



# V 16

Remote Controller  
Quick Start Guide

[WWW.HELLORADIOSKY.COM](http://WWW.HELLORADIOSKY.COM)

# Introduction

Thank you for purchasing the HelloRadioSky V 16 Multi-protocol radio system. HelloRadioSky is proud to bring this ground-breaking product to the market and would like to thank customers just like you and the community for making this dream possible. Please take a moment to read this quick start reference before using your new V 16 radio.

## Safety & Precautions.

Many radio control models are equipped with powerful motors and sharp spinning propellers. Please exercise caution when working on models. Ensure power is disconnected from your models and remove propellers when performing maintenance.

Do not operate the V 16 radio system under the follow conditions.

- During bad weather or high wind conditions such as rain, hail, snow, storms or electromagnetic events.
- Under limited visibility.
- In areas where people, property, powerlines, roads, vehicles or animals may be in present.
- If you are feeling tired or unwell or under the influence of drugs or alcohol.
- If the radio or model appear to be damaged or not functioning correctly.
- In areas of high 2.4GHz interference or in locations where use of 2.4GHz radios is prohibited.
- When the battery in the V 16 or the model is too low to function.

## Manuals and firmware downloads.

The V 16 is shipped with EdgeTX software installed as standard. To download the latest software and manual please visit <https://www.helloradiosky.com>

Further firmware information. EdgeTX: <http://edgetx.org>

ExpressLRS: <https://www.expresslrs.org/2.0/>

Multi Protocol Module: <https://www.multi-module.org/>

## CAUTION!

The V 16 is shipped with the most stable firmware at the time of manufacture. Please only update firmware if you are experienced and confident in updating system firmware. Incorrect updates may render the radio inoperable.

DO NOT charge 6.6v LiFE battery packs or Li-ion 18650 cells with nominal voltage of 3.6v. Incorrectly charging the wrong battery type may lead to damage of the radio or fire.

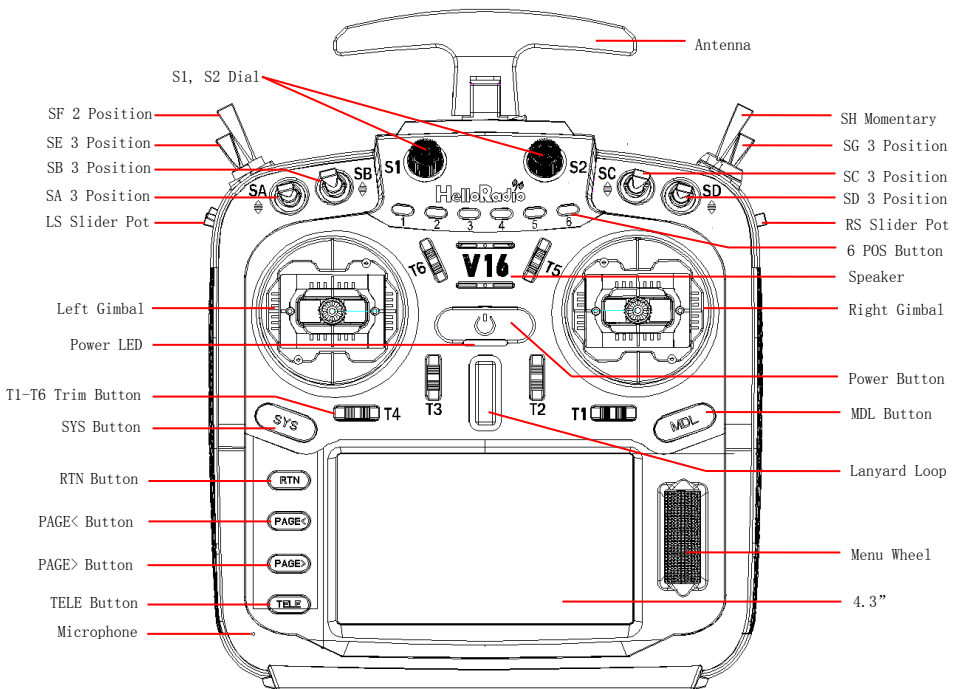
### **Antenna Separation Distance**

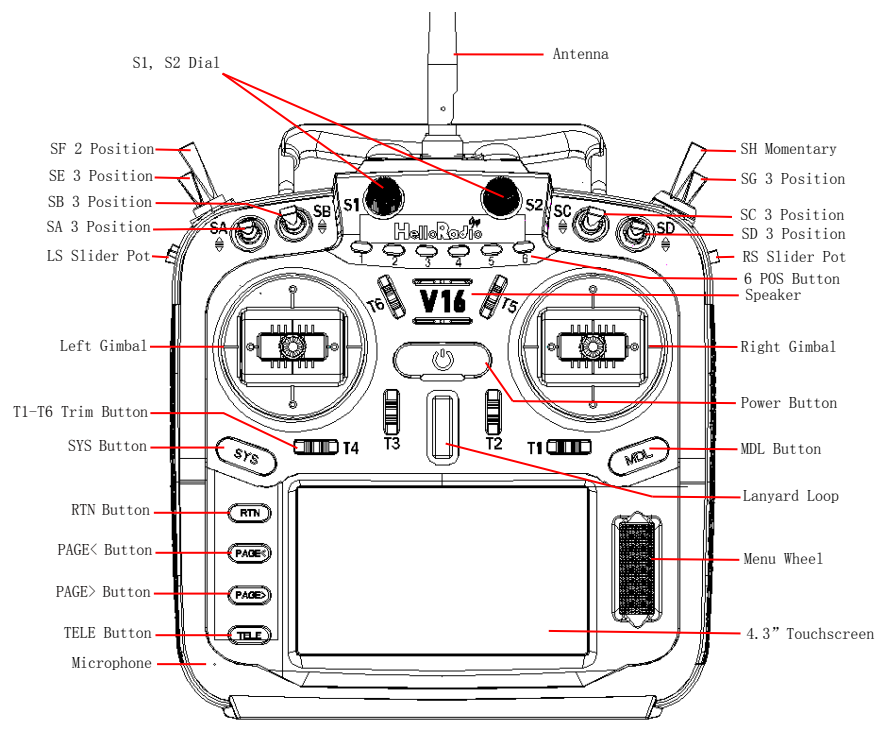
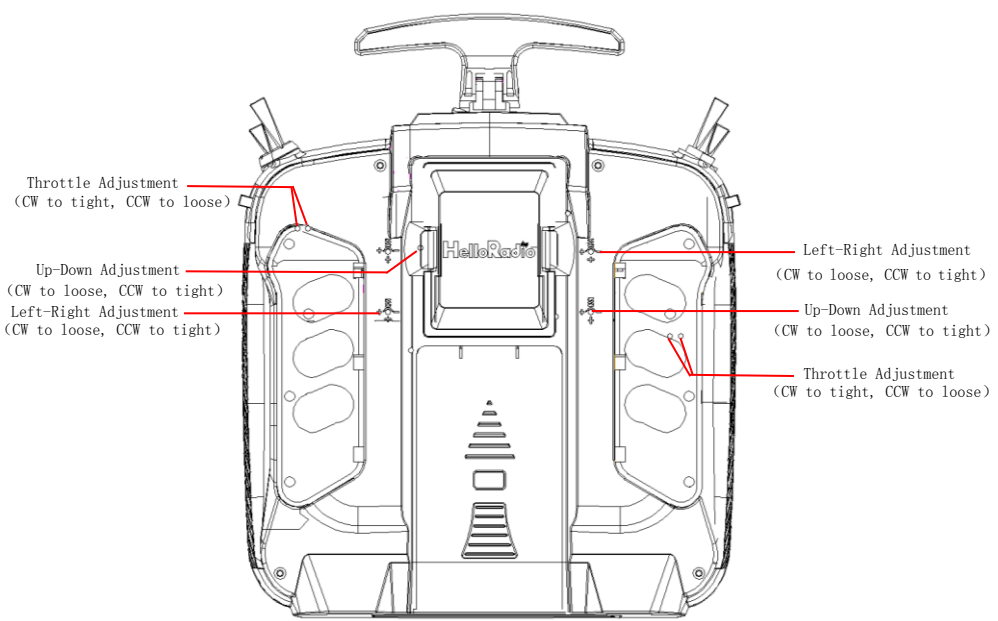
When operating your HelloRadioSky transmitter, please be sure to maintain a separation distance of at least 20

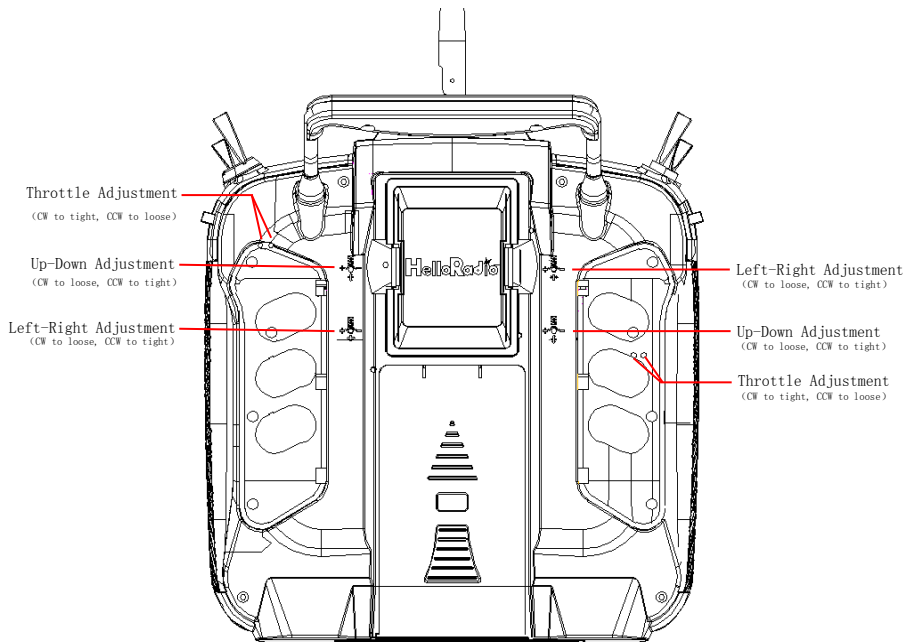
cm between your body (excluding fingers, hands, wrists, ankles and feet) and the antenna to meet RF exposure safety requirements as determined by FCC regulations.

Regularly check the health and condition of your batteries and never leave your radio charging unattended. Always charge in a safe area away from combustible materials and surfaces. Do not charge if your radio becomes wet or damaged in any way. HelloRadioSky does not accept any liability for the use or misuses of this product.

## Remote control overview







## Power Requirements and Charge

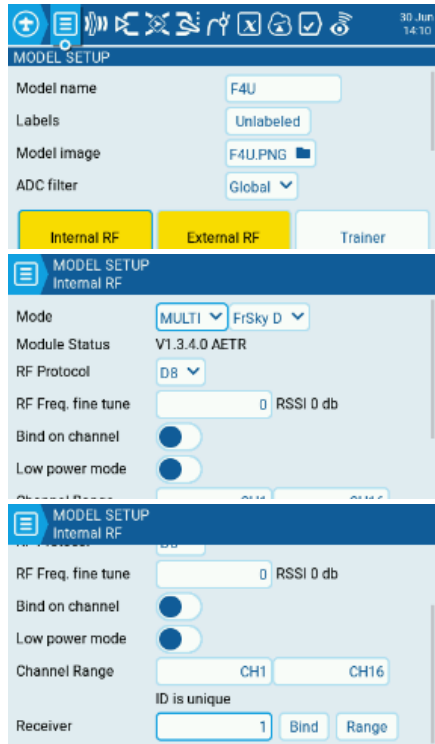
The V 16 has built in USB-C charging for 3.7v Lithium cells. The Charging circuit is designed for 2x 3.7v Li-ion 18650 unprotected cells or 2x 3.7v Li-poly cells (2s 7.4v LiPO pack) only with a nominal cell voltage of 3.7v and maximum charge capacity of 4.2v.

Please turn off the internal and external RF modules during charging, and it is suggested not operate the radio during charging.

## Model and protocol selection (multi-protocol module)

A wide variety of modules is available for V 16 units with the multi-protocol module. To find out whether a certain protocol would work with your radio, please visit: <https://www.multi-module.org/>

Please note that current protocols may be updated, and new protocols added, without prior notice.



Press and hold the MDL button and scroll to the MODEL SETUP page. Under internal RF, set the Mode to MULTI and select the RF Protocol/ sub protocol as desired. Once the protocol is selected, the corresponding RF chip will be activated.

Note:

-The Bind button starts the bind process, if a compatible receiver is in bind mode within range, it will bind to your receiver.

-Range mode cuts the RF output by a factor of 30, allowing for easy range testing.

## Model and protocol selection (ELRS)

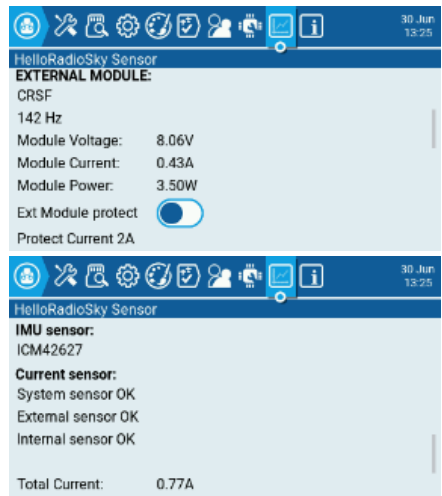
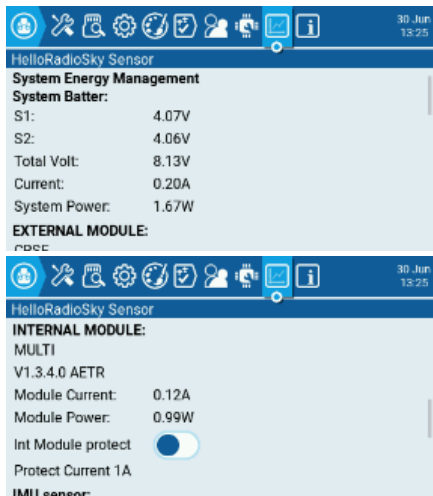


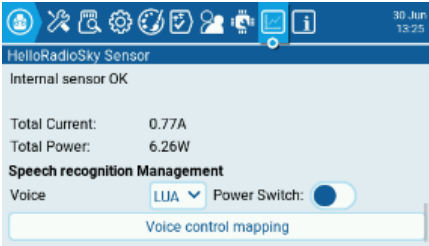
Bind method :

1. Turn off the radio.
2. Cycle power to the receiver 3 times, the receiver LED will start blinking, indicating it's in bind mode.
3. Turn on the radio, enter the ExpressLRS LUA, and select Bind.
4. The receiver LED will now stay illuminated, signaling a successful bind process.

## Radio Safeguard

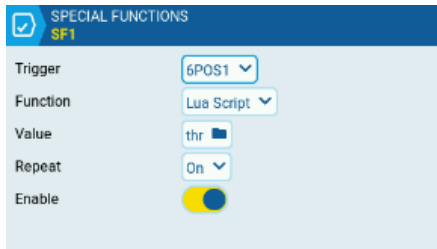
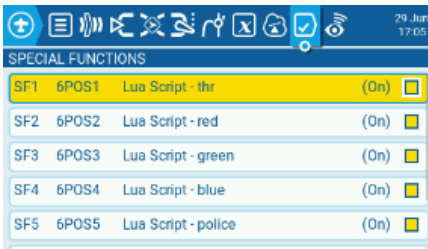
The radio is equipped with three high-precision voltage and current sensor measurement units with a measurement accuracy of 0.2%, which solves the problem of using a multimeter to calibrate the battery voltage of the remote control. With the update of EdgeTX software, it can monitor the operating status of the system in real time and also the working status of the battery, main control system, built-in high-frequency module, and external high-frequency module in real time. When the system detects abnormal current and voltage signals, it will automatically protect the system and high-frequency modules, and give warnings at the same time. It will prevent damage caused by moisture short circuits, overvoltage and overcurrent, and avoid flight accidents in advance.





## Programmable Gimbal LED

Through a simple Lua program, the gimbal LED flashing mode can be customized, and you can use the flight switches to switch between different modes.



## AI voice assistant

The remote control is equipped with an AI voice recognition unit, which can provide you with a unique human-machine interaction experience through customized voice entries, powered with EdgeTX software.

Make flying easier and more fun.

1. Say "Hello Radio" to the remote control to activate the voice assistant, recognize and respond to subsequent control commands. The timeout after waking up is 8 seconds. If there is no valid voice within 8 seconds, it enters sleep mode and needs to be activated again.
2. Send corresponding voice commands. The effective voice commands and corresponding control responses generated are as follows:

Voice Command	Response (expected actions or functions)
Hello Radio	Active AI voice assistant
System menu	Pop up system settings page
Channel message	Pop up channel monitor page
Channel monitor	Pop up channel monitor page
telemetry	Pop up telemetry information page



Sensor message	Pop up sensor information page
Sensor status	Pop up sensor information page
Model menu	Pop up model settings page
Enter	Confirm
cancel	exit previous page, similar to pressing the RTN key
return	exit previous page, similar to pressing the RTN key
quit	exit previous page, similar to pressing the RTN key
Open gear	Drop landing gear
Close gear	Retract landing gear
Open flap	Extend flaps, one segment at a time, two segments total
Close flap	Retract flaps
Aileron adjustment	Active aileron trim command
left	Adjust the aileron to the left by one grid, and adjust the aircraft's aileron to the left
right	Adjust the aileron to the right by one grid, and adjust the aircraft's aileron to the right
Pitch adjustment	Active elevator trim command
Pitch up	Adjust the elevator up by one grid, and the aircraft will head up
Pitch down	Adjust the elevator down by one grid, and the aircraft will head down
Rotating adjustment	Active rudder trim command
left	Adjust the rudder to the left by one grid, and the aircraft will yaw left
right	Adjust the rudder to the right by one grid, and the aircraft will yaw right

## IMU sensor

The V 16 is equipped with 3-axis acceleration and 3-axis gyroscope sensors. With the support of future EdgeTX software, it can achieve functions such as body sensing control and transmitter attitude perception

## Support. Warranty and Repairs.

Please retain your proof of purchase and contact the retailer you purchased your V 16 from, should you experience any problems with your radio hardware. Warranty is valid for one year from the date of purchase.

## Firmware updates and EdgeTX information

For the latest information and firmware updates on the EdgeTX, please visit the EdgeTX website at <https://www.EdgeTx.org>.

## Specifications

Size: 286\*128\*182mm

Weight: 750g (without battery)

Transmission frequency: 2.400GHz-2.480GHz

Transmitter module: 4-in-1 multi-protocol internal module -OR- ExpressLRS internal module

Working current: 450mA

Working voltage: 6.6-8.4V DC

Radio firmware: EdgeTX

Channels: More than 16 channels (depending on the receiver)

Display: 4.3-inch TFT full-color touch display with a resolution of 480 \* 272

Gimbal: Non-contact 3D vector Hall gimbal

Module Bay: Compatible with following micro JR bay modules: Multi-Protocol-Module, ExpressLRs, Ghost, TBS

Crossfire, TBS Tracer etc

Upgrade method: Supports USB-C online / SD card offline upgrade

## Approved for use

2 x 3.7v Li-ION 18650 cells (Assembled as 7.4v 2s Battery pack)

2 x 3.7v Li-ION 21700 cells (Assembled as 7.4v 2s Battery pack)

2 x 3.7v Lithium-polymere cells (Assembled as 7.4v 2s Battery pack)

DO NOT use 3.6v Li-ION cells

2S 6.6v LiFE Battery packs LiFEP04 cells

Do not use 2s 6.6v LiFE battery pack, 18650 lithium-ion cells with a nominal voltage of 3.6v or LiFEP04 18650

Round cells. Using the built in USB charger with incorrect battery types and voltage may cause damage to the remote control or fire.

Check the health and condition of the batteries regularly. Do not use damaged cells. Never charge your device

unattended. Always charge in a safe area away from flammable materials. If the remote control gets wet or damaged in any way, do not charge it.

HelloRadioSky is not responsible for any adverse consequences caused by using or misusing this device.

## EU Simple Declaration of Conformity

HelloRadioSky declares the radio equipment V 16 is in compliance with EU directives Directive 2014/53/EU. Full text of the declaration of conformity is available at the following website [www.radio-masterrc.com](http://www.radio-masterrc.com)

## Manufactured by

ShenZhen HelloRadioSky Technology Co., Ltd

## FCC statement

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.

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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Full text of the declaration of conformity is available at the following website [www>HelloRadioSky.com](http://www>HelloRadioSky.com)

## CAUTION:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This product contains a radio transmitter with wireless technology which has been tested and found to be compliant with the applicable regulations governing a radio transmitter in the 2.400GHz to 2.4835GHz frequency range.

# 简介

感谢您购买 HelloRadioSky V 16 遥控系统。该系统用途广泛，可供初学者和专业人士使用。为了确保正确、安全地使用本产品，请在使用前仔细阅读本使用说明书。本手册中包含的信息如有更改，恕不另行通知。V 16 遥控器适用于所有类型的固定翼、滑翔机、直升机和多旋翼飞机。可以根据使用的航空器选择型号类型，并可以使用各种混合功能。

# 安全须知

许多遥控模型都配备了强大的电机和锋利的螺旋桨。使用模型时，请谨慎行事。进行组装或维护时，请确保已断开模型的电源并卸下螺旋桨。

在以下情况下，请勿操作 V 16 遥控系统：

- 在恶劣天气或强风条件下，例如雨，冰雹，下雪，暴风雨或电磁环境中。
- 在能见度有限的任何情况下。
- 在可能存在人员、财产、电力高压线、公共道路、有车辆或动物的区域。
- 如果您感到疲倦或不适，或在药物或酒精的影响下。
- 如果遥控器或模型似乎已损坏或无法正常工作。
- 在干扰较大的区域或禁止使用无线电的地方。
- 当电池电压太低而无法使用时。
- 在当地法规禁止使用航空模型的区域。

# 说明书和固件下载

V 16 预装标准的 EdgeTX 固件。要下载最新的软件手册，请访问 HelloRadioSky 网站：

<https://www.helloradiosky.com> EdgeTX: <http://edgetx.org>

ExpressLRS: <https://www.expresslrs.org>

Multi Protocol Module: <https://www.multi-module.org/>

# 警告！

V 16 出厂时预装最稳定的固件。如果您有经验并且有信心更新系统固件，请仅更新固件。不正确的更新可能会导致遥控器无法操作。

未经负责合规方明确批准的更改或修改可能会使用户丧失操作设备的权限。本产品包含具有天线技术的无线电发射器，该无线电发射器已经过测试，符合适用于无线电发射器的适用法规。

# 安全的天线距离

操作 HelloRadioSky 发射器时，请确保您的身体（不包括手指，手，腕，脚踝和脚）与天线之间保持至少 20cm 的

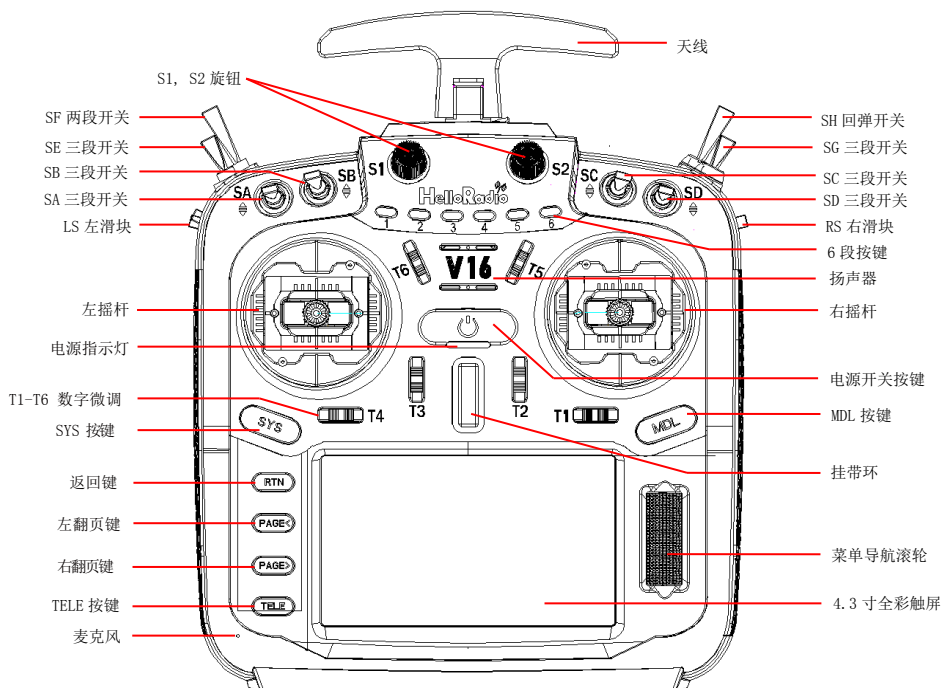
距离，以符合 FCC 法规确定的 RF 暴露安全要求。

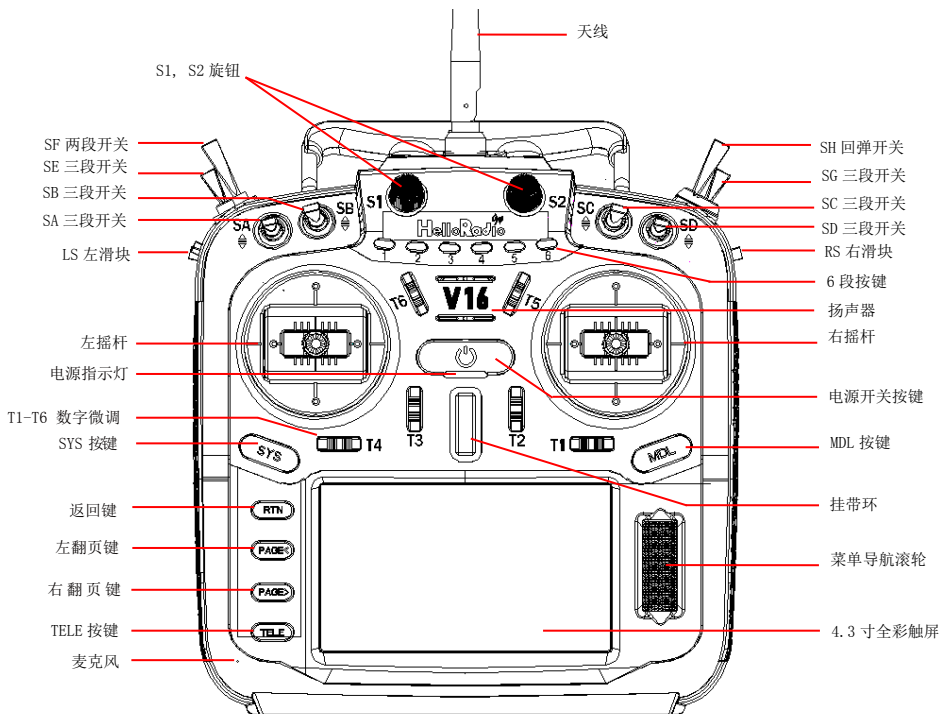
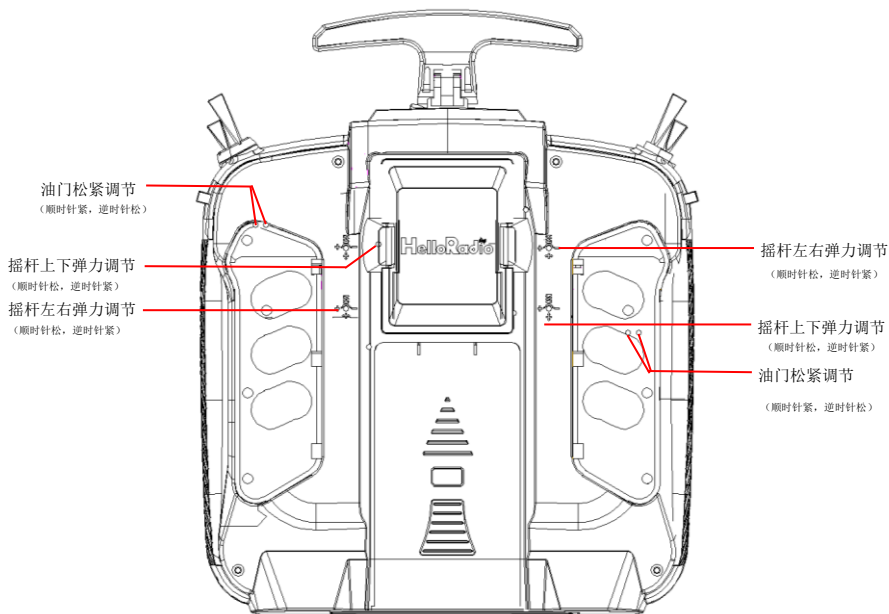
## 电源和充电注意事项

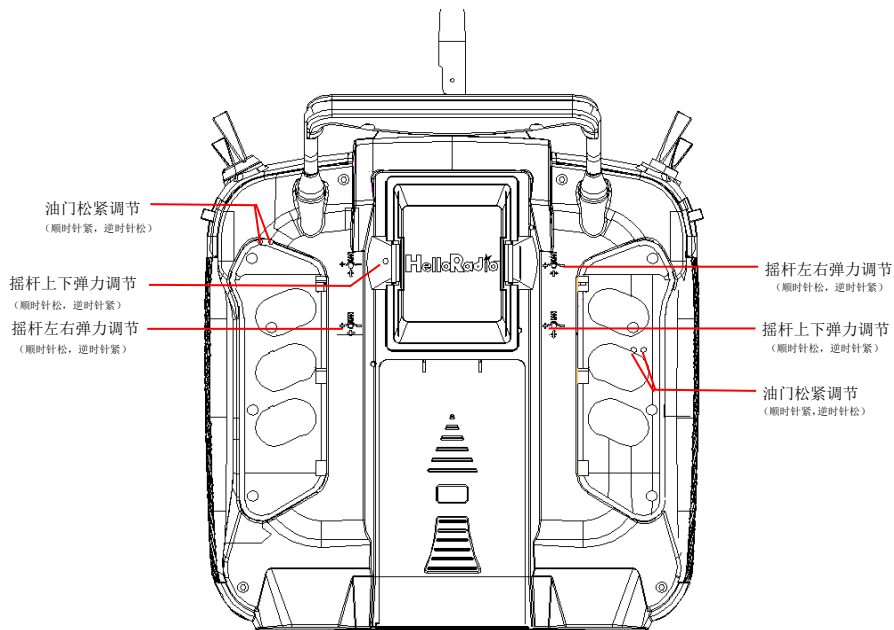
V 16 内置 USB 充电功能，支持 2cell 7.4v 电池组 (2 x 3.7v 锂电池组)。充电电路仅适用于 2x 3.7v 锂离子 18650、2x 21700 3.7v 锂离子 (21700 2s 7.4v 锂离子电池组) 或 2x 3.7v 锂聚合物 (2s 7.4v 锂聚合物电池组)。每个电池的标称电压为 3.7v，最大充电截止电压为 4.2v。

充电时请关闭内置和外置高频模块，尽量不要在充电状态下操作遥控器。

## 遥控器概述



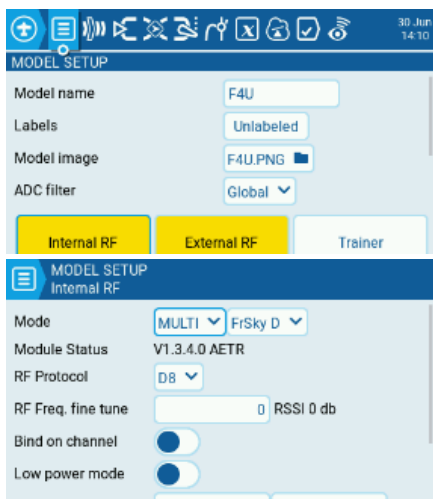




## 模型选择及协议选择（多协议）

多协议高频模块，拥有并兼容很多不同协议，要查看所有兼容协议的最新列表，请访问：<https://www.multi-module.org/>。

请注意，新协议会不断更新并被添加到最新固件。







请长按 MDL 按钮进入模型设置，在 MODEL SETUP 页面中选择 MULTI，并在子选项中选择需要使用的协议。

- Bind 按钮用于启动对频过程。
- Range 按钮可将功率降低至 1/30，以方便测试遥控距离。

## 模型选择及协议选择（ExpressLRS）

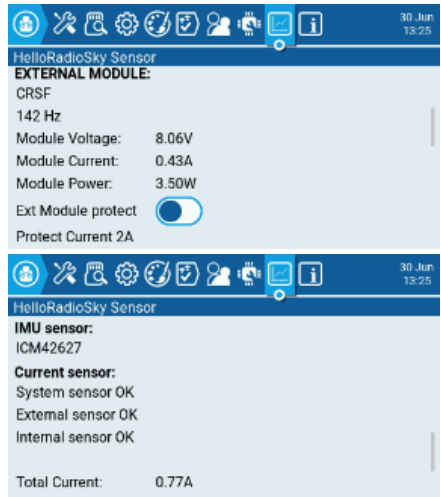
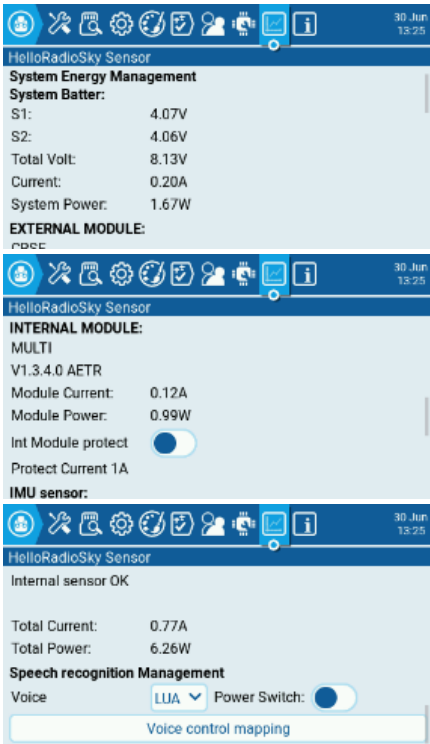


对频方法：

- 1: 关闭遥控器
- 2: 重复给接收机上电三次（每次上电等 LED 灯亮起后算一次），接收机灯双闪，表明接收机处于对频模式
- 3: 开启遥控器，进入 ELRS 的 LUA 操作界面，选择到【BIND】，确认
- 4: 接收机灯常亮表明对频成功

## 遥控器安全卫士

遥控器内置了 3 路测量精度在 0.2% 的高精度电压、电流传感器测量单元，从此解决你需要用万用电表来矫正遥控器电池电压的麻烦，未来配合 EdgeTX 软件的更新，能实时监控系统运行状态，能对电池、主控系统、内置高频头、外置高频头的工作状态进行实时监控。当系统检测到异常电流电压信号，会自动对系统和高频模块进行保护以及预警。防止潮湿短路，过压过流等造成的损坏，提前预防及保护遥控器飞行事故。



## 可编程幻彩光圈

通过简单的 Lua 程序可以定制光圈闪烁模式，可以使用开关来切换不同模式。



## 智能语音助手

遥控器内置 AI 语音识别器件，通过定制语音词条并配合 EdgeTX 软件，能给你带来不一样的人机交互新体验。

让飞行更加轻松好玩。

1. 对着遥控器说出“哈罗，雷迪”，可以唤醒语音助手，识别响应后续的控制指令，唤醒后的超时为 8 秒，8 秒内无有效语音，就进入休眠状态，需要再次唤醒。

2. 发出相应的语音指令。目前预制的语音指令如下：

中文语音指令	英文语音指令	产生的控制响应（预计实现的功能）
哈罗，雷迪	Hello Radio	唤醒语音助手
嗨罗，雷迪	Hello Radio	唤醒语音助手
系统菜单	System menu	弹出对应页面信息
通道信息	Channel message	弹出对应页面信息
通道监视	Channel monitor	弹出对应页面信息
回传信息	telemetry	弹出对应页面信息
传感器信息	Sensor message	弹出对应页面信息
传感器状态	Sensor status	弹出对应页面信息
模型菜单	Model menu	弹出对应页面信息
确认	Enter	确认
取消	cancel	退出前一个页面，类似按下 RTN 键
退出	return	退出前一个页面，类似按下 RTN 键
返回	quit	退出前一个页面，类似按下 RTN 键
打开起落架	Open gear	放下起落架
放下起落架	Open gear	放下起落架
开起落架	Open gear	放下起落架
关闭起落架	Close gear	收起落架
收起落架	Close gear	收起落架
关起落架	Close gear	收起落架
打开襟翼	Open flap	放襟翼，语音一次放一段襟翼，共两段
放襟翼	Open flap	放襟翼，语音一次放一段襟翼，共两段
开襟翼	Open flap	放襟翼，语音一次放一段襟翼，共两段
关闭襟翼	Close flap	收襟翼
收襟翼	Close flap	收襟翼
关襟翼	Close flap	收襟翼
副翼微调	Aileron adjustment	激活副翼微调控制

左转	left	副翼向左微调一格，飞机副翼左调
左调	left	副翼向左微调一格，飞机副翼左调
右转	right	副翼向右微调一格，飞机副翼右调
右调	right	副翼向右微调一格，飞机副翼右调
升降微调	Pitch adjustment	激活升降微调控制
抬头	Pitch up	升降轴上微调一格，飞机抬头
拉起	Pitch up	升降轴上微调一格，飞机抬头
拉升	Pitch up	升降轴上微调一格，飞机抬头
低头	Pitch down	升降轴下微调一格，飞机低头
压低	Pitch down	升降轴下微调一格，飞机低头
下压	Pitch down	升降轴下微调一格，飞机低头
方向微调	Rotating adjustment	激活方向微调控制
左转	left	方向左微调一格，飞机方向左调
左调	left	方向左微调一格，飞机方向左调
右转	right	方向右微调一格，飞机方向右调
右调	right	方向右微调一格，飞机方向右调
打开降落伞		
拍照		
开始录像		
停止录像		
返航回家		
GPS 返航		
遥控器关机		

## IMU 传感器

遥控器内置 3 轴加速度与 3 轴陀螺仪传感器, 在未来 EdgeTX 软件支持下, 可以实现体感控制、遥控器姿态感知等功能。

## 注意

EdgeTX 软件非常强大，并且具有大量的编程和混控功能。请从下面的链接下载综合软件安装指南以获取 更详细的说明：<https://www.EdgeTx.org>

## 保修及维修

如果您的遥控器硬件出现任何问题，请保留购买证明并与您购买 V 16 的零售商联系。

## 固件更新和 EdgeTX 信息

有关 EdgeTX 开源固件开发团队的最新资讯和固件更新，请访问 EdgeTX 网站，网址为 <https://www.EdgeTx.org> 。

## 技术指标

规格尺寸： 286\*128\*182 毫米

重量： 750 克（不含电池）

传输频率： 2.400GHz-2.480GHz

发射器模块：多协议高频模块、ExpressLRS 高频模块

工作电流： 450mA

工作电压： 6.6-8.4V DC

开源固件： EdgeTX（遥控器）

通道数： 多于 16 个通道（取决于接收器）

显示： 4.3 英寸 TFT 全彩显示屏，分辨率为 480 \* 272

摇杆： 非接触式 3D 矢量霍尔操纵杆 JR/FrSKY 兼容模块托架

升级方法： 支持 USB 在线/SD 卡离线升级

协议： 有关完整协议列表，请访问

[https://github.com/pascallanger/DIY-Multiprotocol-TX-Module/blob/master/Protocols\\_Details.md](https://github.com/pascallanger/DIY-Multiprotocol-TX-Module/blob/master/Protocols_Details.md)

<https://www.expresslrs.org>

## 允许使用的电池规格

2 x 3.7v Li-ION 18650 电池组 (7.4v 2s 电池组)

2 x 3.7v Li-ION 21700 cells (7.4v 2s 电池组)

2 x 3.7v Lithium-polymer cells (7.4v 2s 电池组)

## 请勿使用以下电池或电池组

3.5 v Li-ION 电池

2S 6.6v LiFe 电池组

LiFePO4 电池组

## 特别警告

请勿使用 2S 6.6v LiFE 电池组，标称电压为 3.6v 的 18650 锂离子电池或 LiFEP04 18650 圆形电池。如果使用错误的电池类型和电压，在使用内置的 USB 充电器充电时，可能会损坏遥控器或引起火灾。

请定期检查电池的电压和状况，决不要在无人看守的情况下为其充电。请务必始终在远离可燃材料的安全区域中充电。如果遥控器弄湿或以任何形式损坏，请勿充电。

对于不按照安全规范使用或滥用本产品造成的一切不良后果，HelloRadioSky 不承担任何责任。

## 欧盟认证合格声明

HelloRadioSky 无线电设备 V 16 符合欧盟指令 2014/53/EU。符合性认证声明的全文可在以下

网站上找到：[www.helloradiosky.com](http://www.helloradiosky.com)

制造商

深圳 HelloRadioSky 科技有限公司

## FCC 认证信息

T 该设备已经过测试，符合 FCC 规则第 15 章的规定。操作必须符合以下两个条件：

- (1) 此设备不会造成有害干扰
- (2) 此设备必须接受收到的任何干扰，包括可能导致意外操作的干扰。符合性声明的全文可在以下网站上找到：

[www.helloradiosky.com](http://www.helloradiosky.com)



[WWW.HELLORADIOSKY.COM](http://WWW.HELLORADIOSKY.COM)