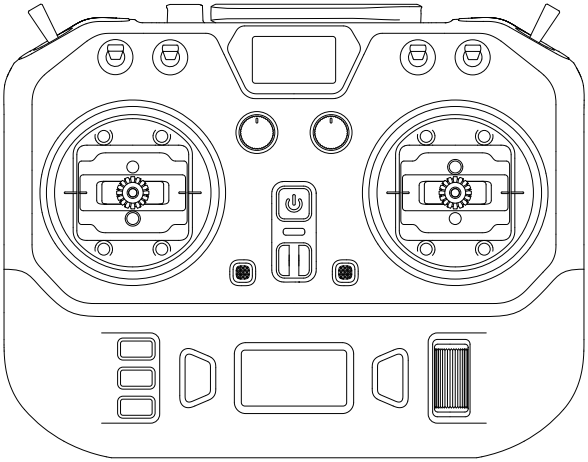
BETAFPV | NexRadio



NexRadio 14 Radio Controller

USER MANUAL | 使用说明书

EdgeTX × ExpressLRS

第 I 版 2026-10-15

Introduction

The BETAFPV NexRadio 14 is a multifunctional radio controller built on the EdgeTX platform and using the ExpressLRS (ELRS) protocol. It is designed for a wide range of applications.

Disclaimer

Before using this product, read and follow all instructions in this manual. BETAFPV may be unable to provide warranty coverage or after-sales service if improper operation causes the product to malfunction or become unusable.
By using this product, you acknowledge that you have read and accepted all terms and conditions related to it.
Supported wireless operating bands and available ranges vary by country or region. Refer to local laws and regulations for details.
This manual may be updated without prior notice. Visit www.betafpv.com for the latest information.

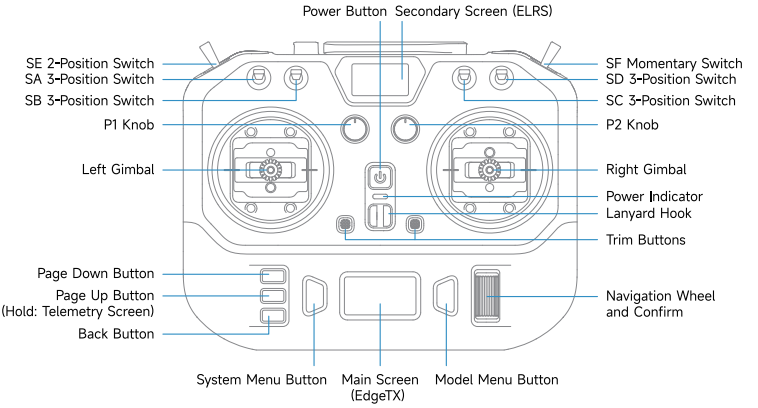
Special Warning

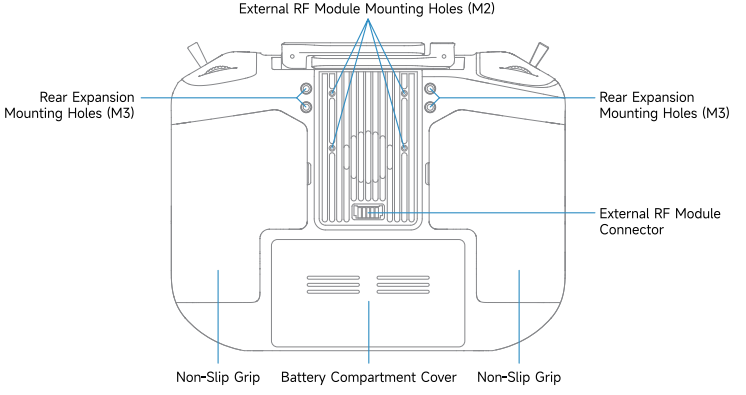
Firmware Update: The radio controller comes with a stable version of EdgeTX preinstalled. Do not update the firmware unless you are familiar with the update procedure and have confirmed that the firmware is compatible with your radio controller model. Installing incompatible firmware or performing the update incorrectly may make the radio controller unusable.

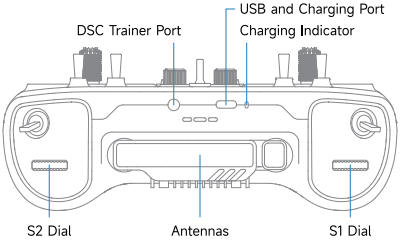
Specifications

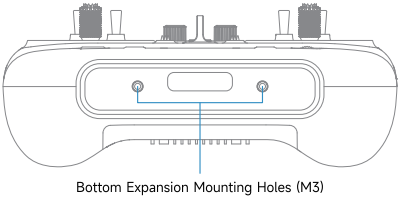
- Product Name: NexRadio 14 Radio Controller
- Model: N14
- Dimensions: 180 × 141 × 77mm
- Weight: 350g (without batteries)
- Operating Voltage: 7.4 V DC (6.6–8.4 V)
- Operating Current: 0.6–1.0 A (from minimum to maximum RF output power)
- Operating System: EdgeTX
- Built-in RF Module: NexRadio TX Module
- RF Firmware: ExpressLRS (ELRS)
- Channels: 14
- Antennas: 2 foldable dual-band antennas
- Batteries: 2 × 21700 lithium-ion cells (sold separately)
- Charging: USB charging supported
- Charging Power: 15 W
- Main Display (EdgeTX): 1.3-inch OLED
- Secondary Display (ELRS): 0.77-inch OLED
- Gimbals: NexRadio Gimbal
- Gimbal Stick-End Thread: M4
- External RF Module Bay: Micro/Nano module bay (module sold separately)
- Firmware Update: USB

Functional Overview

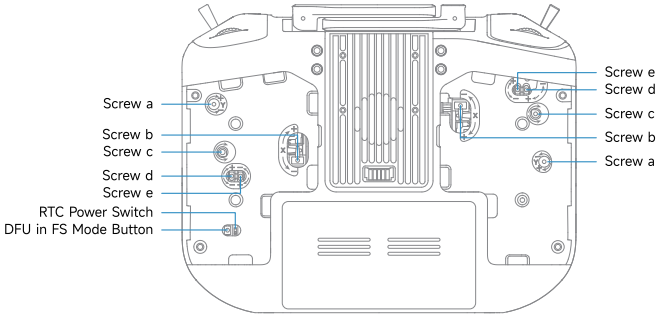


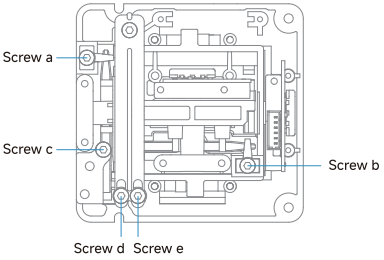






Rear Buttons and Gimbal Adjustment





Y-Axis Self-Centering Force

Use screw a to adjust the Y-axis gimbal tension. Turn it clockwise to increase the tension or counterclockwise to decrease it.

X-Axis Self-Centering Force

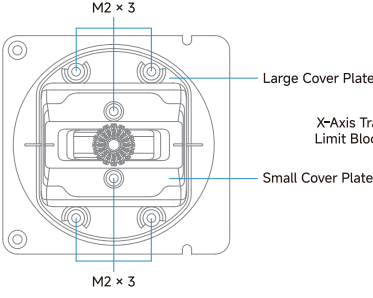
Use screw b to adjust the X-axis gimbal tension. Turn it clockwise to increase the tension or counterclockwise to decrease it.

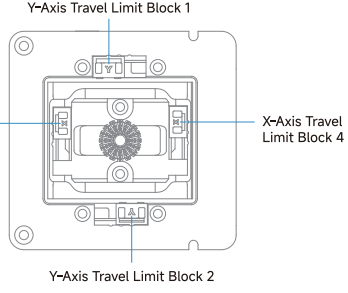
Y-Axis Self-Centering Mode

Use screw c to switch the Y-axis gimbal between self-centering and non-self-centering modes:
• Non-self-centering: Turn screw c fully clockwise. This setting is suitable for the throttle axis.
• Self-centering: Turn screw c counterclockwise until the Y-axis returns fully to center. This setting is suitable for the pitch axis.

Throttle Tension Adjustment

• Damping: Use screw d to adjust throttle damping. Turn it clockwise to increase damping or counterclockwise to decrease it.
• Ratchet: Use screw e to adjust the throttle ratchet. Turn it clockwise to increase the ratchet tension or counterclockwise to decrease it.





Y-Axis Travel Adjustment

• Remove the four M2 × 3 screws and take off the large cover plate.
• Move Y-axis limit block 1 to set the maximum downward gimbal travel. From right to left, the positions correspond to 24°, 27°, and 30°.
• Move Y-axis limit block 2 to set the maximum upward gimbal travel. From left to right, the positions correspond to 24°, 27°, and 30°.

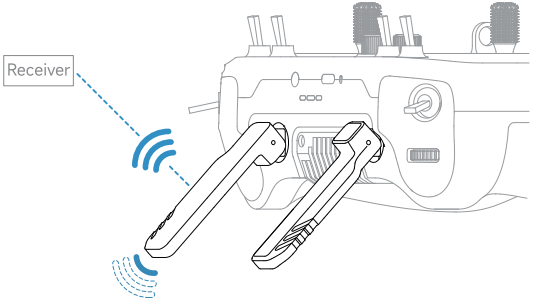
X-Axis Travel Adjustment

• Remove the two M2 × 3 screws and take off the small cover plate.
• Move X-axis limit block 3 to set the maximum rightward gimbal travel. From top to bottom, the positions correspond to 24°, 27°, and 30°.
• Move X-axis limit block 4 to set the maximum leftward gimbal travel. From bottom to top, the positions correspond to 24°, 27°, and 30°.

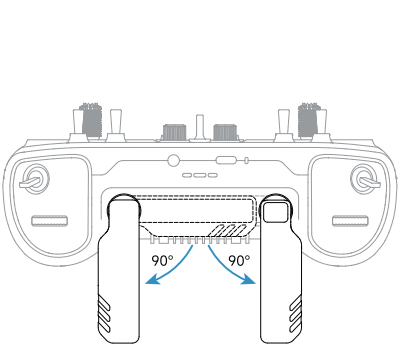
Note: Follow the viewing angle shown in the illustrations above when adjusting the gimbals.

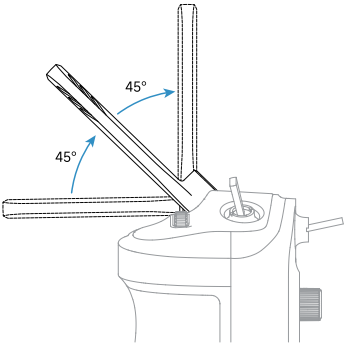
Antennas

The radio controller antennas are directional. Whenever possible, orient the flat surfaces of the antennas toward the receiver.



For optimal positioning, the antennas can rotate 90° horizontally and 45° or 90° vertically. Do not force them beyond these limits, as this may damage the antennas.





Note: Do not cover the antenna while the radio controlller is operating, otherwise it may affect the connection quality of the wireless signal.

Binding

The NexRadio 14 has a built-in ExpressLRS (ELRS) RF module and supports various compatible 2.4GHz ELRS receivers.

- Power-cycle the receiver three times. When its status LED repeatedly flashes twice, the receiver is in binding mode.
- Power on the radio controller and briefly press the SYS (System) button. In the TOOLS menu, select "ExpressLRS" and press the navigation wheel to open it. Scroll to [Bind] and press the wheel to start binding.

Note: Different NexRadio 14 versions may have different built-in RF modules. Only the protocols supported by the installed module are displayed.

Battery and Charging Precautions

The NexRadio 14 requires two 21700 lithium-ion cells connected in series to form a 7.4 V battery pack. The built-in USB charging function is designed only for a 2S pack made from two 3.7 V lithium-ion cells. Each cell has a nominal voltage of 3.7 V and a fully charged voltage of 4.2 V. Using an incompatible battery type may damage the radio controller or cause a fire.

Service and Technical Support

The NexRadio 14 requires two 21700 lithium-ion cells connected in series to form a 7.4 V battery pack. The built-in USB charging function is designed only for a 2S pack made from two 3.7 V lithium-ion cells. Each cell has a nominal voltage of 3.7 V and a fully charged voltage of 4.2 V. Using an incompatible battery type may damage the radio controller or cause a fire.

Service and Technical Support

BETAFPV Technical Support

Manuals

BETAFPV Official Shop

EdgeTX offers extensive model programming and mixer functions. For the software guide and more information, visit https://edgetx.org/.

Declaration for Low-Power Radio Equipment

• The Wi-Fi (wireless LAN) function of the NexRadio 14 complies with the technical requirements for Class F general low-power equipment specified in the Catalogue and Technical Requirements for Micro-Power Short-Range Radio Controller Equipment. The product uses an onboard antenna for data transmission and firmware updates. Refer to this manual for operating instructions.
• Do not change the intended use or operating conditions without authorization. Do not expand the transmission frequency range, increase transmit power (including by adding an RF power amplifier), or modify the transmitting antenna.
• Do not cause harmful interference to other lawfully operating radio stations, and do not request protection from such interference.
• This equipment must accept interference from industrial, scientific, and medical (ISM) equipment that emits RF energy, as well as from other lawfully operating radio stations.
• If this equipment causes harmful interference to another lawfully operating radio station, stop using it immediately. Resume operation only after the interference has been eliminated.
• When using low-power equipment aboard aircraft or in designated electromagnetic-environment protection areas—including radio astronomy observatories, weather radar stations, satellite earth stations (for telemetry, control, ranging, reception, and navigation), other military or civilian radio stations, and airports—follow the requirements of the relevant authorities and industry regulators.
• Do not use any model radio controller within a 5,000 m radius of the midpoint of an airport runway.
• Operating Temperature: -10 °C to 40 °C. Operating Voltage: 7.4 V.

Compliance Information

NexRadio 14 Radio Controller
Model: N14
FCC ID: 2AT6X-N14

FCC statements

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.
NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications or changes to this equipment. Such modifications or changes could void the user's authority to operate the equipment.
NOTE: 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.

Radiation Exposure Statement
The SAR limit of USA (FCC) is 1.6 W/kg averaged over one gram of tissue.
This product has also been tested against this SAR limit.
To maintain compliance with FCC RF exposure requirements, the use of belt clips, holsters, and similar accessories should not contain metallic components in their assembly. The use of accessories that do not satisfy these requirements may not comply with RF exposure requirements and should be avoided.

EU Declaration of Conformity

Hereby, Shenzhen Baida Moxing Co., Ltd. declares that the radio equipment NexRadio 14 Radio Controller is in compliance with directive 2014/53/EU.
The full text of the EU Declaration of Conformity is available at the following internet address: https://support.betafpv.com/hc/en-us

Operation Frequency & output power
2.4GHz: E.I.R.P.<20dBm

Specific Absorption Rate (SAR)
• Your device is tested to comply with applicable requirements and regulations of the European Union of human exposure to radio wave.
• Specific Absorption Rate (SAR) is used to measure radio waves absorbed by a body. The device complies with RF specifications when the device used at a distance of 0 mm from your body. The SAR limit is 2.0 W/kg averaged over 10 gram of tissue in the European Union.

CAUTION RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

简介

NexRadio 14遥控器是BETAFPV推出的一款多功能遥控系统，基于EdgeTX平台开发，搭载ExpressLRS通信协议，适用于多种应用场景。

免责声明

使用本产品前，请您仔细阅读并遵守此说明书内的操作指引，如因不规范操作导致产品故障或无法使用，BETAFPV可能无法向您提供相应保修措施等售后服务。
使用本产品视为您已阅读并接受与本产品相关的全部条款。
各国家/地区支持的无线工作频段及其对应的可用范围有所不同，详情请参考当地法律法规。
本产品的文档如有更新，恕不另行通知，请访问 www.betafpv.com 了解最新信息。

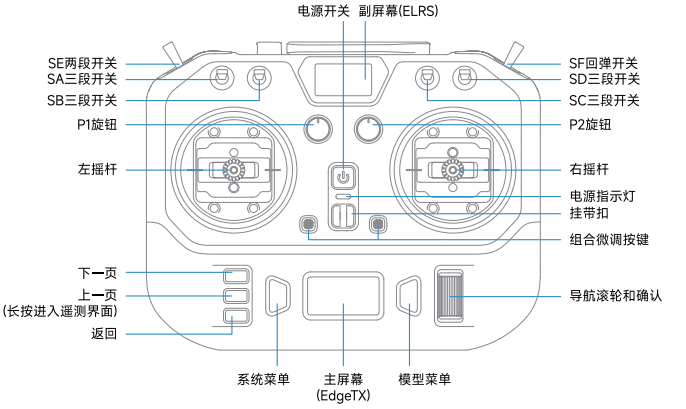
特别警告

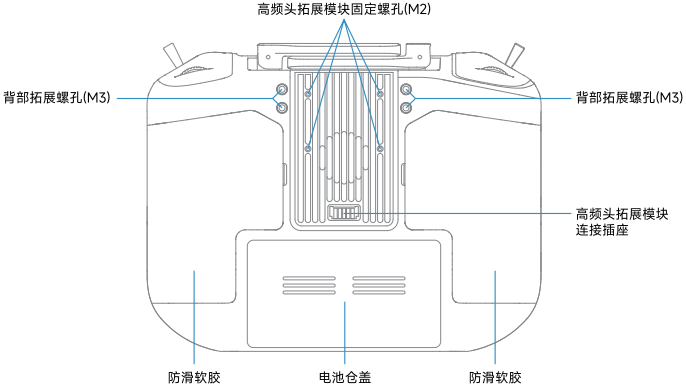
固件更新：本遥控器出厂时已预装稳定版本的EdgeTX固件。除非您熟悉固件更新流程并确认固件与设备型号相匹配，否则请勿自行更新。不正确的固件或操作失误可能导致遥控器无法正常使用。

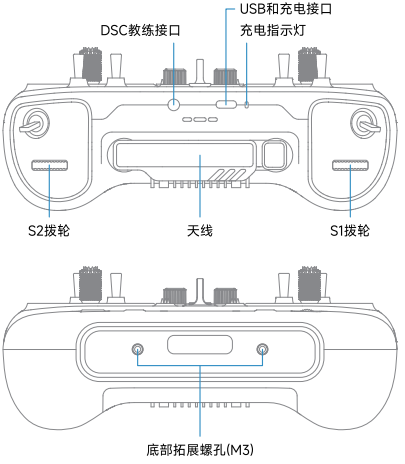
规格参数

产品名称：NexRadio 14遥控器
产品型号：N14
尺寸：180*141*77mm
重量：350g（不含电池）
工作电压：7.4V DC（6.6V-8.4V）
工作电流：0.6A-1.0A（最小功率至最大功率）
操作系统：EdgeTX
内置射频：NexRadio射频模块
射频固件：ExpressLRS
通道数量：14
天线：可折叠双频天线*2
电池：21700锂离子电池*2（需额外购买）
充电：支持USB直充
充电功率：15W
主屏幕（EdgeTX）：1.3英寸OLED屏幕
副屏幕（ELRS）：0.77英寸OLED屏幕
摇杆型号：NexRadio摇杆
摇杆头螺丝：M4
外部射频接口：Micro / Nano高频头拓展模块（需额外购买）
升级方法：USB

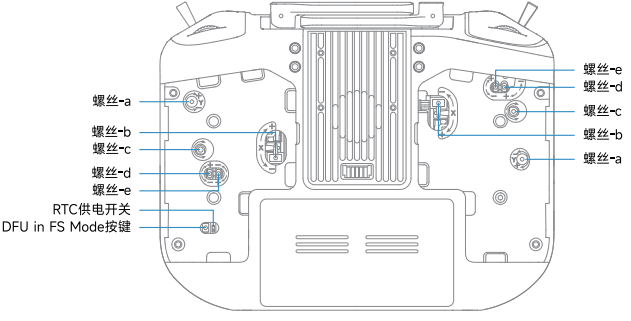
功能简介

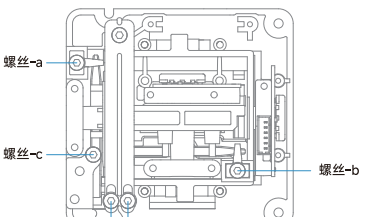

电源开关
副屏幕(ELRS)
SE两段开关
SA三段开关
SB三段开关
P1旋钮
左摇杆
下一页
上一页
(长按进入遥测界面)
返回
SF回弹开关
SD三段开关
SC三段开关
P2旋钮
右摇杆
电源指示灯
挂带扣
组合微调按键
导航滚轮和确认
系统菜单
主屏幕
(EdgeTX)
模型菜单


高频头拓展模块固定螺孔(M2)
背部拓展螺孔(M3)
背部拓展螺孔(M3)
高频头拓展模块
连接插座
防滑软胶
电池仓盖
防滑软胶


USB和充电接口
DSC教练接口
充电指示灯
S2拨轮
天线
S1拨轮
底部拓展螺孔(M3)

背部按键与摇杆调节


螺丝-a
螺丝-b
螺丝-c
螺丝-d
螺丝-e
RTC供电开关
DFU in FS Mode按键
螺丝-e
螺丝-d
螺丝-c
螺丝-b
螺丝-a



Y轴回中力度调节

- 通过螺丝-a调节Y轴回中力度，顺时针调节回中力度变大，逆时针调节回中力度变小。

X轴回中力度调节

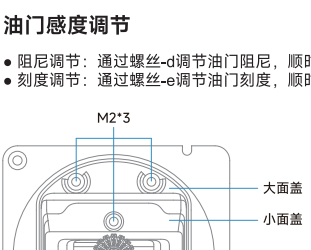
- 通过螺丝-b调节X轴回中力度，顺时针调节回中力度变大，逆时针调节回中力度变小。

Y轴回中模式切换

通过螺丝-c切换Y轴的回中模式；
- 不回中：顺时针拧到底为不回中模式，适合作为油门通道；
- 回中：逆时针拧至Y轴完全回中即可，适合作为俯仰通道。

油门感度调节

- 阻尼调节：通过螺丝-d调节油门阻尼，顺时针调节阻尼变大，逆时针调节阻尼变小；
- 刻度调节：通过螺丝-e调节油门刻度，顺时针调节刻度变重，逆时针调节刻度变轻。



Y轴行程调节

- 取下4颗M2*3螺丝，拆开大面盖；
- 拨动Y轴限位块-1可调节Y轴向下的最大行程角度，从右到左分别对应24°/27°/30°；
- 拨动Y轴限位块-2可调节Y轴向上的最大行程角度，从左到右分别对应24°/27°/30°。

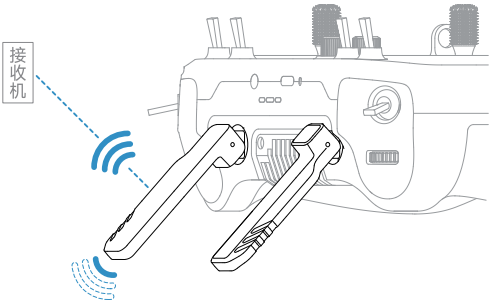
X轴行程调节

- 取下2颗M2*3螺丝，拆开小面盖；
- 拨动X轴限位块-3可调节X轴向右的最大行程角度，从上到下分别对应24°/27°/30°；
- 拨动X轴限位块-4可调节X轴向左的最大行程角度，从下到上分别对应24°/27°/30°。

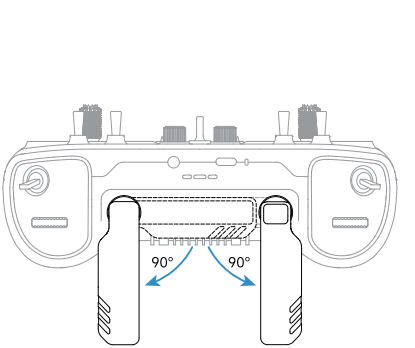
注意：摇杆调节说明请以上述图示视角为准。

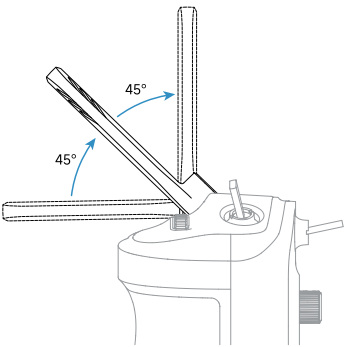
天线

发射机天线具有指向性，请尽量保持天线平面朝向接收机的方向。



为了匹配最佳的使用角度，天线的水平方向可旋转90°，垂直方向可旋转45°或90°，超出此范围可能会导致天线损坏。





注意：请勿在遥控器工作时遮挡天线，否则可能影响无线电信号的连接质量。

对频

NexRadio 14内置ExpressLRS射频模块，支持2.4 GHz接收机且兼容多种类型的ELRS接收机。
- 接收机连续通电3次，状态指示灯持续双闪，即进入对频状态；
- 遥控器开机，短按系统菜单，在TOOLS菜单下选择“ExpressLRS”按确认键进入，滚动导航滚轮到[Bind]并按确认键开始对频。

注意：由于NexRadio 14遥控系统不同版本内置的射频模块不同，系统中只会列出当前内置射频模块所支持的协议列表。

电池及充电注意事项

NexRadio 14遥控器仅支持2节21700锂离子电池（即7.4V电池组），内置USB充电功能仅适用于2节3.7V锂离子电池串联（2S），每节电池的标称电压为3.7V，满电电压为4.2V；
如果使用错误的电池类型，可能损坏遥控器或引起火灾。

服务与技术支持

BETAFPV技术支持　　说明书　　官网

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及获取更详细的说明：https://edgetx.org/

微功率无线电设备使用声明

- NexRadio 14遥控器的 WiFi（无线局域网）功能，符合“微功率短距离无线电发射设备目录和技术要求”中，对通用微功率设备 F 类设备相关的技术要求，产品采用板载天线设计，用于数据传输、产品固件升级，详细使用方法请参照产品说明书；
- 不得擅自改变使用场景或使用条件、扩大发射频率范围、加大发射功率（包括额外加装射频功率放大器），不得擅自更改发射天线；
- 不得对其他合法的无线电台（站）产生有害干扰，也不得提出免受有害干扰保护；
- 应当承受辐射射频能量的工业、科学及医疗（ISM）应用设备的干扰，或其他合法的无线电台（站）干扰；
- 如对其他合法的无线电台（站）产生有害干扰时，应立即停止使用，并采取措施消除干扰后方可继续使用；
- 在航空器内和依据法律法规、国家有关规定、标准划设的射电天文台、气象雷达站、卫星地球站（含测控、测距、接收、导航站）等军民用无线电台（站）、机场等的电磁环境保护区域内使用微功率设备，应当遵守电磁环境保护及相关行业主管部门的规定；
- 禁止在以机场跑道中心点为圆心，半径5000米的区域内使用各类模型遥控器；
- 微功率设备使用时温度为 -10°C 至 40°C，电压的环境条件为 7.4V。

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