FLYSKY FMS-R3B Receiver Instruction Manual

Contents

FLYSKY FMS-R3B Receiver

Product Information

The FMS-R3B is a 2-in-1 3-channel receiver with brushed ESC and LED light set. It is compliant with the 2A-BS protocol and supports 2-way transmission. The receiver features a single external antenna and can output PWM signals and vehicle light control signals. It has an auto-bind function upon power-on, a lightweight and compact design, and is suitable for model cars.

Receiver Overview

- [1] – Motor Interface (-)
- [2] + Motor Interface (+)
- [3] Battery Interface
- [4] Power Switch Cable
- [5] LED
- [6] Car Light Interface
- [7] CH1
- [8] CH3
- [9] Antenna

Note: The motor interface uses a 3.5mm bullet female connector.
The battery interface uses an XT30 male connector. CH1 and CH3 interfaces use standard 1.25mm*3Pin terminal blocks. The car light interface uses standard 1.25mm*2Pin terminal blocks.

Product Specifications

The FMS-R3B receiver needs to be bound with the transmitter for normal operation. The binding process is as follows:

1. Put the transmitter into bind mode (refer to the transmitter’s user manual for instructions).
2. Power on the receiver and wait for 2 seconds.
3. If the receiver is not connected, it will automatically enter the binding state.
4. Once the binding is successful, the LED indicator on the receiver will stay solid on.

Note: Make sure to set the transmitter to its binding state first, and then set the receiver to its binding state. If the binding process takes longer than 10 seconds, the LED of the receiver will start flashing slowly

The FMS-R3B receiver has a failsafe function to protect the model and personnel in case of out-of-control situations. By default, CH1 and CH3 channels will maintain their last output in such situations. You can set the failsafe value for CH1 and CH3 channels at the transmitter side.

ESC Drag Brake Force/Running Mode

The ESC drag brake force can be switched among 0%, 50%, 75%, and 100%. The default drag brake force is 0%.
The running mode can be set to Forward/Reverse/Brake mode or direct Forward/Reverse mode.
The default running mode is direct Forward/Reverse mode. When the running mode is set to Forward/Reverse/Brake mode, the maximum brake force can be set to 50%, 60%, or 100% through the transmitter.

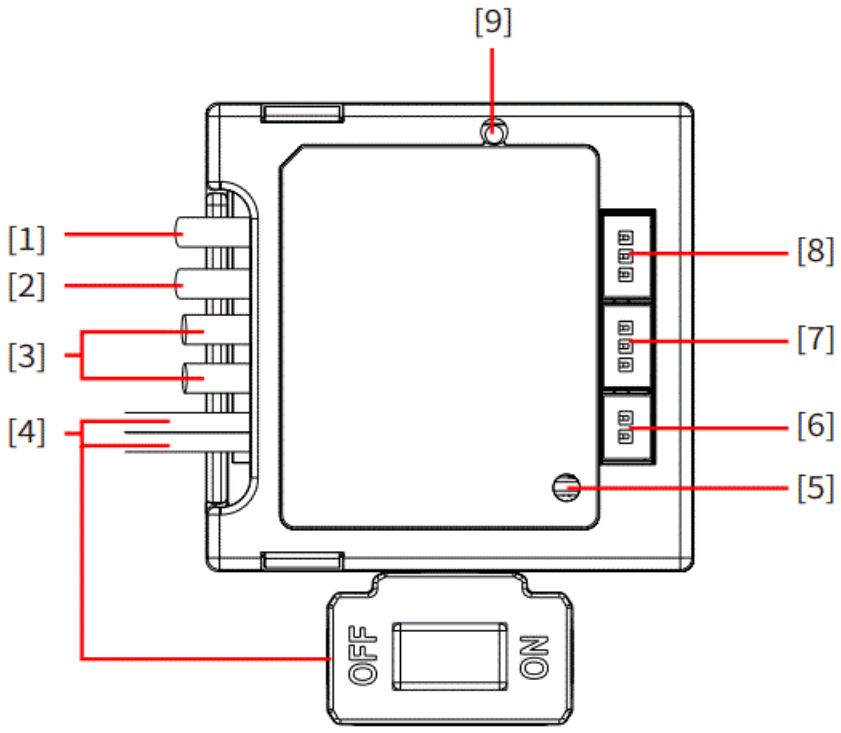
Note: The drag brake force and running mode of the ESC can be set using the transmitter bound with the receiver. Refer to the transmitter manual for more details.

Car Light Control
When the receiver and transmitter are connected normally, you can press the BIND button on the transmitter to turn on or turn off the car light. By default, the car light is off.

Introduction

The FMS-R3B, in compliance with the 2A-BS protocol, is a 2-in-1 3-channel receiver with brushed ESC and LED light set. The receiver, equipped with a single external antenna, can output PWM signals and vehicle light control signals, and support 2-way transmission.
It adopts auto-bind upon power-on and lightweight and compact design, and adaptation to model cars.

Receiver Overview



1. Motor Interface “-“

2. Motor Interface “+”
3. Battery Interface
4. Power Switch Cable
5. LED
6. Car Light Interface
7. CH1
8. CH3
9. Antenna

Note: The spec of motor interface is a 3.5 mm bullet female connector. The battery interface uses an XT30 male connector.
CH1 and CH3 interfaces use standard 1.25mm*3Pin terminal blocks. The car light interface uses standard 1.25mm*2Pin terminal blocks.

Product Specifications

- Product Name: FMS-R3B
- Applicable Transmitters: FMS-G3
- Model Type: 1/24 High-speed Model Cars
- Applicable Motors: 180 Brushed Motor
- Number of Channels: 3
- Number of Light Interfaces: 1
- RF: 2.4GHz ISM
- 2.4G Protocol: 2A-BS
- Antenna: Single External Antenna
- Input Power: 2S Lithium Battery
- BEC Output: 5V/1A
- Continuous / Peak Current: 20A/80A
- Distance: > 100m (Ground distance without interference)
- Data Output: PWM
- Temperature Range: -10℃ ~ +60℃
- Humidity Range: 20% ~ 95%
- Waterproof: PPX4
- Online Update: No
- Dimensions: 33.0*31.7*15.0mm
- Weight: 21g
- Certifications: CE, FCC ID: 2A2UNR3B00

Binding

This receiver is designed to automatically enter the binding mode at power-on.

- The receiver enters the waiting-for-connection state upon power-on, waiting for the connection to the bound transmitter.
- If the receiver does not connect the bound transmitter within 2S, it automatically enters the binding state. This

state lasts for 10S.

- If the binding with the transmitter is successful, it enters the normal connection state, otherwise, it exits the binding state and returns to the waiting-for-connection state.
  Note: In case of binding, the receiver LED flashes quickly. In case of waiting-for-connection, the receiver LED flashes slowly. In case of normal connection, the receiver LED is solid on.

The binding steps are as below.

1. First put the transmitter into bind mode (See the transmitter's user manual for instructions on how to activate bind mode.).
2. When the receiver is powered on and waits for 2 seconds, it will automatically enter the binding state if it is not connected.
3. After the binding is successful, the LED indicator of the receiver is solid on.
   Note: Set the transmitter to its binding state first, and then set the receiver to its binding state. If the binding is not finished within 10S, the LED of the receiver will enter its slow flashing state.

Protection

The receiver supports the low voltage protection function.

- Low Voltage Protection: The receiver will enter the low voltage protection state in case of detecting low voltage, all channels won't output, and the car light will flash slowly for prompt.
  The receiver supports the overheating protection and the blocking protection function.
- Overheating Protection: The receiver will enter the overheating protection state in case of the high internal temperature of the ESC, the CH2 motor channel won't output, but the other channels will output normally. The CH2 motor channel will output normally when the temperature is normal.
- Blocking Protection: When the external motor is blocked, it enters the blocking protection state, to protect the ESC and the motor.

Car Light Control

When the receiver and the transmitter has connected normally, press the BIND button of the transmitter to turn on or turn off the car llight. By default, the car light is off.

ESC Drag Brake Force/Running Mode

ESC Drag Brake Force
The drag brake force of the ESC can be switched among 0, 50%, 75% and 100%, and by default, the drag brake force is 0.

ESC Running Mode
The running mode can be set to Forward/Reverse/Brake mode or direct Forward/Reverse mode, and by default, the running mode is direct Forward/Reverse mode.
When the running mode is set to Forward/Reverse/Brake mode, the maxmam brake force can be set to 50%, 60% or 100% through the transmitter.
Note: The drag brake force and running mode of the ESC can be set at the transmitter side bound with the receiver. For the details, refer to the transmitter manual.

Attention:

- Make sure the product is installed and calibrated correctly, failure to do so may result in serious injury.
- Make sure the receiver's battery is disconnected before turning off the transmitter, failure to do so can result out of control.

  Unreasonable setting of the Failsafe may cause accidents.
- Make sure the receiver is mounted away from motors, electronic speed controllers or any device that emits excessive electrical noise.
- Keep the receiver's antenna at least 1cm away from conductive materials such as carbon or metal.
- Do not power on the receiver during the setup process to prevent loss of control.

Certifications

FCC Compliance Statement
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Warning: changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC
Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

EU DoC Declaration
Hereby, we declare that the Radio Equipment [FMS-R3B] is in compliance with RED 2014/53/EU.

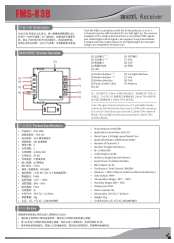
RF Exposure Compliance
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 centimeters between the radiator and your body.

Environmentally friendly disposal
Old electrical appliances must not be disposed of together with the residual waste, but have to be disposed of separately.
The disposal at the communal collecting point via private persons is for free. The owner of old appliances is responsible to bring the appliances to these collecting points or to similar collection points. With this little personal effort, you contribute to recycle valuable raw materials and the treatment of toxic substances.

FCC ID: 2A2UNR3B00

Figures and illustrations in this manual are provided for reference only and may differ from actual product appearance. Product design and specificatiions may be changed without notice.

Documents / Resources

	**FLYSKY FMS-R3B Receiver** [pdf] Instruction Manual R3B00, 2A2UNR3B00, FMS-R3B, Receiver, FMS-R3B Receiver