output (or motor Fwd/Rev) : 400 mA

Motor output : 1,5A (2,5 A peak)

\* Contact us for inhibiting the undervoltage detection (For 2 NiCad use)

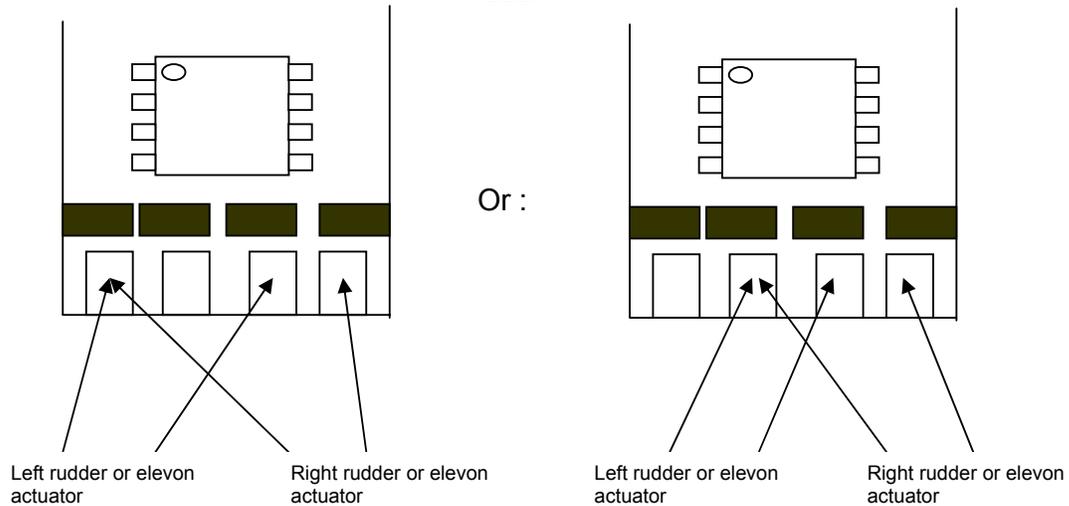
Connecting the outputs :

Normal mode



*Note : Actuator direction can be changed by swapping its two wires, or by turning the magnet around.*

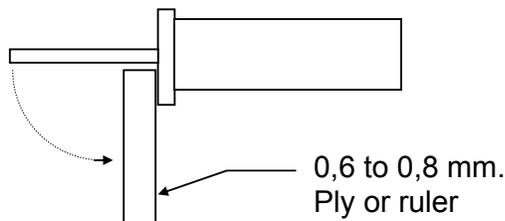
Mixer mode



*Note : Changing from the left-hand diagram to the right-hand diagram will reverse elevator direction, without changing rudder direction.*

*If rudder direction needs to be changed without changing elevator direction, swap the wires from the actuators on the two right-hand solder lands.*

Preparing the Crystal



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