RADIOMASTER

BOXER

Quick start guide

WWW.RADIOMASTERRC.COM

Introduction

Thank you for purchasing the RadioMaster Boxer 2.4g remote control system. The system is versatile and can be used by beginners and professionals. In order to ensure the correct and safe use of this product, please read this manual carefully before use. Due to constant improvements in software and hardware this manual may change over time. The information contained in this manual is subject to change without notice. Visit our website for the most up to date information.

Boxer remote control is suitable for all types of fixed-wing aircraft, gliders, helicopters, cars, boats, robotics, multi-rotor aircraft and anything else you might create, if you can build it RadioMaster can control it. The Boxer uses a powerful operating system called EdgeTX, for more information visit the links below.

-The RadioMaster team.

Safety Information

Many remote-control models are equipped with powerful motors and sharp propellers. When using or maintaining models, proceed with caution. When performing assembly or maintenance, make sure to disconnect the power to the model and remove the propellers.

Do not operate the Boxer remote control system under the following conditions:
• In severe weather or strong windy conditions, such as rain, hail, snow, storms or electromagnetic environ- ments.
• In any situation where visibility is limited.
• In areas where people, property, high-voltage power lines, public roads, vehicles or animals may be present.
• If you feel tired or unwell, or under the influence of drugs or alcohol.
• If the remote control or model seems to be damaged or not working properly.
• In areas with high 2.4GHz interference or where 2.4GHz radio is prohibited.
• When the radios battery voltage is too low to be used.
• In areas where local regulations prohibit the use of aviation models.

Manual and firmware download

Boxer is pre-installed with factory approved EdgeTX firmware. To download the latest software manual, please visit the RadioMaster website: https://www.radiomasterrc.com

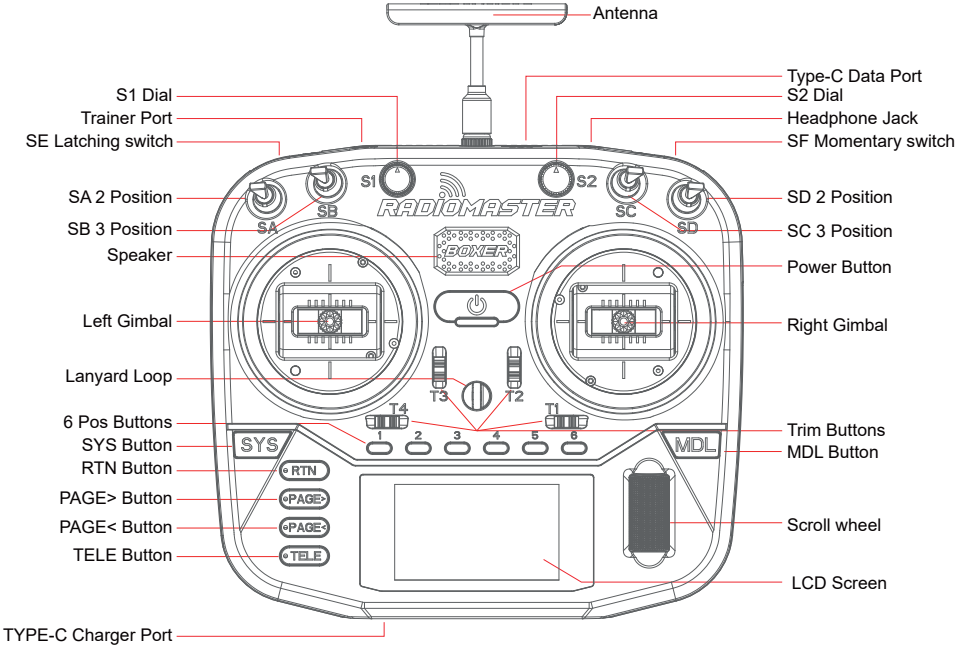
To download the latest firmware for your Boxer remote control, please visit the EdgeTX website: https://www.Edge-tx.org

Important!

ANTENNA: Install the provided antenna in the top of the radio BEFORE installing batteries and turning on the radio. DO NOT operate the radio without the antenna installed and the internal RF module powered on. Doing so will damage the internal RF module and will not be covered under warranty.

FIRMWARE: The Boxer is pre-installed with the most stable firmware at the factory at time of release. please only attempt to update the firmware if you are confident in the process. Incorrect firmware updates may cause the remote control to become inoperable.

Remote control overview



Batteries and charging

Boxer has a built-in USB-C charging function for 3.7V lithium batteries. The charging circuit is only designed to charge 2x 3.7V Li-ion 18650 or 2x 3.7V Li-Poly batteries (2s 7.4v Lipo battery pack), the nominal battery voltage is 3.7V, the charged voltage is 4.2V/Cell.

Do not use LiFE battery packs or 18650 lithium-ion batteries with a nominal voltage of 3.6v with a fully charged voltage of 4.10V. Charging the incorrect type of battery may damage the charger or cause a fire.

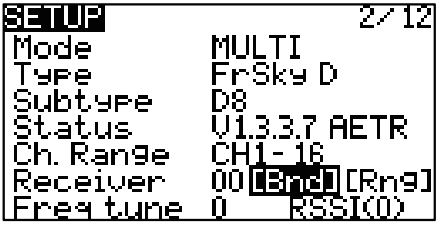
If using Li-ion, ensure the cells are not protected and are button-top cells.

Please check the voltage and condition of the battery regularly and never charge unattended. Always charge in a safe area away from combustible materials. Refrain from charging if the remote control gets wet or damaged in any way. Do not charge with the polarity reversed

RadioMaster does not assume any responsibility for any adverse consequences caused by the use or misuse of this product.

Model and protocol selection (multi-protocol module)

The Boxer comes with 4in1 or CC2500 multi-protocol internal RF module, which is compatible with several different protocols. To view the latest list of all compatible protocols, please visit https://www.-multi-module.org/ Please note that new protocols will be constantly updated and added to the latest firmware. Some new protocols may require firmware upgrades.

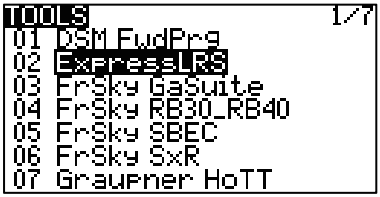


• Long press the MDL button to enter the model settings, select MULTI in the SETUP page, and select the protocol to be used in the sub-options. The system will automatically turn on the corresponding RF module according to the RF protocol you selected.
• Bind [BND] is used to start the binding process.
• Range [RNG] button can reduce the power to 1/30 to facilitate testing of remote-control distance.

Model selection and protocol selection (ELRS version)

Boxer ELRS units are equipped with an internal ELRS module, capable of providing 25mW-1000mW RF output. In non-extreme circumstances, 100mW output at 500Hz update rate is recommended, as higher RF output and update rates may significantly reduce battery life and generate excessive heat.

Bind instructions
1: Turn off the transmitter
2: Cycle power to the receiver 3 times, the receiver LED will flash twice- indicating bind mode.
3: Turn on the transmitter, long press the SYS button and choose the ExpressLRS LUA under the TOOLS menu. Scroll down to [Bind] and press enter.
4: The LED on the receiver should now be solid, indicating successful bind.



Notes

EdgeTX software is very powerful, and has a large number of programming and mixing functions. Please download the comprehensive software installation guide from the link below for more detailed instructions: https://www.Edge-tx.org or https://www.radiomasterrc.com

Specifications

Size: 235*178*77mm
Weight: 532.5g
Frequency: 2.400GHz-2.480GHz
Internal RF Options: CC2500 multi-protocol / 4-in-1 multi-protocol / ELRS 2.4GHz
Supported protocols: Module dependent
Transmitting Power CC2500 and 4IN1: Max 20dBm
Transmitting Power ExpressLRS: Max 30dBm (international) / Max 20dBm (EU LBT)
Cooling fan: Built in (ELRS version)
Voltage Range: 6.6-8.4V DC
Radio Firmware: EdgeTX (Transmitter) / Multi-Module (RF module) / ELRS
Channels: Max 16 channels (Receiver dependent)
Battery: 7.4V 2-cell Lithium-Polymer / Two 3.7V 18650 Lithium-Ion cells (batteries not included)
Display: 128*64 Monochrome LCD display
Gimbal: High precision 4.0 Hall gimbals as standard (AG01 Optional)
External module: JR/FrSKY/Crossfire compatible
Upgrade Method: USB/SD card & EdgeTX Companion PC software
* For the most up to date list on supported protocols please visit https://www.multi-module.org/

Warranty and repair

If there is any problem with your remote control hardware, please keep the proof of purchase and contact the retailer where you purchased the Boxer. You may also visit our warranty support page https://www.radio- masterrc.com/contact

Firmware update and EdgeTX

For the latest information and firmware updates from the EdgeTX open source firmware development team, please visit the EdgeTX website at https://https://www.Edge-tx.org.

EU Simple Declaration of Conformity

RadioMaster declares the radio equipment Boxer is in compliance with EU directives Directive 2014/53/EU. Full text of the declaration of conformity is available at the following website www.radiomasterrc.com

Manufacturer by

ShenZhen RadioMaster Co., Ltd
4th Floor, Yangtian Building, No. 18 Yangtian Road, Xin'an Street, Baoan District, Shenzhen, Guangdong.

FCC ID: 2A337-BOXER-4IN1 2A337-BOXER-ELRS

FCC Information

This equipment has been tested and found to comply with the limits for Part 15 of the FCC rules. 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. Full text of the declaration of conformity is available at the following website www.radiomasterrc.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.

Antenna Separation Distance

When operating your RadioMaster 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.

简介

感谢您购买RadioMaster Boxer 2.4g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。

Boxer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。

-RadioMaster　团队敬上

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Boxer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

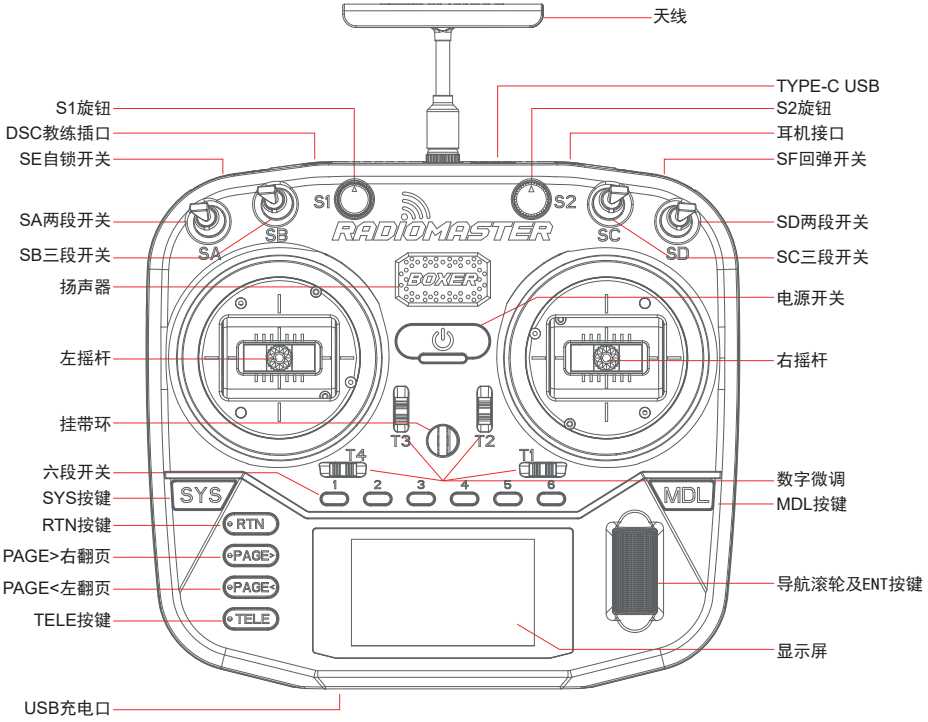
Boxer 预装标准的EdgeTX固件。要下载最新的软件手册，请访问RadioMaster网站：
https://www.radiomasterrc.com

要为您的Boxer 遥控器下载最新的固件，请访问EdgeTX网站： https://www.Edge-tx.org

警告！

Boxer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。

遥控器概述



电源和充电注意事项

Boxer内置USB-C充电功能，可用于3.7v至4.2v的锂电池。该充电电路仅适用于2x 3.7v锂离子18650电池或2x 3.7v Lipoly电池(2s 7.4v Lipo电池组)，标称电池电压为3.7v，最大充电电压为4.2v。

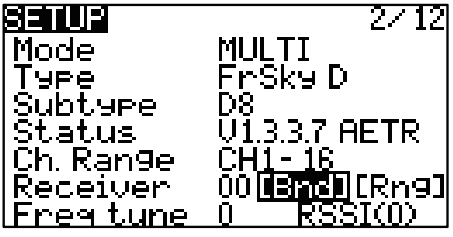
不要使用标称电压为3.6v至4.10v的寿命电池组或18650锂离子电池。给不正确的电池充电可能会损坏充电器或引起火灾。请确保电池正负极未接反。

请定期检查电池的电压和状态，切勿在无人看管的情况下充电，在远离易燃材料的安全区域充电。如果遥控器被水打湿或损坏了，请勿给它充电。

RadioMaster不承担因使用或误用本产品而造成的任何不良后果。

模型选择及协议选择(内置CC2500和4合1多协议高频模块)

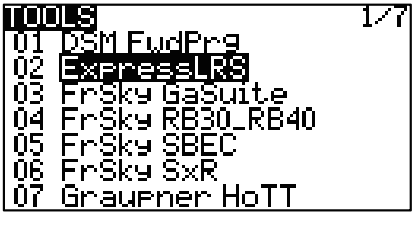
Boxer附带4IN1多协议高频模块，或CC2500单芯片多协议高频模块，拥有并兼容许多不同协议， 要查看所有兼容协议的最新列表，请访问多协议官方网站：https://www.multi-module.org
请注意，由于Boxer遥控器不同版本内置高频模块不同，系统中只会列出当前内置高频模块所支持的协议列表，新协议会不断更新并被添加到最新固件中， 新的某些协议可能需要升级固件。



・请长按MDL按钮进入模型设置，在SETUP页面中选择MULTI，并在子选项中选择需要使用的协议。系统根据您选择的射频协议，会自动开启对应的射频模块，同时关闭其它三个射频模块。系统在同一时间只会开启一个射频模块，以确保没有多余的无线电信号相互干扰。
・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(内置ELRS高频模块)

Boxer 内置ELRS具有25mW-1000mW可调范围，最大功率为1000mW，在非极限条件使用时，推荐将功率限制为100mW，并使用500Hz速率，更高的速率会降低控制距离，更高的功率会带来较大的发热和耗电，请您根据自身需求，合理调整功率及速率，以便达到性能和耗电的平衡。



注意

EgdeTX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.Egde-tx.org

技术指标

产品型号：BOXER 遥控
规格尺寸：178*76.7*235毫米
重量：532.5克
传输频率：2.400GHz-2.480GHz
内部射频选项：CC2500多协议 ／ 4-in-1多协议／ ELRS 2.4GHz
射频功率：CC2500 ／4-in-1：最大20dBm ， ELRS：最大30dBm
冷却风扇：内置散热风扇（仅限ExpressLRS版本）
工作电压：6.6-8.4V DC
开源固件：EdgeTX（遥控器）/DIY-Multiprotocol-TX-Module（高频模块）/ELRS
通道数：最多16个通道（取决于接收器）
显示：128*64单色LCD显示器
摇杆：V4.0 霍尔遥杆
外置模块：JR/FrSKY兼容模块插座
升级方法：支持USB在线/SD卡离线升级
协议：多协议支持的所有协议（有关多协议支持的协议列表，请访问
https://github.com/pascallanger/DIY-Multiprotocol-TX-Module/blob/master/Protocols_Details.md）

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Boxer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.Edge-tx.org

用户手册

有关Boxer EdgeTX系统固件的详细用户手册，请访问https://www.Edge-tx.org

欧盟认证合格声明

广东省深圳市宝安区新安街道72区杨田路扬田大厦4楼
RadioMaster无线电设备Boxer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.radiomasterrc.com

制造商

深圳RadioMaster有限公司

FCC ID: 2A337-BOXER-4IN1 2A337-BOXER-ELRS

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.radiomasterrc.com

警告：

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RadioMaster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。

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