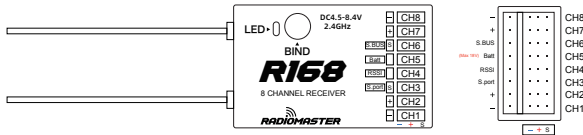


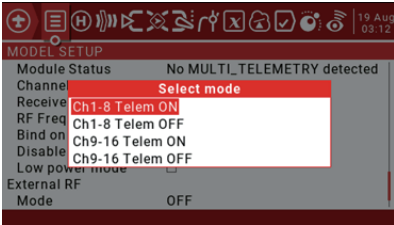
产品特性

- 通道个数：16通道
- 频率范围：2400-2483.5Mhz
- 信号格式：D16
- 供电范围：4.5-8.4V
- 输出格式：PWM、SBUS
- 支持回传：S.port、RSSI输出、VBAT（最高18V电压检测）
- 控制距离：大于1km
- 失控保护：CUSTOM（全通道自定义）、HOLD（失控保持）、NO PULSES（无脉冲）
- 天线长度：约15cm
- 尺寸：40*26*16毫米
- 重量：10克



对频方法

- 接收机按住BIND按钮，同时接通电源，接收机LED红绿灯同时常亮，等待对频
- 遥控器多协议高频头选择D16协议，并按下[BIND]选项，接收机红灯闪烁，表示对频成功
- 遥控器退出[BIND]模式，接收机需重新通电，此时接收机绿灯常亮，对频成功

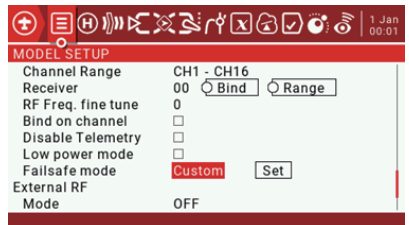


对频时遥控器弹出模式选单

- Ch1-8 Telem ON: 接收机PWM接口输出1-8通道信号，回传开启
- Ch1-8 Telem OFF: 接收机PWM接口输出1-8通道信号，回传关闭
- Ch9-16 Telem ON: 接收机PWM接口输出9-16通道信号，回传开启
- Ch1-16 Telem OFF: 接收机PWM接口输出9-16通道信号，回传关闭

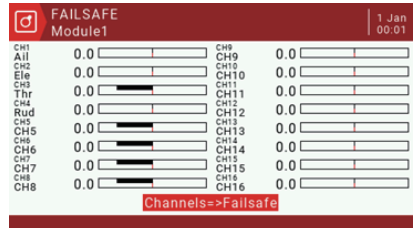
失控保护

接收机支持多种失控保护方式，可在遥控器 Failsafe mode 中选择相应的设置，自定义失控保护



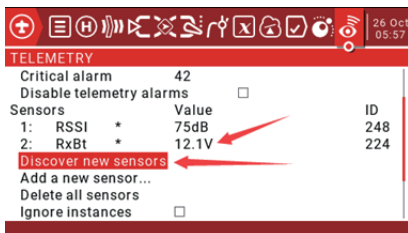
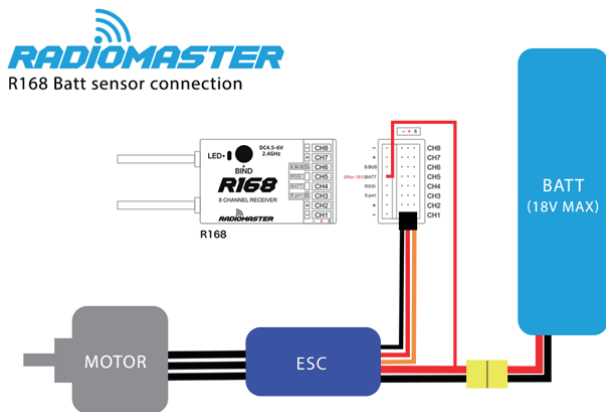
Failsafe mode失控保护设置选项说明

- Not set: 未设置失控保护，遥控器开机弹出相应提示，提醒您设置失控保护
- Hold: 失控保持，保持失控前最后一刻的通道输出
- No pulses: 无脉冲，接收机失控时切断所有通道输出信号
- Receiver: 接收机按钮设置，接收机短按BIND按钮小于1秒，接收机LED绿灯闪烁两次，即保存当前遥控通道值，作为接收机失控保护值
- Custom: 自定义，选择[Set]进入以下界面，可在此界面定义每个通道值，选择最下方Channels=>Failsafe选项，即可将当前设置发送到接收机，作为接收机失控保护值

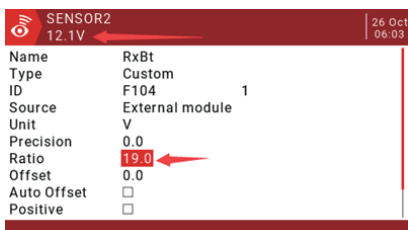


电压回传

1. 接收机支持供电电池电压回传，将电池正极连接至BATT接口即可实现电池电压的回传功能。
2. 可按下图图示连接，接收机电压检测接口BATT最大支持18V电压输入，请不要接入大于18V电压的电池，以免对接收机造成不可逆的永久损坏。



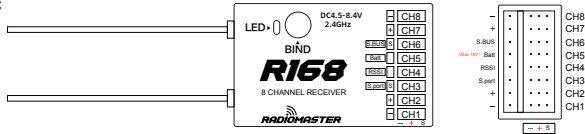
3. 扫描回传项目：第一次使用需在遥控器TELEMETRY页面中选择Discover new sensors扫描回传，以得到所有回传项目。



4. 校准电压：选中电压回传项目，例如RxBt，在弹出的菜单选择Edit进入编辑，修改Ratio参数，并观察顶部的回传电压显示，直到顶部电压显示与实际测量电压基本一致，完成校准。

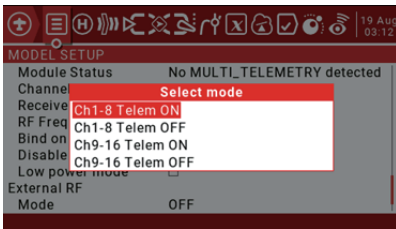
Receiver Specifications

- Number of channels: 16 channels
- Frequency range: 2400-2483.5MHz
- Power supply range: 4.5-8.4V
- Signal protocol: D16
- Output format: PWM, SBUS
- Telemetry: S.port, RSSI output, VBAT (up to 18V voltage detection)
- Control distance: more than 1km
- Failsafe protection: CUSTOM (customized for all channels),
HOLD (failsafe hold), NO PULSES (no pulse)
- Antenna length: Approximately 15cm
- Size: 40*26*16mm
- Weight: 10 grams



Bind Method

1. On the receiver, presses and hold the BIND button and power on the receiver at the same time. The receiver LED red and green lights will be on at the same time, the receiver is now ready to bind.
2. The multi-protocol RF of the remote control select the D16 protocol, presses the [BIND] option, the red light of the receiver will flash indicating successful bind.
3. Exit [BIND] mode on your radio then power off and power on again the receiver. At this time, the green light of the receiver is always on, this indicates the bind process was a success.



The remote control opens the mode menu when binding. SBUS always outputs channels 1-16

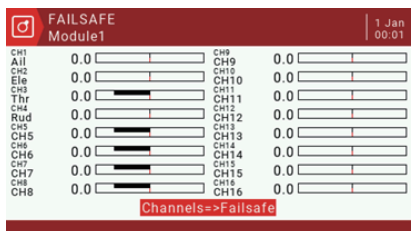
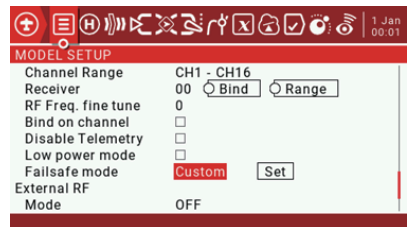
- Ch1-8 Telem ON: The receiver's PWM interface outputs 1-8 channel signals, and telemetry is turned on
- Ch1-8 Telem OFF: The receiver's PWM interface outputs signals from channels 1-8, and telemetry is turned off
- Ch9-16 Telem ON: Receiver PWM interface outputs 9-16 channel signals, and telemetry is on
- Ch1-16 Telem OFF: The receiver PWM interface outputs 9-16 channel signals, and telemetry turned off

Setting Fail-safe

The receiver supports a variety of fail-safe protection methods, you can select the corresponding settings in the remote-control Failsafe mode to customize the fail-safe protection

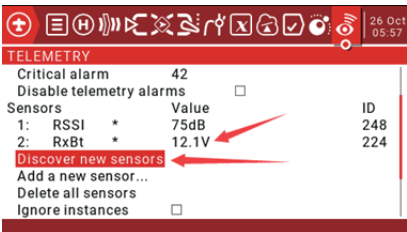
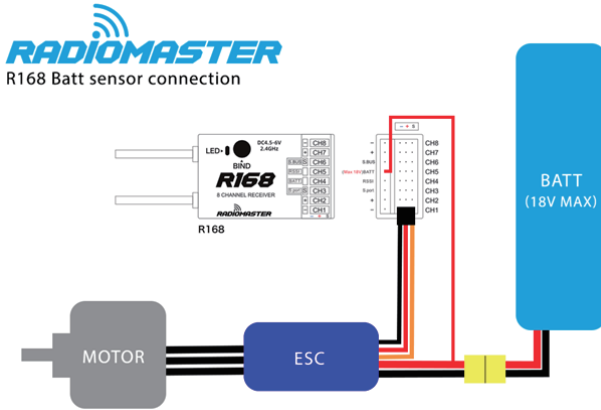
Failsafe mode Failsafe setting option description

1. Not set: If the runaway protection is not set, the remote control will pop up a corresponding prompt to remind you to set the runaway protection.
2. Hold: Failsafe hold, keep the channel output at the last moment before losing signal.
3. No pulses: no pulse, when the receiver is out signal range, the output signal of all channels will be shut down
4. Receiver: On the receiver short press the BIND button for less than 1 second, the receiver LED green light flashes twice, this will save the current channel values and stick positions of the remote control as the receiver failsafe values.
5. Custom: Select [Set] to enter the following interface, you can define each channel value in this interface, select the lowest Channels=>Failsafe option, you can send the current settings to the receiver as the receiver's failsafe values.

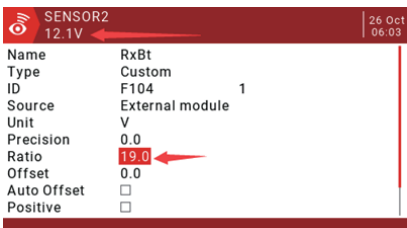


Battery Telemetry

1. The R168 has built in voltage telemetry for your main flight battery or any battery up to 18v. Connect the positive electrode of the battery to the BATT interface to so the telemetry sensor can take a voltage reading. Note the ground circuit must be on the same circuit as the battery being read.
2. Please follow the below diagram. Please DO NOT connect the BATT sensor to a battery greater than 18v or the receiver will be damaged.



To enable the telemetry function on your radio, navigate to the telemetry page and select "Discover New Sensors" to scan for sensors currently on the receiver.



Ensure you calibrate the voltage of the sensor. Select the RxBt option and follow the popup menu. Adjust the ratio parameter until the displayed voltage matches the actual voltage of the battery being read by the receiver.

频率微调

特别注意 D8和D16协议接收机在正式使用之前，必须使用频率微调功能，消除发射机与接收机之间的频率误差，才可达到最佳遥控距离与稳定性，具体操作方法如下：

1. 将RF Freq. fine tune数值逐渐调低，直到接收机丢失信号，并记录下这个数值（一般为负数）
2. 再RF Freq. fine tune数值逐渐调高，直到接收机丢失信号，并记录下这个数值（一般为正数）
3. 将这两个数字按此公式计算，得出频率微调中点值，并填写在RF Freq. fine tune参数中
(低位数值+高位数值) ÷ 2=中点值

例如：得到低位数值为-73，高位数值为35，根据公式计算

$$\text{RF Freq. fine tune} = (-73 + 35) \div 2$$

$$\text{RF Freq. fine tune} = (-38) \div 2$$

$$\text{RF Freq. fine tune} = -19$$

D8 and D16 compatible receivers MUST be frequency fine tuned before flight.

Once the radio is bound to the receiver:

Return to the RF Freq. fine tune option

1. Lower the value until the radio loses the connection with the receiver. Record the value (TUNE_MIN).
2. Raise the value so that the connection is restored, then continue to raise it until the radio loses the connection with the receiver again. Record the value (TUNE_MAX).
3. Calculate the median between the two values (TUNE_MIN + TUNE_MAX) / 2 = TUNE_MEDIAN
4. Set RF Freq. fine tune to the median value

Example

Connection is lost at -73 and +35; the median is -19:

Once the Fine Tuning value is known, it can be used for all models which use the same protocol.

For More information visit <https://www.multi-module.org/using-the-module/frequency-tuning>

