

# FATFISH

## F16

Quick start guide

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

# Introduction

The best just got better

Thank you for purchasing the FATFISH F16 Multi-protocol radio system. FATFISH 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. The F16 version has had several improvements thanks to feedback from users like you. Please take a moment to read this quick start reference before using your new F16 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 F16 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 F16 or the model is too low to function.

## Manuals and firmware downloads.

The F16 is shipped with EdgeTX software installed as standard. To download the latest software and manual please visit <https://www.fatfishfpv.com>

Further firmware information.

EdgeTX: <http://edgetx.org>

ExpressLRS: <https://www.expresslrs.org/3.0/>

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

## CAUTION!

The F16 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.

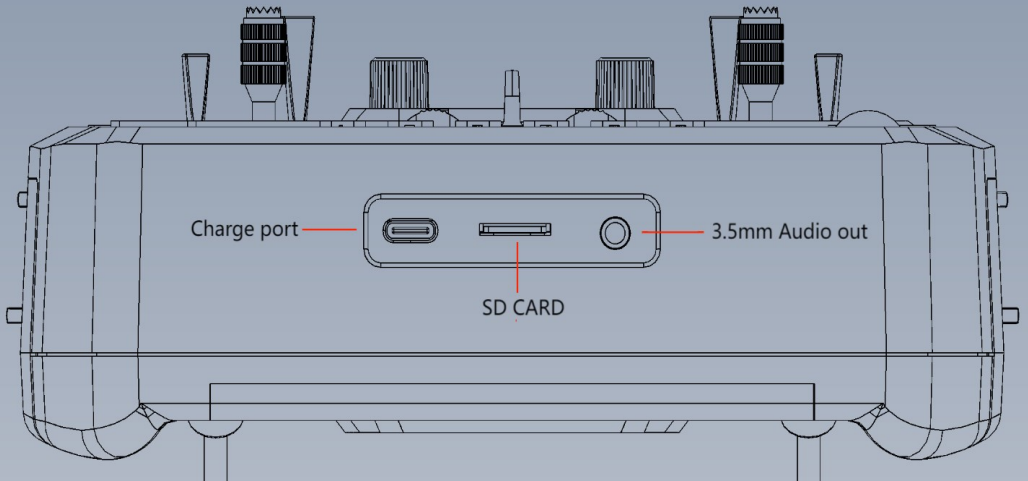
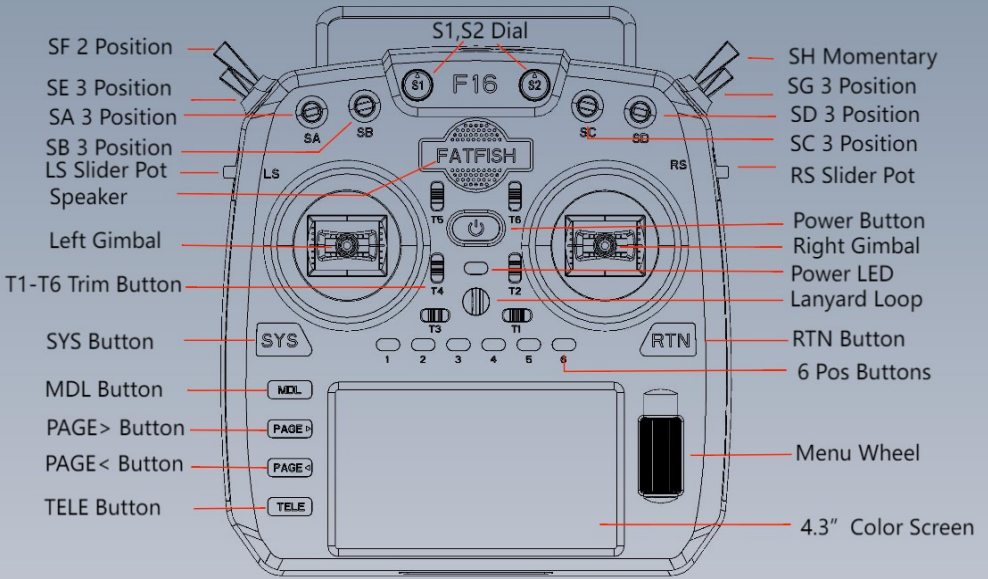
DO NOT charge 6.6v LiFe battery packs or Li-ion 18650 cells with nominal voltage of 3.6v. Incorrectly charging the wrong battery type may lead to damage of the radio or fire.

### **Antenna Separation Distance**

When operating your FATFISH 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. FATFISH does not accept any liability for the use or misuses of this product.

# F16 Radio overview



## Power Requirements.

The F16 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.

## Model and protocol selection(ELRS)



Bind method

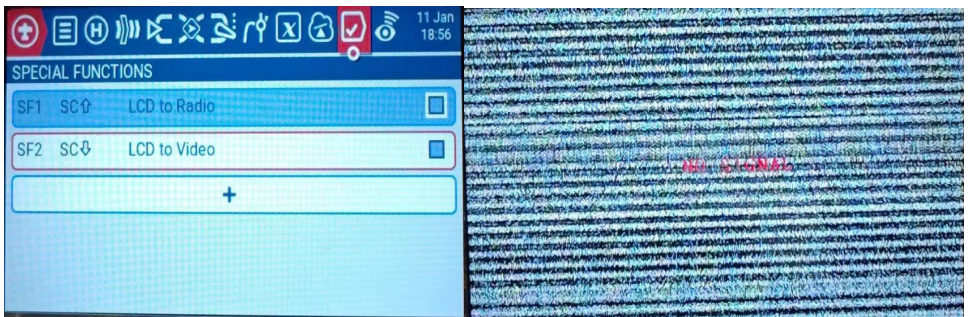
1. Turn off the radio.
2. Cycle power to the receiver 3 times, the receiver LED will start blinking, indicating it's in bind mode.
3. Turn on the radio, enter the ExpressLRS LUA, and select Bind.
4. The receiver LED will now stay illuminated, signaling a successful bind process.

## Support.

### Warranty and Repairs.

Please retain your proof of purchase and contact the retailer you purchased your F16 from, should you experience any problems with your radio hardware. Warranty is valid for one year from the date of purchase.

## Switch between remote control display and video transmission display



In the special function setting menu, any switch channel can be defined as a display toggle switch

# Specifications

Size: 213\*200\*95mm  
Weight: 608g (without battery)  
Transmission frequency: 2.400GHz-2.480GHz  
Transmitter module: 4-in-1 multi-protocol internal module -OR- ExpressLRS internal module  
Transmitting power: Internal 4-in-1 multi-protocol module : Max 100mw (protocol dependent)  
Internal ELRS : Max 500mw (transmitting power is adjustable)  
Working current: 500mA  
Working voltage: 6.6-8.4vDC  
Remote control distance:> 4km @ 27dbm  
Radio firmware: EdgeTX (Supports OpenTX also)  
Channels: Up to 16 channels (depending on the receiver)  
Display: 4.3-inch TFT full-color touch display with a resolution of 480 \* 272  
Gimbal: Hall sensor  
Module Bay: JR compatible module bay  
Upgrade method: Supports USB-C online / SD card offline upgrade

## Approved for use

2 x 3.7v Li-ION 18650 cells (7.4v using supplied tray)  
2 x 3.7v Li-ION 21700 cells (Assembled as 7.4v 2s Battery pack)  
2 x 3.7v Lithium-polymer 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.

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

## Manufacturer by

ShenZhen FATFISH Co., Ltd  
Nanshan Yungu Nanfeng Building, Nanshan District, Shenzhen city Guangdong  
Province, China

## 简介

感谢您购买FATFISH F16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。由于版本升级，已经进行了更改。本手册中包含的信息如有更改，恕不另行通知。

F16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F16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2.4GHz干扰较大的区域或禁止使用2.4GHz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

F16预装标准的EdgeTX固件。要下载最新的软件手册，请访问FATFISH网站：

<https://www.fatfishfpv.com>

EdgeTX: <http://edgetx.org>

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

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

## 警告！

F16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2.400GHz至2.4835GHz频率范围内的无线电发射器的适用法规。

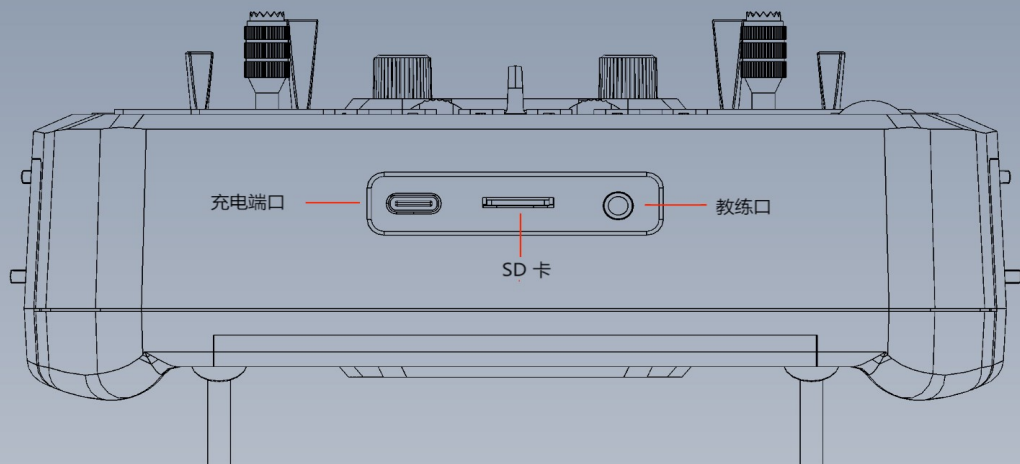
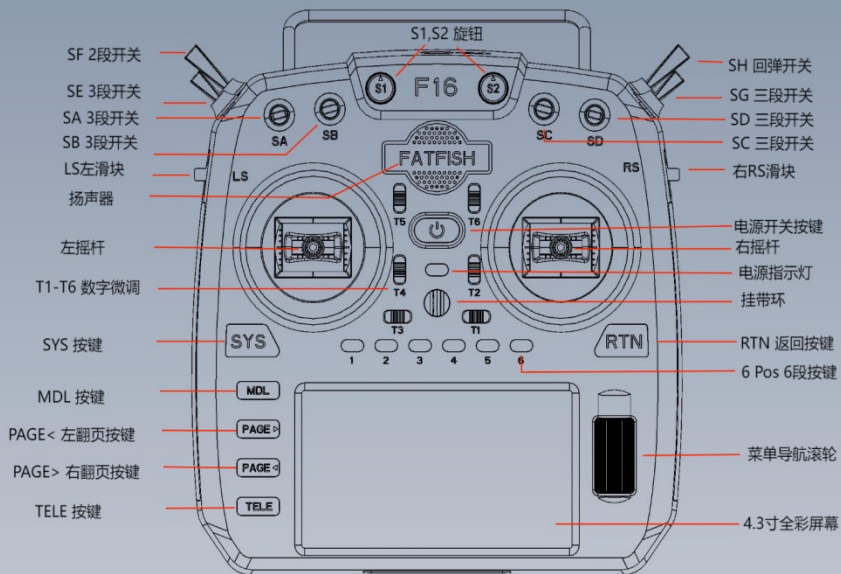
## 安全的天线距离

操作FATFISH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

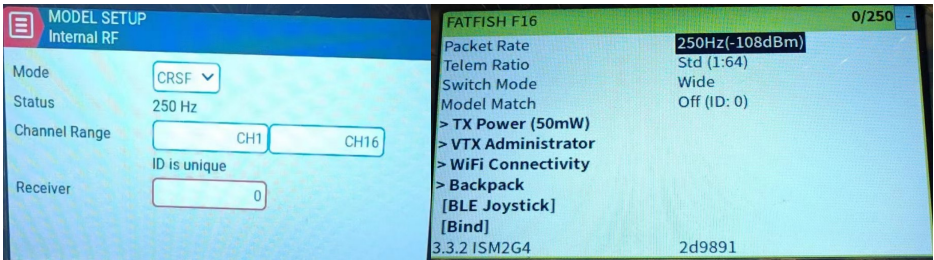
F16内置USB充电功能，支持2cell 7.4v电池组（2 x 3.7v锂电池组）。充电电路仅适用于2x 3.7v锂离子18650、2x 21700 3.7v锂离子（21700 2s 7.4v锂离子电池组）或2x 3.7v锂聚合物（2s 7.4v锂聚合物电池组）。每个电池的标称电压为3.7v，最大充电截止电压为4.2v。

# 遥控器概述





## 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, 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

### 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.Edge-tx.org>

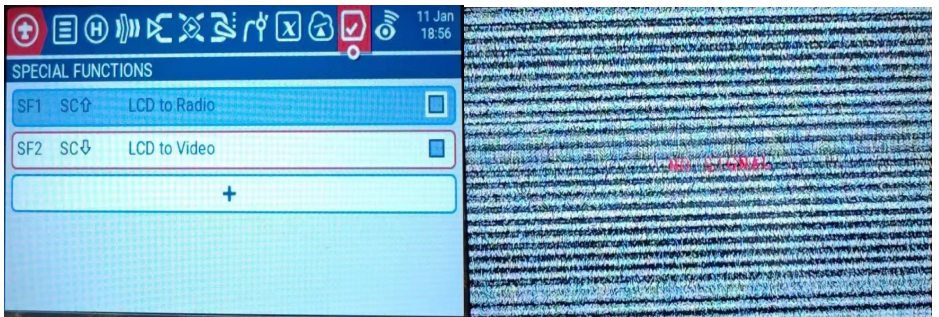
### 保修及维修

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F16的零售商联系。

### 固件更新和EdgeTX信息

有关EdgeTX开源固件开发团队最新资讯和固件更新, 请访问EdgeTX网站,

## 遥控显示和图传显示界面切换



特殊功能设置菜单里可定义任一开关通道 做为显示切换开关



## 技术指标

规格尺寸: 213\*200\*95mm

毫米重量: 608克 (不含电池)

传输频率: 2.400GHz-2.480GHz

发射器模块: 四合一多协议高频模块 (CC2500 CYRF6936 A7105 NRF2401)

ExpressLRS高频模块(ELRS)

发射功率: 多协议版最大20dBm (100mW)、ELRS版最大27dBm (500mW发射功率可调)

图传接收: 模拟5.8G

工作电流: 500mA

工作电压: 6.6-8.4v DC

遥控距离: > 4km @ 27dbm

开源固件: EdgeTX (遥控器)

通道数: 最多16个通道 (取决于接收器)

显示: 4.3英寸带触控TFT全彩显示屏, 分辨率为480 \* 272

云台: 非接触式3D矢量霍尔操纵杆

升级方法: 支持USB在线/SD卡离线升级

协议: 全系列DSM2/X全系列Flysky和Flysky 2A FrSKY

(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))

## 允许使用的电池规格

2 x 3.7v Li-ION 18650 电池组 (7.4v 随遥控器附带的电池盒)

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

3.6v Li-ION 电池

2S 6.6v LiFE 电池组

LiFEP04 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, FATFISH 不承担任何责任。

## 制造商

深圳大鱼互联网络科技有限公司

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