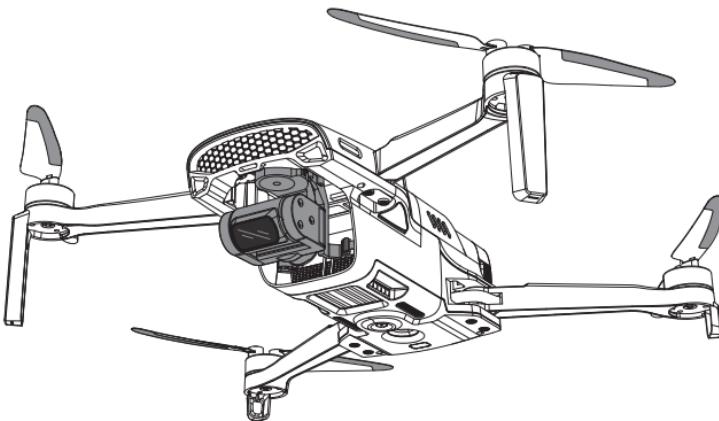


T210 MINI

(WKRC-H9)

操作指南 v1.2 2023.2.10



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安全概要



使用本产品具有一定的安全风险,不适合未满14岁的人士使用。安全概要仅包含部分的飞行安全知识,请务必仔细阅读《快速操作指南》的全部内容,以避免因操作不当而导致财产损失,甚至人身伤害。

- ★ 本产品采用2.4GHz 高清图传,应该在开阔无遮挡、无电磁干扰的环境飞行。
- ★ 本产品适用于有操作模型经验、年龄不小于14周岁的人群。
- ★ 恶劣天气下请勿飞行,如大风、下雪、下雨、有雾天气等。
- ★ 选择开阔、周围无高大建筑物的场地。大量使用钢筋的建筑物会影响指南针工作,而且会遮挡GPS信号,导致飞行器定位效果变差甚至无法定位。
- ★ 飞行时,请远离高速旋转部件(如螺旋桨、无刷电机)。
- ★ 飞行时,请保持在视线内控制,远离障碍物、人、水面等。
- ★ 请勿在有高压线,通讯基站或发射塔等区域飞行,以免遥控器受到干扰。
- ★ 请勿在相关法律或规定限制的禁飞区域飞行。
- ★ 请勿在人群聚集的地方采用抛飞的起飞方式放飞飞行器
- ★ 在海拔约4500米以上飞行,由于环境因素导致飞行器电池及动力系统性能下降,飞行性能将会受到影响。

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免责声明与警告

使用飞行器具有一定的安全风险,仅适用于14周岁及以上有操作模型经验的人群,不适合未满14岁的人士使用。请勿让儿童接触飞行器,在有儿童出现的场景操作时请务必特别小心注意。使用本产品之前,请仔细阅读本文档。本声明对安全使用本产品以及您的合法权益有着重要影响。

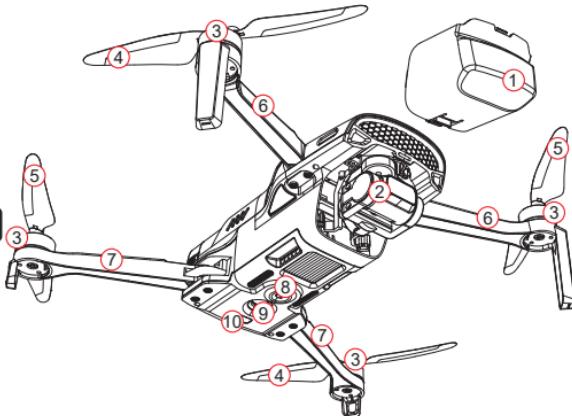
本产品是一款多旋翼飞行器,在电源正常工作及各部件未损坏的情况下将提供轻松自如的飞行体验。华科尔保留更新本免责声明的权利。务必在使用产品之前仔细阅读本文档,了解您的合法权益、责任和安全说明;否则可能带来财产损失、安全事故和人身安全隐患。一旦使用本产品,即视为您已理解、认可和接受本声明全部条款和内容。使用者承诺对自己的行为及因此而产生的所有后果负责。使用者承诺仅出于正当目的使用本产品,并且同意本条款及华科尔可能制定的任何相关政策或者准则。在法律允许的最大范围内,在任何情况下,华科尔均不对任何间接性、后果性、惩罚性、偶然性、特殊性或刑罚性的损害,包括因您购买、使用或不能使用本产品而遭受的损失,承担责任(即使华科尔已被告知该等损失的可能性亦然)。

某些国家的法律可能会禁止免除担保类条款,因此您在不同的国家的相关权利可能会有所不同。在遵从法律法规的情况下,华科尔享有对以上条款的最终解释权。华科尔有权在不事先通知的情况下,对本条款进行更新,改版或终止。

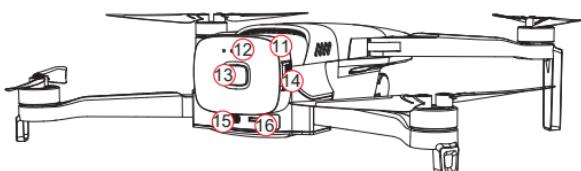
认识您的飞行器

- T210 MINI 采用主流的轻巧、折叠型设计，在保证飞行和使用质量的前提下，无论是使用还是携带上都前所未有地便捷。
- 采用GPS/GLONASS/BeiDou三模卫星定位导航系统，飞行更精准、更安全。
- 配备下视视觉系统和TOF飞行时间测距系统，可在超低空或室内实现稳定飞行和悬停。
- 采用自主研发的领先飞控制系统，提供敏捷、稳定、安全的飞行性能，可实现抛飞和智能飞行。
- 采用高精度三轴机械防抖增稳云台，相机可稳定拍摄4K高清视频与及4800万像素照片。
- 采用全新2.4GHz远距离数字加密传输技术，抗干扰能力更强、图传距离更远。

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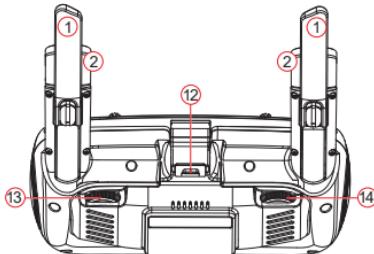
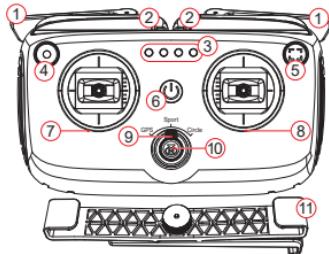
- 1) 云台保护罩 (飞行前请取出)
- 2) 一体式云台相机
- 3) 电机
- 4) 反转螺旋桨(↘)
- 5) 正转螺旋桨(↗)
- 6) 前机臂
- 7) 后机臂
- 8) 下视视觉系统
- 9) TOF测距传感器
- 10) 飞行器状态指示灯
- 11) 电池
- 12) 电池电量指示灯
- 13) 电源按键
- 14) 电池卡扣
- 15) Type-C升级/充电端口
- 16) MicroSD卡槽



- ※1) 使用T210 MINI之前，请在WK Fly App里观看教学视频升级相关固件及校准相关项目并仔细阅读《快速操作指南》，以避免因操作不当而导致财产损失，甚至人身伤害。
- 2) 高速旋转的螺旋桨具有危险性，操作者应与飞行器保持安全距离并使飞行器远离人群、建筑物、树木或其它遮挡物，以避免发生撞击。

认识您的遥控器

此遥控器内置2.4G数字图像传输系统地面端，结合移动设备可以通过APP在实时显示高清画面，折叠式手柄可稳定放置移动设备。



- | | | | | |
|----------|---------|-------------|-------------|-------------------|
| 1) 天线 | 4) 录像按键 | 7) 左摇杆 | 10) 反航按键 | 13) 右拨轮(相机曝光补偿调节) |
| 2) 手机支架 | 5) 拍照按键 | 8) 右摇杆 | 11) 平板支架 | 14) 左拨轮(控制云台俯仰) |
| 3) 电源指示灯 | 6) 电源按键 | 9) 飞行模式切换开关 | 12) 升级/充电端口 | |

遥控器摇杆模式分为美国手、中国手和日本手，出厂默认摇杆模式为“美国手”(左手油门)，可以在APP设置中切换，建议初学者使用美国手作为操控方式。

美国手为左手油门：

左摇杆(THRO/RUDD)控制飞行器上升/下降以及左/右转向;右摇杆(ELEV/AILE)控制飞行器前进/后退以及向左飞/向右飞；

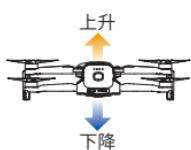
中国手为右手油门：

左摇杆(ELEV/AILE)控制飞行器前进/后退以及向左飞/向右飞；右摇杆(THRO/RUDD)控制飞行器上升/下降以及左/右转向；

日本手为右手油门：

左摇杆(THRO/RUDD)控制飞行器前进/后退以及左/右转向；右摇杆(ELEV/AILE)控制飞行器上升/下降以及向左飞/向右飞；

左摇杆



右摇杆



左转
右转



左倾
右倾

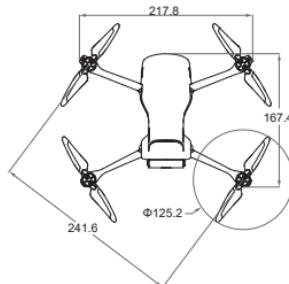
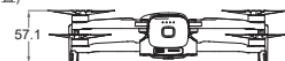


注意：请在开阔无遮挡、无电磁干扰的环境飞行。

参数

• 飞行器

对称电机轴距	241.6mm
机身尺寸(长*宽*高)	167.4mm*217.8mm*57mm(展开); 143mm*82.8mm*57mm(折叠)
标准起飞重量	249g
最大上升速度	8m/s(可调)
最大下降速度	5m/s(可调)
最大水平飞行速度	GPS模式:5m/s, 运动模式:12m/s(可调), 姿态模式:25m/s(无风环境)
最大可倾斜角度	GPS模式:55°, 运动模式:55°, 姿态模式:55°
最大旋转角速度	150°/s
最大飞行海拔高度	4500m
最大可承受风速	18m/s
电池规格	7.7V, 2250mAh, LiPo 2S, 10C
最大飞行时间	30分钟(海平面无风环境, 3m/s自动巡航条件下测得)
工作环境温度	-10°C至+45°C
定位精度	水平方向: ±0.5m; 垂直方向: ±1.5m (GPS定位正常工作时)



• 下视定位系统

精确测距范围	0.25m~5m
视觉悬停范围	0.25m~10m

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• 相机

影像传感器	1/2.3英寸CMOS; 有效像素4800万
镜头	FOV83°; 4.49mm; f/2.6光圈
ISO范围	100-3200
电子快门	1/2-1/4000
照片分辨率	8000*6000(48MP)/4000*3000(12MP)/3840*2160(8MP)
录像分辨率	UHD:3840*2160 (4K 30fps) ;
视频存储最大码率	100Mbps
支持文件系统格式	Fat32; exFat
图片格式	JPEG; RAW
视频格式	MP4
支持存储卡类型	Micro SD卡, 最大支持128G, Fat32文件系统格式, 传输速度为Class10及以上或达到UHS-1评级的Micro SD卡

• 云台

稳定系统	3轴(俯仰、偏航、横滚)
可控转动范围	俯仰: -90°至30°;
最大控制转速	俯仰: 5°/s~100°/s可调;
角度控制精度	静态: ±0.01°; 动态: ±0.02°; 防抖: ±0.01°

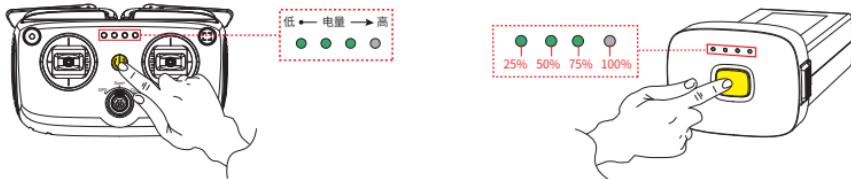
• 遥控器参数

机身(长x宽x高)	173.37x100.85x70.6mm
工作频率	2.4GHz
最大通信距离	约5公里(开阔无遮挡, 无电磁干扰)
电池	内置锂电7.4V 2200mAh LiPo 2S
移动设备支架	适用于平板和手机

检测电量

遥控器：短按电源开关查看电量，电量指示灯常亮(显示电量)。

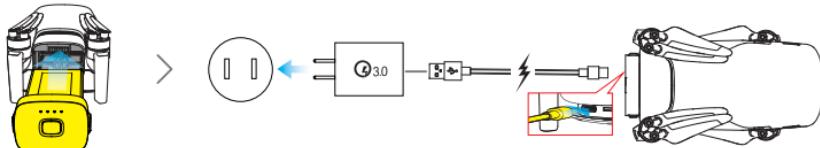
飞行器电池：短按电源开关开启电池查看电量，电量指示灯常亮(显示电量)。



充电

飞行器电池充电

提示：飞行器电池须装在飞行器上充电，飞行器兼容市场标准Type-C接口，请使用满足QC3.0 协议的USB充电器（例如手机、相机等数码产品USB充电器）进行充电。如在飞行器充电时遇到冒烟、有异味、漏夜的情况下时，请勿继续充电，请移送至本公司进行维修。



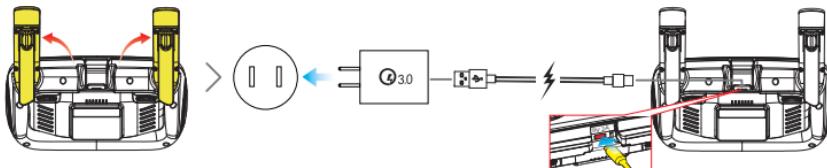
电量指示绿灯闪烁表示开始充电；充满后电量指示熄灭。

注意：开机状态下不支持充电，充电过程中不能开启飞行器。

飞行结束后飞行器电池温度较高，须待飞行器电池降至室温再对飞行器电池进行充电。

遥控器充电

提示：本遥控器使用内置一体式可充电锂电池，兼容市场标准Type-C接口，请使用满足QC3.0 协议的USB充电器（例如手机、相机等数码产品USB充电器）进行充电。如在遥控器充电时遇到冒烟、有异味、漏夜的情况下时，请勿继续给遥控器充电，请移送至本公司进行维修。



电量指示绿灯闪烁表示开始充电；充满后电量指示熄灭。

注意：对于使用非华科尔官方指定的充电器进行充电所造成的一切后果，华科尔将不予负责。

下载WK Fly APP

WK Fly APP支持安卓Android 5.1及以上系统、鸿蒙HarmonyOS 2.0及以上系统、苹果iOS9.0及以上系统的手机、平板。

安卓系统或鸿蒙系统移动设备请使用打开浏览器输入网址: <https://fly.walkera.cn/a/> 或扫描右边的二维码下载安装APP;

苹果iOS系统请到APP Store搜索 WK Fly 下载安装。



※为保证飞行安全,未连接、未登录App,以及中国大陆地区用户未绑定手机完善注册信息进行飞行时,飞行器将被限高30 m,限远50 m。在中国大陆地区使用飞行器的用户,需根据中国民用航空局的相关规定完成实名登记,请通过民航局无人机实名登记系统登记,或直接在WK Fly App中进行登记操作。

如需了解更多信息,请访问<https://uas.caac.gov.cn>

WK Fly APP界面介绍

在该界面可以预览T210 MINI所拍摄的实时高清视频以及照片,以及动态设置飞行器、语音手柄、云台以及电池等参数。

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- 1) 返回: 返回上一层。
- 2) 设备状态: 显示设备实时状态信息。
- 3) 飞行时间: 飞行器飞行的时间。
- 4) 飞行模式: 显示飞行器当前的飞行模式。
- 5) 飞行器电池信息: 点击图标展开、查看当前飞行器电池的电量、电压信息。
- 6) GPS状态: 点击图标展开查看当前飞行器接收的GPS星数、GPS定位方式。
- 7) 高清图传信号强度: 显示飞行器与语音手柄之间图传信号的强度。
- 8) 通知信息: 点击图标展开查看通知信息列表。
- 9) 设置: 点击图标展开设置菜单:里面有飞行器设置、电池信息及设置、系统设置。

“”飞行器设置：里面有返航高度设置；飞行速度、转向灵敏度、限高、围栏开关、距离限制、云台横滚设置、高度跟随开关、打点开关、失联动作选择、飞行器传感器设置；新手模式开关。

“”电池设置：里面有电池剩余电量、当前电压、当前温度、系列号、充放电循环次数等信息显示；低电量自动返航开关。

“”系统设置：里面有地图设置；飞行轨迹开关；直播设置；固件升级、视频缓冲、开启硬解码等设置。

10) 预览画质：相机视窗图像预览画质(即图像传输画质)。

11) 遥控器摇杆模式：显示当前设定的遥控器摇杆模式。

12) 飞行器TF卡容量：实时显示当前飞行器TF卡容量信息。

13) 相机曝光值：显示当前飞行器相机曝光度数值。

14) 相机工作模式切换：每点击图标一次，相机工作模式将在拍照与录像之间切换一次。

15) 相机快门图标：在拍照模式下每点击此图标一次拍照一张；在录像模式下点击快门图标开始录像，再次点击快门图标停止并保存录像。

16) 相机设置：点触图标展开相机设置界面，里面有专业设置、拍照设置、视频设置和其他等设置。

专业设置：里面可以设置ISO感光度、快门速度、曝光补偿度、白平衡等。

拍照设置：可以设置拍摄模式、照片格式、照片大小(质量)等；

视频设置：可以设置预览分辨率、录像码率、录像分辨率、视频显示模式。(提示：在预览分辨率为高清时图传画质最好；在预览分辨率为流畅时图传距离最远，图传视频最流畅)。

... 其他设置：有网格(网格设置)；格式化TF卡(格式化飞行器内TF卡)，TF卡容量信息信息；拍照动画开关；拍照声音开关等。

17) 媒体库：点击图标打开飞行器所拍摄照片和视频存放位置，点选图片或视频可以快速分享、下载或管理媒体文件。

18) 飞行状态参数：

H高度：飞行器与返航点垂直方向的距离。

D距离：飞行器与返航点水平方向的距离。

V.S垂直速度：飞行器在垂直方向的飞行速度。

H.S水平速度：飞行器在水平方向的飞行速度。

19) 姿态球缩略图标：点击此图标展开姿态球悬浮窗。

20) 放大地图：点击图标放大地图。

21) 缩小地图：点击图标缩小地图。

22) 隐藏小窗口：点击图标隐藏地图/相机画面小窗口。

23) 地图/相机画面小窗口：点击图标地图窗口与相机画面窗口互换(地图切换到全屏大窗口，相机画面切换到小窗口)。

24) 起飞/返航模式图标(当飞行器未起飞时显示起飞图标①；飞行器起飞后显示返航模式图标②)：

在已达到自动起飞条件后点击起飞图标①，飞行器将自动起飞并悬停在一定高度；

在飞行器已起飞状态下点击返航模式图标②，飞行器将中止所有飞行任务，自动返回到起飞点降落。

25) VR模式图标：点击此图标相机视窗预览视频将切换为左右格式显示。搭配VR眼镜即可实现沉浸式的第一视角飞行体验，依靠手机陀螺仪实现头部追踪功能控制飞行器云台相机的俯仰和偏航角。

在VR模式显示界面里有飞行器电池信息、飞行模式、实时状态参数等信息显示。

在VR模式显示界左边向上或向下拖动可以切换视频显示模式；在VR模式显示界右边向上或向下拖动可以调节视频显示窗口大小。

26) 智能飞行功能图标：点击图标展开智能飞行模式选择界面。里面有延时摄影、辅助功能等智能飞行模式。

27) 位置显示切换：点击图标可选择显示飞行器位置或语音手柄(移动设备)位置：

点选图标“▲”，显示飞行器位置；

点选图标“(◎)”，显示语音手柄(移动设备)位置。

28) 地图锁：点击图标锁定/解锁正北(上北,下南,左西,右东)；“↑”为锁定正北状态；“↖”为解锁地图状态；

29) 擦除飞行轨迹：擦除地图界面显示的飞行轨迹。

30) 地图切换：点击图标展开地图类型切换选项。

31) 清除航点：删除已上传至飞行器的航点。

32) 显示/隐藏航迹：点击图标在地图窗口上显示/隐藏飞行器的飞行轨迹。

33) 地图跟随飞行器：点亮图标地图跟随飞行器移动而动，飞行器始终在地图正中央。

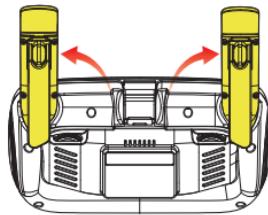
34) 放大：点击图标放大地图。

35) 缩小：点击图标缩小地图。

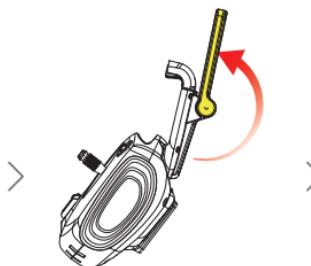


地图窗口界面

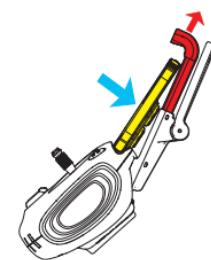
CHS 准备遥控器



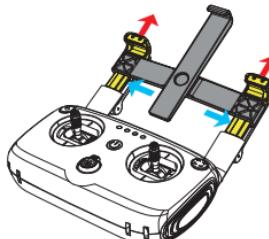
展开手机支架



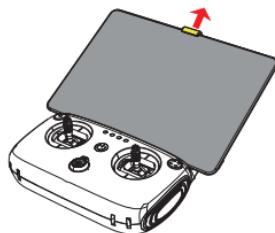
展开天线



将手机支架向上拉住不放，放入手机后松开拉手机支架的手使其夹紧手机。



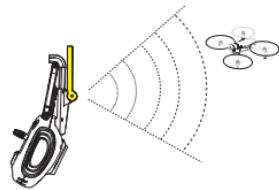
依次将手机支架向上拉住不放，放入平板支架后将手机支架嵌入平板支架，最后松开拉手机支架的手。



将平板支架向上拉住不放，放入平板后松开拉平板支架的手使其夹紧平板。

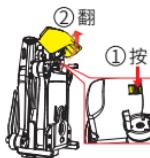
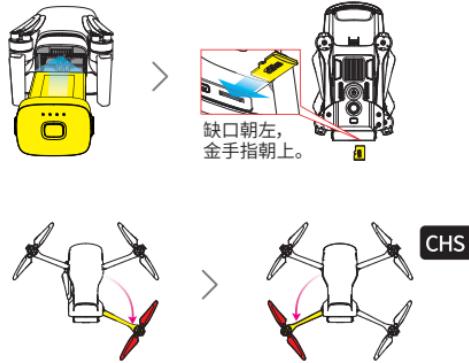
注意事项：

- 1) 操控飞行器前使用前请检查天线是否按要求摆放(遥控器在握持的姿势下天线竖直向上)。
- 2) 及时调整操控者、遥控器与飞行器之间的方位、距离，并确保遥控器天线始终竖直向上以得到最佳通信；
- 3) 请勿同时使用其它同频段的通信设备，以免对遥控器信号造成干扰。

**准备飞行器**

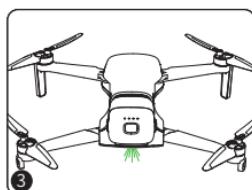
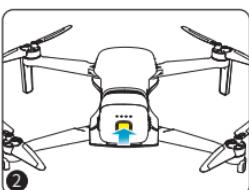
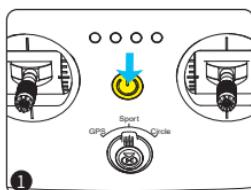
飞行器出厂时处于收纳状态，请按照如下步骤展开飞行器。

- 1) 安装电池、MicroSD卡。
- 2) 移除云台保护锁扣。
- 3) 展开前机臂、前桨叶。
- 4) 展开后机臂、后桨叶。

**准备飞行****启动与连接**

⚠ 注意：开启飞行器电源之前，确保云台保护罩已移除、前后机臂均已展开，以免影响飞行器自检。

- 1) 长按电源开关3~5秒开启遥控器。
- 2) 先短按电池电源开关一次，然后长按电源开关3~5秒开启飞行器。
- 3) 将飞行器静止放于水平位置，待到飞行器状态指示灯由黄灯快闪变成绿灯慢闪，蜂鸣器变为不响表示连接码成功。



连接移动设备

打开移动设备的WiFi设置项，等待约30秒，当可用WLAN列表中出现WK_GRD_XXXXXX时，点击“WK_GRD_XXXXXX”并输入密码“12345678”进行连接，连接成功后退出设置项。

下载离线地图

在移动设备系统桌面找到“WK Fly”图标并点击运行WK Fly APP → 点击“ 离线地图” → 双指在屏幕拖动并缩放地图，将需要下载的地图区域放置于黄色方框内，然后点击“下载”下载该区域的离线地图，下载完成后在APP左上角点击“<”返回主界面。

激活飞行器并绑定设备

全新的T210 MINI必须通过WK Fly App 激活和绑定设备，请分别开启飞行器和遥控器电源，连接手机后运行WK Fly App，根据界面提示操作。激活过程中需要连接网络。

在主界面点击“ 连接引导” → 根据界面提示操作激活飞行器并绑定设备 → 向左或向右滑动，找到“T210 MINI” → 然后点击“飞行界面”进入飞行界面。



飞行前，请先下载计划飞行区域的离线地图(在移动设备连网状态下下载离线地图)。

GPS卫星定位信号说明

点击移动设备APP顶端状态栏飞行器GPS状态图标可以展开飞行器GPS状态窗口查看GPS状态。



电机解锁

对码成功后，将左右摇杆同时置于最低位置并且向外拨保持不动直到电机转动，转动后请及时松开摇杆。



电机锁定

飞行器着地之后,将油门摇杆推到最低的位置并保持2秒后电机停止。



操控飞行

- 1. 确保遥控器、飞行器电池以及移动设备电量充足；
- 2. 确保飞行器已收到卫星定位信号并且APP里GPS状态图标是绿色的(星数大于10)；
- 3. 起飞前请查看确认遥控器摇杆模式(在APP右上角查看)；
- 4. 起飞前请切换飞行模式；
- 5. 起飞前请将电机解锁。



手动起飞

执行以下摇杆动作启动电机,然后缓缓向上推动油门摇杆起飞。

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手动降落

缓缓向下拉动油门摇杆,直至飞行器降落至地面。飞行器着地之后,将油门摇杆拉到最低的位置并保持2秒后电机停止。



油门摇杆

一键起飞

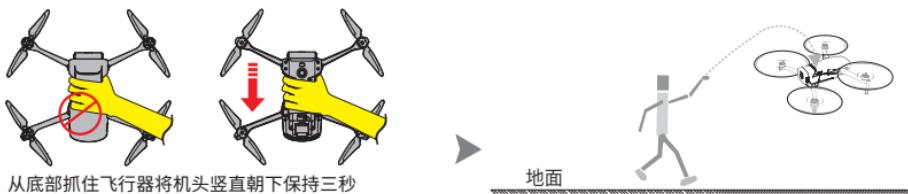
先将执行以下摇杆动作启动电机,然后将飞行模式三档开关拨在左端“GPS”位置,最后在APP界面点击起飞图标,飞行器将会自动起飞(默认高度为2~2.5m)。



抛飞方式起飞

GPS定位后,从飞行器底部抓住飞行器将飞行器机头垂直朝下约2-3秒触发抛飞模式飞行器机会发出“滴滴”声,抛出后飞行器自由落体0.5秒后电机将自动解锁、飞行器自动调整姿态、自动悬停(高度2~2.5米)。

注意:每次进入抛飞状态后,抛飞状态自动保持10秒,超过10秒后蜂鸣器停止提示音,请在进入抛飞状态后10秒内抛出。若抛超时,请重新进入抛飞状态再抛飞。



从底部抓住飞行器将机头竖直朝下保持三秒

地面

⚠ 警告

- 1) 请勿在人群聚集的地方采用抛飞的起飞方式放飞飞行器。
- 2) 采用抛飞方式放飞飞行器时,严禁从飞行器顶部抓住飞行器或抓住螺旋桨,否则后果自负。
- 3) 只有在飞行器已接收到GPS卫星定位信号、且信号良好的情况下(星数大于10)才能使用抛飞。
- 4) 飞行器蜂鸣器响起后请在10秒内将飞行器抛出去,否则会超时会自动退出抛飞模式。
- 5) 进入抛飞模式后严禁向下抛或握着飞行器向下甩,抛飞时尽量向上抛出或向前平抛。
- 6) 抛飞后,请根据您的需要切换飞行模式。

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运动模式

飞行器通电后首次解锁起飞默认为运动模式;飞行器在空中,将遥控器飞行模式切换开关拨在正中“Sport”位置,飞行器将进行运动模式。

注意事项:

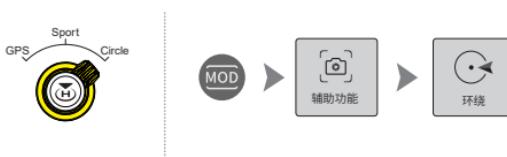
- 1) 飞行器每次通电后首次飞行均默认为运动模式。
- 2) 在运动模式下,有定高、定点、刹车功能,飞行速度较快。
- 3) 若GPS信号差或无信号时,只能定高,而不会定点。



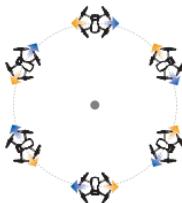
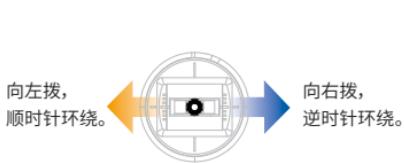
环绕模式

飞行器在空中,并且飞行模式在GPS模式下,将遥控器飞行模式切换开关拨在右端“Circle”位置或在APP界面点击MOD图标→然后点击辅助功能按钮→最后在弹出悬浮窗中点击环绕按钮,飞器将进入环绕模式。

环绕中心点可以点击锁定按钮来确定,可在App主界面右侧栏打开打点功能,查看环绕中心点在地图的位置,如果没有锁定目标,环绕中心点默认是飞行器前方10米处。

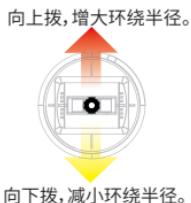


1) 进入自动环绕飞行时, 飞行器处于悬停静止状态, 横滚摇杆(AILE)向左或向右拨动设定环绕的速度和方向(-5m/s ~+5m/s, 默认为0m/s), 才能环绕飞行。



速度: 拨动幅度越大且保持的时间越长, 环绕速度越快, 反之越小。

2) 俯仰摇杆(ELEV)向上或向下拨动改变环绕的半径控制飞行器靠近或远离目标(5~50m, 默认环绕半径为5m)。



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★注意: 操作前请查看确认遥控器当前摇杆模式(在APP右上角查看)。

★调整环绕方向(横滚摇杆AILE): 美国手或日本手都是右摇杆向左或向右拨动; 中国手则是左摇杆向左或向右拨动。

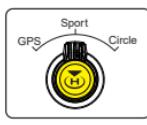
★调整环绕半径(俯仰摇杆ELEV): 中国手或日本手都是左摇杆向上或向下拨动; 美国手则是右摇杆向上或向下拨动。

返航模式

在飞行过程中, 长按遥控器上的返航按键“”或在移动设备APP界面左边点击返航图标“”, 飞行器将进入返航模式自动飞回到起飞点降落; 返航结束后自动退出返航模式。



点击此图标



长按返航按键

注意事项：

- 1) 长按“”键或在移动设备APP界面右边点击返航图标“”后,请不要操作其它开关按键或图标。
- 2) 当飞行器丢失遥控器的遥控信号后会自动进入失控返航。
- 3) 当飞行器接收GPS信号异常或GPS模块不工作时,无法实现返航,请手动操控降落。
- 4) 自动返航过程中再次长按返航键“”,可以取消返航。
- 5) 在失控返航过程中,遥控器信号恢复正常后,返航过程仍将继续,但拨动飞行模式切换开关切换飞行模式可取消返航。
- 6) 若返航降落过程中发现飞行器高度低于15米时降落速度过快,须手动稍微上推油门摇杆,减缓飞行器下降速度,保障飞行器安全降落。

飞行器与Home点水平距离>20m

- a. 当飞行器高度高于设定返航高度时,飞行器将保持现有的高度,自动返航至Home点上方,然后垂直降落。
- b. 当飞行器高度低于设定返航高度时,飞行器将垂直爬升至设定返航高度后自动返航至Home点上方,然后垂直降落。

飞行器与Home点水平距离<20m

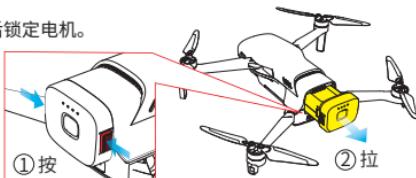
- a. 当飞行器高度高于设定返航高度时,飞行器将保持现有的高度,自动返航至Home点上方,然后垂直降落。
- b. 当飞行器高度低于设定返航高度时,飞行器将保持现有的高度,自动返航至Home点上方,然后垂直降落。

**结束飞行**

- 1) 手动降落、低电量保护自动降落或返航功能降落,降落地面后锁定电机。
- 2) 先关闭飞行器电源后再关闭遥控器。
- 3) 将飞行电池从飞行器取出。

拆卸电池:

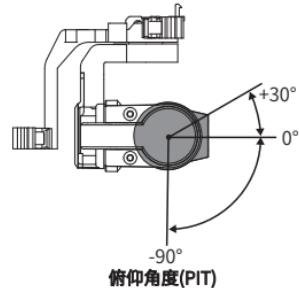
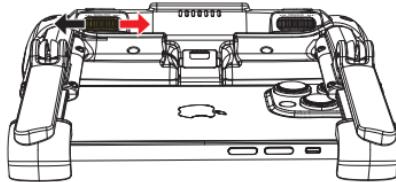
按住电池两侧卡扣纹理部分后,向飞行器后方拉取出电池。



云台控制

三轴稳定云台为相机提供稳定的平台，使得在飞行器高速飞行的状态下，相机也能拍摄出稳定的画面。您可以通过遥控器左拨轮控制云台的俯仰角度(PIT)。

遥控器左拨轮向右或向左拨动



相机控制

1) 拍摄画面亮度调节

在APP里设置

当图像画面偏暗或偏亮时，可以点击图标“”→点选图标“”进入相机专业设置，通过调节ISO感光度、快门速度、曝光值来调节画面的亮度。

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点亮图标“”为自动档：相机会根据不同环境自适应自动调节ISO感光度和快门速度，自动档只有白平衡可以手动调节。

点亮图标“”手动档：手动档可以手动调节ISO感光度、快门速度、曝光值来调节画面的亮度。



自动档只有白平衡可以调节。



手动档ISO感光度、快门速度、曝光值、白平衡均可以调节。

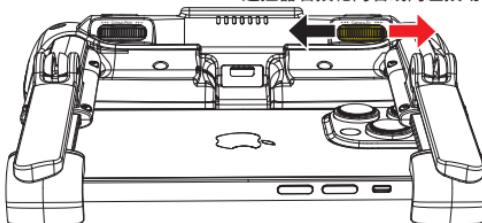
注意事项：

- 1) 在录像情况下是不可以进行自动或手动切换；在自动档下录像，可以调爆光补偿；在手动档下录像，只能调节感光度ISO值和调爆光补偿，不能调节快门速度值。
- 2) 手动档下，当在暗的场景时把快门速度值和感光度ISO值调大后图像画面变亮，这时如果相机镜头对着光线比较亮的地方时，往往画面就显示过爆，则需要调节快门速度或感光度ISO值来重新调图像亮度；当在比较亮的场景下通过手动档把画面调好后，当相机镜头对准光线比较暗的地方时又要通手动调快门速度或感光度ISO值来调整画面。

通过遥控器右拨轮快速调节相机曝光值

当相机画面图像偏亮时,将遥控器右拨轮向左拨可快速调低曝光值减暗图像;当相机画面图像偏暗时,将遥控器右拨轮向右拨可快速调高曝光值增亮图像。

遥控器右拨轮向右或向左拨动

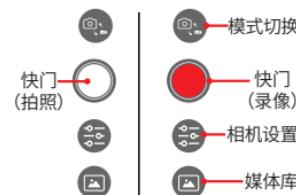


2) 拍照和录像

拍照和录像可以遥控器拍照、录像按键或在移动设备APP相机视窗中操作。

在移动设备APP界面中操作

提示: 移动设备APP界面相机视窗有接收到飞行器相机传输的画面,才能实现现在APP界面操控。



①选择工作模式:点触相机工作模式换图标“”切换工作模式为拍照或录像。

②拍照:点击拍照图标“”进行拍照。

③录像:点击录像图标“”开始录像,录完后再次点击录像图标“”停止录像并且保存录像到飞行器内存卡中。

遥控器实体按键操控拍照或录像

①拍照:短按遥控器右上方的拍照按键“”一次,相机拍照一张并且保存到飞行器内存卡中。

②录像:短按遥控器左上方的录像按键“”一次,相机开始录像,再次短按录像按键“”一次,相机停止并且保存录像到飞行器内存卡中。

智能飞行功能说明

智能飞行功能提供延时摄影、辅助功能等辅助拍摄智能飞行功能模式。飞行器可自动按照设定的辅助拍摄飞行模式拍摄多种经典航拍运镜。

⚠ 警告

- 1) 请在开阔无遮挡、无障碍物的环境使用智能飞行功能,并时刻注意飞行器路径上是否有人、动物、建筑物等障碍物。
- 2) 始终注意来自飞行器四周的物体并通过手动操作来避免事故(如碰撞)及对飞行器的遮挡。
- 3) 请不要在靠近建筑物、有遮挡等GNSS信号不佳的地点使用智能飞行功能,否则可能导致飞行器飞行轨迹不稳定等意外情况发生。
- 4) 用户在使用智能飞行功能时,请务必遵守当地的法律法规对隐私权的规定。

⌚ 延时摄影

⌚ **自由延时:** 通过设置参数, 飞行器将在设定时间内自动拍摄一定数量的照片, 并生成延时视频。未起飞状态下, 可在地面进行拍摄; 起飞状态下用户可以通过遥控器左/右摇杆自由控制飞行器和通过左拨轮控制云台俯仰角度。

使用步骤:

- ① 设置拍摄参数, 包括拍摄间隔、合成视频时长。屏幕将显示拍摄张数和拍摄时间。
- ② 点击拍摄按键开始拍摄。

🕒 **辅助功能:** 辅助功能包含定速模式、锁定模式、环绕模式、冲天模式、渐远模式、甩尾模式等。

⌚ 定速(定速巡航):

自动保持三维运动和自旋速度, 在手动操作飞行器飞行的同时在App界面点击定速按钮, 飞控自动保持当前的爬升速度, 水平飞行速度, 和自旋角速度, 匀速维持手动飞行时候的动作飞行, 带来新的运镜玩法, 再次点击定速按钮或者把油门摇杆推到最高, 来取消定速。

⊕ 锁定(目标打点辅助运镜):

在飞行过程中, 调节云台对准地表目标, 在App界面点击锁定按钮, 可打开打目标点功能, 查看目标的经纬高坐标和距离, 云台自动持续对准锁定目标, 此时云台俯仰和飞行器航向变为自动控制状态, 无法手动调节, 可打杆对飞行器的高度, 水平位置进行调节, 在位置变化的同时云台自动锁定目标。在对高楼等高于地表的目标打点时, 需要把飞行器飞到目标正上方, 操作云台俯仰朝最下, 调节飞行器高度高于楼顶20米, 此时按下锁定按钮, 云台将会锁定飞行器正下方20米处的位置。再次点击锁定按钮, 则取消云台锁定。

⌚ 环绕:

在锁定目标后, 在App界面点击环绕按钮, 飞行器将对准目标持续环绕, 达到时间限制或者再次点击环绕按钮, 则取消环绕。

↑ 冲天:

在锁定目标后, 在App界面点击冲天按钮, 飞行器将对准目标, 自动飞行到目标正上方, 开始一边升高, 一边慢速旋转航向, 达到时间限制或者再次点击冲天按钮, 则取消冲天。

↗ 渐远:

在锁定目标后, 在App界面点击渐远按钮, 飞行器将对准目标, 自动进行一边升高, 一边远离目标的飞行, 达到时间限制或者再次点击渐远按钮, 则取消渐远。

◎ 甩尾:

在锁定目标后, 手动飞行飞行器后退远离打点目标, 在App界面点击甩尾按钮, 无人机将对准目标, 自动进行甩尾拍摄飞行动作, 达到时间限制或者再次点击渐远按钮, 则取消甩尾。

附加说明

下视视觉系统和TOF测距系统说明

T210 MINI下视视觉系统和TOF飞行时间测距传感系统都位于飞行器底部。下视视觉系统由一个摄像头构成；飞行时间测距传感系统由TOF探测光脉冲传感器模组组成，可以提供飞行器对地高度参考，配合下视视觉系统计算飞行器位置信息。

适用范围

下视视觉系统的定位功能适用于无GPS信号或GPS信号欠佳但表面纹理较丰富、光照条件充足的环境，最佳工作高度范围为0.5 - 10 m。超出该范围飞行时，视觉定位性能可能下降，请谨慎飞行。



使用步骤

- 1) 开启飞行器。
- 2) 起飞后飞行器状态指示灯显示绿灯双闪，视觉定位功能将自动开启。

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注意事项：

- 1) 无GPS的情况下，在开阔平坦的场地使用下视视觉系统时，飞行器最大悬停高度为5 m。
- 2) 下视视觉系统在水面上可能无法正常工作。建议用户对飞行保持全程控制。
- 3) 视觉系统不适合在飞行器速度过快的场景下使用。如离地1m处时飞行速度不可超过5 m/s，离地2 m 不可超过10m/s。
- 4) 视觉系统无法识别没有纹理特征的表面，及无法在光照强度不足或过强的环境中正常工作。
- 5) 请勿以任何方式遮挡、干扰视觉系统，并避免在灰尘、水雾较多的环境下使用，以免影响镜头清晰度。请勿以任何方式遮挡TOF探测光脉冲收发传感器。
- 6) 避免在雨雾天气或其他能见度低(能见度低于100 m)的场景飞行。

在以下场景下视觉系统无法正常工作：

- a) 纯色表面(例如纯黑、纯白、纯红、纯绿)。
- b) 有强烈反光或者倒影的表面(例如冰面)。
- c) 水面或者透明物体表面。
- d) 运动物体表面(例如人流上方、大风吹动的灌木或者草丛上方)。
- e) 光照剧烈快速变化的场景。
- f) 特别暗(光照小于10lux)或者特别亮(光照大于40,000lux)的物体表面。
- g) 对方波脉冲有很强吸收或者反射作用的材质表面(例如镜面)。
- h) 纹理特别稀疏的表面。
- i) 纹理重复度很高的物体表面(例如颜色相同的小格子砖)。
- j) 细小的障碍物(如树枝、电线等)。

校准飞行器罗盘

注意：

- 1) 移动设备WK Fly App提示飞行器磁罗盘干扰严重，或者在悬停时出现绕圈，亦或者飞直线出现偏离航线时，请及时降落进行校准罗盘。(电机必须是锁定状态)。
- 2) 请在室外空旷且远离强电磁场干扰的地方进行校准。

打开飞行器罗盘校准

方式一：移动设备、飞行器与遥控器均在连接状态，在移设备WK Fly APP设置中打开罗盘校准(路径： → → 点击传感器右边的“>”→点击罗盘右边的“校准”→在弹窗中点击“开始校准”);

方式二：在电机锁定、与遥控器在连接状态下直接将飞行器机头垂直向上静置6秒以上飞行器状态指示灯快闪表示已进入罗盘校准状态。

罗盘校准方法如下：



1) 将飞行器机头垂直向上静置6秒以上飞行器状态指示灯进入快闪，再将飞行器沿水平方向旋转720°，飞行器指示灯熄灭。

若校准不成功请重新按上述方法校准。

2) 先将飞行器放平，再沿水平方向旋转720°，飞行器指示灯将亮起，然后将飞行器静止放于水平位置。

遥控器摇杆模式切换

遥控器与移动设备在连接状态，先在WK Fly APP界面右上角点击图标“”展开设置弹窗→然后点亮图标“”展开系统设置菜单→点击摇杆模式右边的“>”进入摇杆模式切换界面→在摇杆模式切换界面上端点选摇杆模式选项“美国手”、“中国手”或“日本手”→在摇杆模式切换界面左上角点击“<”图标退出摇杆模式切换界面即可。

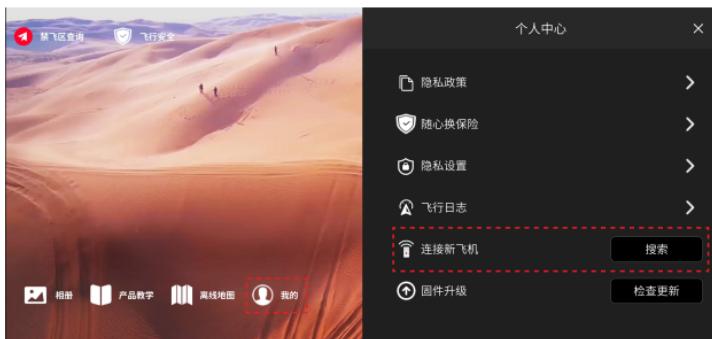


对频说明

- 整套的飞行器出厂前已对频，一般情况下不需要再对频，开机后会自动连接；
- 若是售后更换过新飞机或新的WK-V8/WKRC-H9遥控器，连接新飞机或新的WK-V8/WKRC-H9遥控器前需要先对频，否则将无法连接。

操作如下

- 1) 遥控器开机 → 移动设备连接遥控器wifi → 打开app；
- 2) 飞行器安装电池 → 开机 → 长按电池按钮3秒以上，飞行器蜂鸣器响起；
- 3) 在App主界面点击“我的” → 在弹出的窗口中点击“连接新飞机”右边的“**搜索**”按钮，飞行器与WKRC-H9/WK-V8遥控器将自动对频，直到蜂鸣器提示音结束，表示对频已成功。



电池使用须知及储存安全



- 务必在阴凉干燥处存放智能飞行电池。
- 不正确地使用、充电或存储电池可能会导致火灾和人身伤害。务必参照如下安全指引使用电池。

电池使用须知

- 1) 严禁使电池接触任何液体，请勿将电池浸入水中或将其弄湿。切勿在雨中或者潮湿的环境中使用电池。电池内部接触到水后可能会发生分解反应，引发电池自燃，甚至可能引发爆炸。
- 2) 严禁使用非walkera官方提供的电池。如需更换，请到walkera官网查询相关购买信息。因使用非walkera官方提供的电池而引发的电池事故、飞行故障，walkera概不负责。
- 3) 严禁使用鼓包的、漏液的、包装破损的电池。如有以上情况发生，请联系walkera或者其指定代理商做进一步处理。
- 4) 在将电池安装或者拔出于飞行器之前，请保持电池的电源关闭。请勿在电池电源打开的状态下拔插电池，否则可能损坏电源接口。
- 5) 电池应在环境温度为-10°C至45°C之间使用。温度过高(高于50°C)，会引起电池着火，甚至爆炸。温度过低(低于-10°C)，电池寿命将会受到严重损害。
- 6) 禁止在强静电或者磁场环境中使用电池。否则，电池保护板将会失灵，从而导致飞行器发生严重故障。
- 7) 禁止以任何方式拆解或用尖利物体刺破电池。否则，将会引起电池着火甚至爆炸。

- 8) 电池内部液体有强腐蚀性,如有泄露,请远离。如果内部液体溅射到人体皮肤或者眼睛,请立即用清水冲洗至少15分钟,并立即就医。
- 9) 电池如从飞行器摔落或受外力撞击,不得再次使用。
- 10) 如果电池在飞行器飞行过程中或其它情况下意外坠入水中,请立即拔出电池并将其置于安全的开阔区域,这时应远离电池直至电池完全晾干。晾干的电池不得再次使用,应该废弃并妥善处理。
- 11) 请勿将电池放置于微波炉或压力锅中。
- 12) 请勿将电池电芯放置于导电体平面上。
- 13) 禁止用导线或其它金属物体致使电池正负极短路。
- 14) 请勿撞击电池。请勿在电池或充电器上放置重物。
- 15) 如果电池接口有污物,使用干布擦干净。否则会造成接触不良,从而引起能量损耗或无法充电。

电池储存安全与警告

- 1) 请勿将电池接近明火或者加热器等火源。
- 2) 请将电池放在孩童够不着的地方。
- 3) 请确保电池在室温:25摄氏度左右保存。
- 4) 长期不使用的电池,保存电压请控制在7.3V~7.7V之间。
- 5) 长期不使用时,应每两个星期检查一次电池保存状态有无异常,每两个月进行一次充放电激活,以维持电池的活性。 CHS

CHS



产品名称:T210 MINI运动航拍飞行器

制造商:广州市华科尔科技股份有限公司

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本手册如有更新,恕不另行通知。

您可以在华科尔官方网站查询最新版本。



微信公众号: WALKERA-CHINA

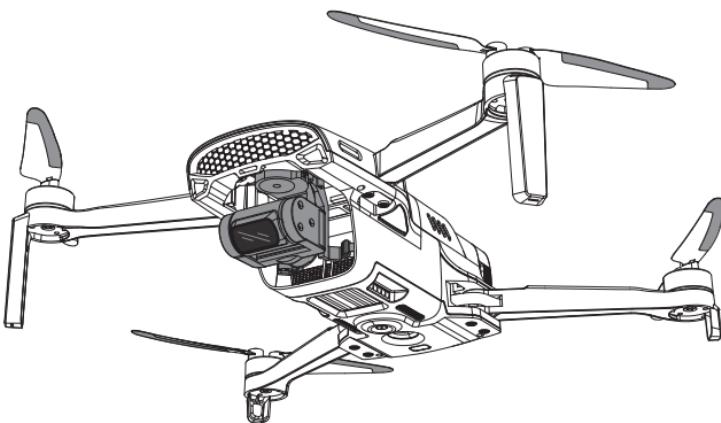


抖音号:walker168

T210 MINI

(WKRC-H9)

Operation Guide v1.2 2023.2.10



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Understand the flight safety



Use of the product T210 Mini may pose certain safety risks. It is not suitable for people under the age of 14. The Safety Summary contains only a portion of the flight safety knowledge, so be sure to read the entire Quick Start Guide carefully to avoid property damage or even personal injury due to improper operation.

- ★ This product uses 2.4GHz high-definition map, should fly in an open without shielding and electromagnetic interference environment.
- ★ This product is suitable for people who have experience in operating models and who are not less than 14 years old.
- ★ Do not fly in bad weather, such as strong wind, snow, rain, fog weather, etc.
- ★ Choose an open space without tall buildings around it. A large use of reinforcement buildings will affect the work of the compass, and will block the GPS signal, resulting in the positioning effect of the aircraft is worse or even impossible.
- ★ When flight, stay away from high speed rotating components (eg. propeller, brushless motor).
- ★ When flying, keep in line of sight, away from obstacles, people, water, etc.
- ★ Do not fly in areas such as high-voltage line, communication base station or transmission tower to avoid interference with the remote control.
- ★ Do not fly in no-fly areas restricted by relevant laws or regulations.
- ★ Do not use the throw to fly method to take-off the aircraft in a crowded place.
- ★ Flying at an altitude of about 4,500 meters, due to environmental factors, the aircraft battery and power system performance will decline, and the flight performance will be affected.

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Disclaimer & Warnings

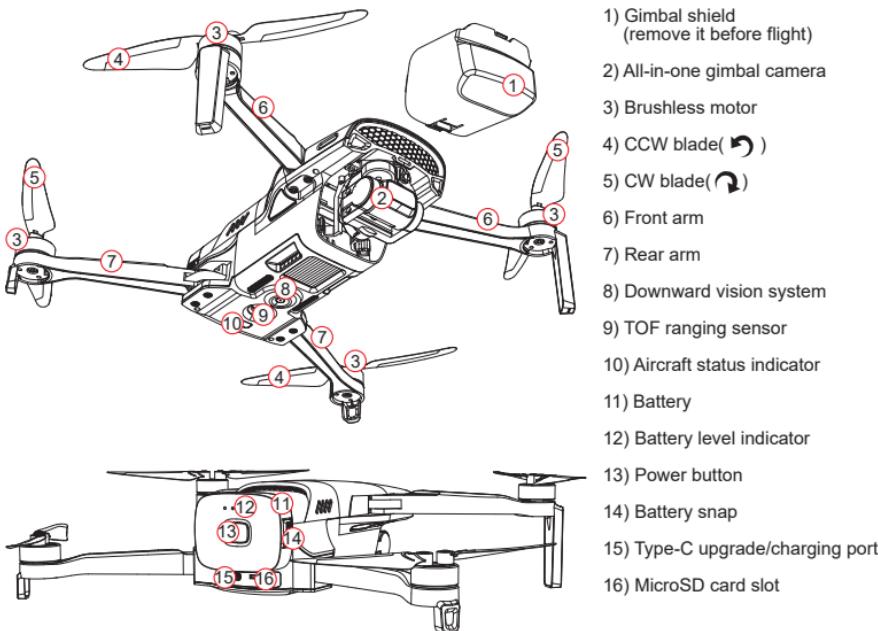
There are safety risks associated with the use of the aircraft, and is only suitable for people aged 14 and above who have experience in operating models, not for people under the age of 14. Keep children away from the aircraft, and special care must be taken when operating it in scenes where children are present. Please read this document carefully before using this product. This statement is of great importance for the safe use of this product and for your legal rights.

The product is a multi-rotor aircraft and will provide an effortless flying experience when the power supply is working normally and all components are undamaged. Walkera reserves the right to update this disclaimer at any time. It is important that you read this document carefully to understand your legal rights, responsibilities and safety instructions before using this product; failure to do so may result in property damage, accidents and personal safety hazards. Once you use this product, you are deemed to have understood, approved and accepted the terms and conditions of this statement in its entirety. The user undertakes to be responsible for his or her own actions and for all consequences arising therefrom. The user undertakes to use this product only for legitimate purposes and agrees to these terms and conditions and to any related policies or guidelines that Walkera may establish. To the fullest extent permitted by law, in no event will Walkera be liable for any indirect, consequential, punitive, incidental, special or criminal damages, including damages resulting from your purchase of, use of, or inability to use this product (even if Walkera has been advised of the possibility of such damages).

The laws of some countries may prohibit the exemption of warranties, so your rights may vary from country to country. Walkera reserves the right of final interpretation of these terms and conditions, subject to the laws and regulations of the country in which you reside. Walkera reserves the right to update, revise or discontinue these terms and conditions at any time without prior notice.

Know your aircraft

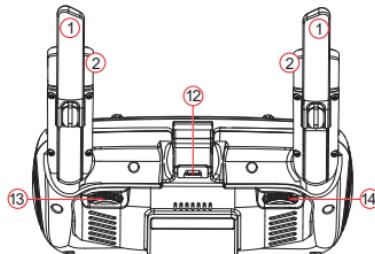
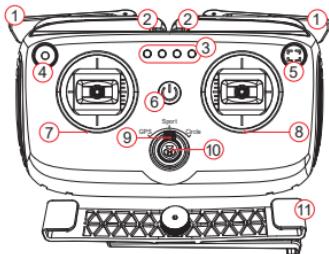
- The T210 MINI features a mainstream lightweight, foldable design that is unprecedentedly easy to use and carry, while maintaining flight and usage quality.
- Adopt GPS/GLONASSBeiDou tri-mode satellite positioning navigation system, ensuring more accurate and safer flight.
- Equipped with downward vision system and TOF ranging system, it can achieve stable flight and hovering at ultra-low altitude or indoors.
- A self-developed leading flight control system is used, which provides agile, stable and safe flight performance, and can achieve various new intelligent flight modes such throwing flight, etc
- Using high-precision three-axis mechanical anti-shake and stabilized gimbal, the camera can steadily take 4K HD video and 48 megapixel photos.
- A new 2.4GHz long-distance digital encryption transmission technique provides stronger anti-interference ability and longer distance of video transmission.



- Before using T210 Mini, please watch the instructional video in WK Fly App to upgrade related firmware and calibration related items and read the "Operation Guide" carefully to avoid property damage or even personal injury caused by improper operation.
- The high-speed rotating propeller is dangerous. The operator should keep a safe distance from the aircraft and keep the aircraft away from people, buildings, trees or other obstructions to avoid collision.

Get to know your remote controller

This remote control has a built-in a ground receiving terminal of 2.4G digital image transmission system . which can achieve a real-time display of high-definition images on a mobile device by using APP,with a foldable holder capable of holding mobile devices.



- | | | |
|------------------------|------------------------------|--|
| 1) Antenna | 6) Power Button | 11) Tablet Stand |
| 2) Mobile Phone Holder | 7) Left Stick | 12) Charging/Upgrade Port |
| 3) Power Indicator | 8) Right Stick | 13) Right dial (camera exposure compensation adjustment) |
| 4) Video Button | 9) Flight Mode toggle switch | 14) Left dial (control gimbal pitch) |
| 5) Photo Button | 10) Return To Home Button | |

The stick mode of the remote control is divided into American hand, Chinese hand and Japanese hand. The factory default stick mode is "American hand" (left-hand throttle), which can be switched in the APP settings. It is recommended that beginners use American hand as the control method.

American hand for left hand throttle:

The left stick (THRO/RUDD) controls the aircraft to ascend/descend and turn left/right; the right stick (ELEV/AILE) controls the aircraft to go forward/backward and fly left/right;

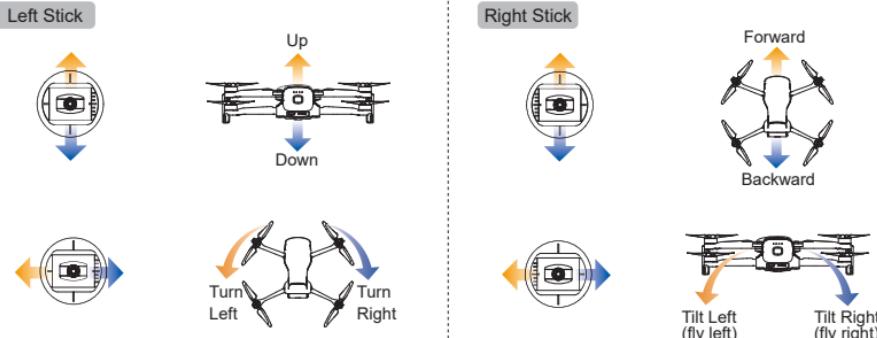
EN

Chinese hand for right hand throttle:

The left stick (ELEV/AILE) controls the aircraft to go forward/backward and fly left/right; the right stick (THRO/RUDD) controls the aircraft to ascend/descend and turn left/right;

Japanese hand for right hand throttle:

The left stick (ELEV/RUDD) controls the aircraft to go forward/backward and turn left/right; the right stick (THRO/AILE) controls the aircraft to ascend/descend and fly left/right;



Notice:

Please fly your aircraft in the open air without shelter and without electromagnetic interference.

Parameters

Aircraft

Symmetric Motor Wheelbase:	241.6mm
Body Size:	167.4×217.8×57mm(Unfold); 143×82.8×57mm(Fold)
Mas Take-off Weight:	249g
Maximum Rise Speed:	8 m/s(adjustable)
Maximum Decline Speed:	5 m/s(adjustable)
Maximum Horizontal Flight Speed:	Loiter Mode: 5m/s, Sport Mode: 12m/s(adjustable), AltHold Mode: 25m/s (wind environment)
Maximum Tilt Angle:	Loiter Mode: 55°, Sport Mode: 55°, AltHold Mode: 55°
Maximum Rotation Angle Speed:	150°/s
Maximum Flight Altitude:	4500m
Maximum Withstand Wind Speed:	18m/s
Battery Specification:	7.7V, 2250mAh,LiPo 2S, 10C
Maximum Flight Time:	30 minutes(measured in a windless environment at sea level, 3m/s automatic cruise)
Working Ambient Temperature:	-10°C to + 45°C
Hoving Accuracy Range:	Vertical ±1.5 m, horizontal ±0.5m (GPS works)

Downward looking positioning system

Precise ranging range	0.25m~5m
Visual hover range	0.25m~10m

Camera

Image Sensor:	1/2.3-inch CMOS; 48 million effective pixels
Lens:	FOV83°; 4.49mm; f/2.6 aperture
ISO Range:	100-3200
Electronic Shutter:	1/2-1/4000
Photo Resolution:	8000*6000(48MP)/4000*3000(12MP)/3840*2160(8MP)
Video Resolution:	UHD:3840*2160 (4K 30fps) ;
Storage Maximum Code Rate:	100Mbps
Supported File System Format:	Fat32; exFat
EXFAT Image Format:	JPEG; RAW
Video Format:	MP4
Support Memory Card Type:	Micro SD card, maximum support of 128G, Fat32 file system format, transmission speed of Class10 or above or UH S-1 rating

Gimbal

Stability System:	3-axis (pitch, yaw, horizontal roll)
Controllable Rotation Range:	Pitch: -90° to 30°
Maximum Control Speed:	Pitch: 5°/s~100°/s adjustable;
Angle Control Accuracy:	static: ± 0.01°; dynamic: ± 0.02°; stabilization: ± 0.01°

Remote Sontroller

Dimensions (L x W x H):	173.37x100.85x70.6mm
Working frequency:	2.4G
Signal range:	About 5km (open without shelter, no electromagnetic interference)
Built-in battery:	7.4V 2200mAh Li-po 2S
Mobile device holder:	Applicable to tablet and phone

EN

Check Battery Level

Remote controller battery:

Short press the power switch to turn on the battery indicator light(displaying the battery level) to check the battery level.

Aircraft battery:

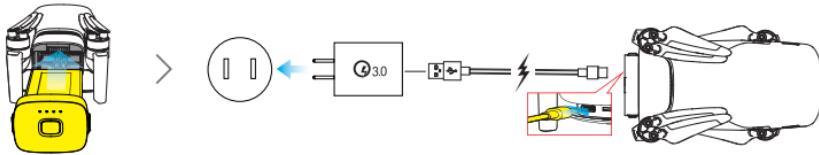
Short press the power switch to turn on the battery indicator light(displaying the battery level) to check the battery level.



Charge

Aircraft battery charging

Tips: The aircraft battery must be installed on the aircraft to charge, the aircraft is compatible with the market standard Type-C interface, please use a USB charger that meets the QC3.0 protocol (such as mobile phones, cameras and other digital product USB chargers) for charging. If you encounter smoke, odor, or night leakage while charging the aircraft, do not continue charging, please transfer to our company for repair.



EN

The battery indicator flashes green to indicate the start of charging.the battery indicator turns off when fully charged.

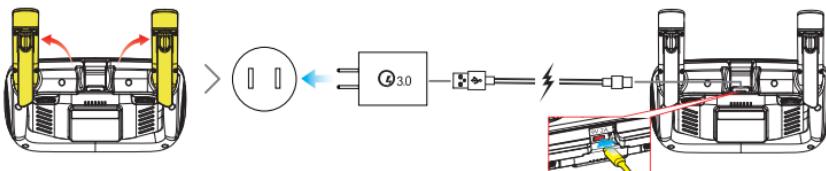
Note:

Charging is not supported in the boot state, and the aircraft cannot be turned on during charging.

After the flight, the aircraft battery temperature is high, and the aircraft battery must be charged after the aircraft battery drops to room temperature.

Remote control charging

Tip: This remote control uses a built-in integrated rechargeable lithium battery, which is compatible with the market standard Type-C interface. Please use a USB charger (such as a USB charger for digital products such as mobile phones and cameras) that meets QC3.0 protocol for charging. If there is smoke, peculiar smell or liquid leakage when charging the remote control, please do not continue to charge the remote control, please send it to our company for repair.



Battery indicator flashing green indicates that charging starts; the indicator is off when fully charged.

Caution:

Walker will not be responsible for any consequences of charging with a charger that is not officially designated by Walker.

Download the WK Fly Application

WK Fly APP supports Android 5.1 and above, HarmonyOS 2.0 and above, and Apple iOS9.0 and above mobile phones and tablets. For Android system or Hongmeng system mobile device, please open the browser and enter the URL (<https://fly.walkera.cn/a/>) or scan the QR code below to download and install the APP; for Apple iOS system, please go to the APP Store and search for WK Fly to download and install.



Android or HarmonyOS system
scan the code to download

※To ensure flight safety, the aircraft will be restricted to a height of 30 m and a distance of 50 m if the APP is not connected and logged in, and if the user in mainland China does not bind a cell phone to complete the registration information. Users using the aircraft in mainland China need to complete real name registration according to the relevant regulations of the Civil Aviation Administration of China (CAAC). Please register through the CAAC real name registration system for drones or directly in the WK Fly App.

For more information, please visit <https://uas.caac.gov.cn>

Introduction of the WK Fly APP interface

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In this interface, you can preview the real-time HD video and photos taken by the T210 Mini, as well as dynamically set the parameters such as the aircraft, voice controller, camera gimbal and battery.



- 1) Return:** Return to the previous level.
- 2) Device Status:** Display real-time status information of the device.
- 3) Time of flight:** the time of the aircraft flight.
- 4) Flight mode:** Click the icon to expand the list of flight modes. In the list, AltHold, Auto, Follow, Loiter, RTL, Land, Sport and other flight modes. Select the flight mode by selecting the intended flight mode in the list.
- 5) Aircraft battery information:** Click the icon to expand and view the current power and voltage information of the aircraft battery.
- 6) GPS status:** Click the icon to expand to view the number of GPS stars and GPS positioning mode received by the current aircraft.
- 7) HD signal intensity:** shows the intensity of the transmission signal between the aircraft and the Remote controller
- 8) Notification information:** Click the icon to view the list of notification information.
- 9) Settings:** Click the icon to expand the Settings menu: there are aircraft settings, battery information and settings, system settings.
"aircraft setting": RTL Height setting, Flight safety settings(Fly Speed, Steering sensitivity, Limit Height, Fence Enable, Limit Distance, Gimbal Roll, Follow Me Alt, Take Point, Lost Action) Sensor setting, New Model switch.
"battery setting": it has battery remaining power, current voltage, current temperature, series number, charge and discharge shield ring times; low power automatic return switch.
"system setting": equipped with map settings; Stick Mode, Trajectory switch, Live setting; firmware upgrade; Video Delayon setting and hardware Decodect.
- 10) Preview resolution:** The image preview quality of the camera window (i.e., image transmission quality).
- 11) Remote control joystick mode:** Displays the currently set remote control joystick mode.
- 12) Aircraft TF card capacity:** Display the current aircraft TF card capacity information in real time.
- 13) Exposure:** Displays the current exposure value of the aircraft camera.
- 14) Camera working mode switch:** with each click of the icon, the camera working mode will switch between the photo and the video.
- 15) Camera shutter icon:** In photo mode, click this icon to take a photo at a time; in video mode, click the shutter icon to start recording, click the shutter icon again to stop and save the video.
- 16) Camera Settings:** Click the icon to expand the camera Settings interface, which has professional Settings, photo settings, video settings and other settings.
Profe ssional setting: it can be set with ISO sensitivity, shutter speed, exposure compensation, white balance, etc.
Photo Settings: you can set the shooting mode, photo format, photo size (quality), etc.;
Video setting: you can set the preview resolution, preview code rate, video code rate, video resolution, video display mode.(With the same preview resolution, the greater the preview code rate, the better the picture quality and the transmission distance accordingly).
... Other settings: grid (grid setting); anti-flicker (on / off anti-flicker); defogging (on / off); formatting TF card (in-aircraft TF card), TF card capacity information; photo animation switch; photo sound switch, etc.
- 17) Media Library:** Click the icon to open the location of photos and videos taken by the aircraft, click on the pictures or videos to quickly share, download or manage media files.
- 18) Aircraft Status Parameters:**
H Height: Vertical distance of the aircraft to the return point.
D Distance: Horizontal distance between the aircraft and the return point.
V.S Vertical speed: the flight speed of the aircraft in the vertical direction.
H.S Horizontal speed: the flight speed of the aircraft in the horizontal direction.
- 19) Posture thumbnail icon:** Click this icon to expand the attitude ball suspension window.
- 20) Map / camera picture small window:** Click the icon map window to swap with the camera picture window (the map switch to the full-screen large window, the camera screen switch to the small window).
- 21) Hide the small window:** Click on the icon to hide the map/camera picture small window.
- 22) Zoom in on the map:** Click on the icon to enlarge the map.
- 23) Scale down the map:** Click on the icon to narrow down the map.

24) Take-off/RTL mode icon: (when the aircraft is not taking off, the takeoff icon is displayed; after the aircraft takes off, the RTL mode icon is displayed): When the auto takeoff condition is reached, click the takeoff icon , and the aircraft will take off automatically and hover at a certain height; when the aircraft has taken off, click the RTL mode icon , and the aircraft will abort all flight missions and automatically return to home point landing.

25) VR mode icon: Click this icon, the camera window preview video will switch to display in SBS mode (side by side). With a pair of VR glasses, it allows users to enjoy an immersive first person view (FPV) flight experience, and relying on the gyroscope of mobile phone, achieve head tracking function to control the flight gimbal camera pitch and yaw angle.

In VR mode, the information displayed on the interface includes aircraft battery information, flight mode, real-time status parameters, etc.

Dragging up or down on the left side of the VR mode display interface can switch the video display mode; Dragging up or down on the right side of the VR mode display interface can adjust the video display window size.

26) Intelligent Flight Function Icon: Click the icon to expand the intelligent flight mode selection interface, which includes various intelligent flight modes such as TimeLapse(Time-Lapse), and Lock Assist(auxiliary) functions.

27) Position display switch: Click the icon to select the aircraft position or remote control(mobile device) position:
click the icon " " to display the aircraft position;
Click the icon " " to display the remote control (mobile device) location.

28) Map lock: Click the icon to lock / unlock the north (upper, north, south, south, west, right, east);
" " to lock the north state;
" " to unlock the map status;

29) Erase the flight track: Erase the flight track displayed on the map interface.

30) Map switching: Click the icon to expand the map type switching options.

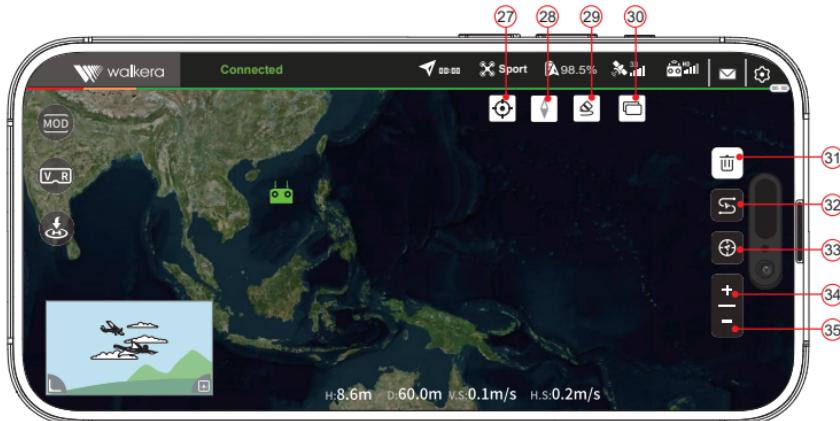
31) Clear the route: clear Except for the points that have been up to the aircraft.

32) Show/hide traces: Click the icon to display/hide the flight track of the aircraft on the map window.

33) Map follows the aircraft: Lights up the icon map to follow the movement of the aircraft, and the aircraft is always in the center of the map.

34) Amplify: Click on the icon to enlarge the map.

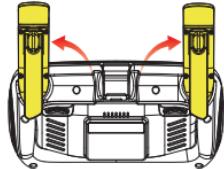
35) Shrink: Click the icon to shrink the map.



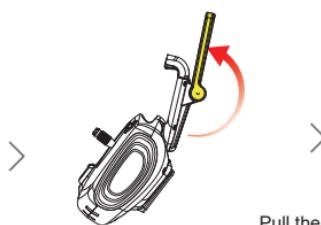
Map window interface

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Preparing the remote control



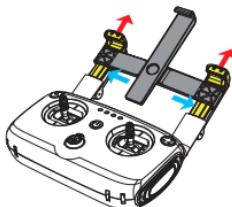
Expand the mobile phone holder



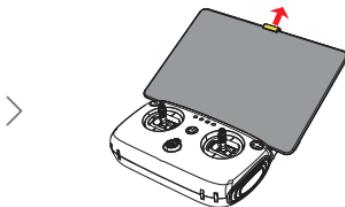
Expand the antenna



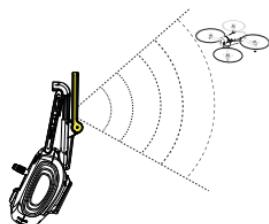
Pull the mobile phone holder upwards and hold it, and after placing the mobile phone, release the hand pulling the mobile phone holder to clamp the mobile phone.



Pull the mobile phone bracket upwards in turn and hold it, insert the mobile phone bracket into the tablet bracket after placing it in the tablet bracket, and finally release the hand that pulls the mobile phone bracket.



Pull the tablet stand up and hold, and after placing the tablet, release the hand that pulls the tablet stand to clamp the tablet.



Always keep the antenna upright

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Precautions:

- 1) Before using the aircraft, please check whether the antenna is placed as required (the antenna is vertically upward when the remote controller is held).
- 2) Adjust the azimuth and distance between the controller, the remote control and the aircraft in time, and ensure that the antenna of the remote control is always upright to obtain the best communication;
- 3) Do not use other communication devices of the same frequency band at the same time to avoid interference to the remote control signal.



Prepare the aircraft

The aircraft is shipped in a stowed state, please follow the steps below to unfold the aircraft.

- 1) Install the battery and MicroSD card.
- 2) Remove the gimbal protection latch
- 3) Unfold the front arms and front propellers.
- 4) Unfold the back arms and back propellers.

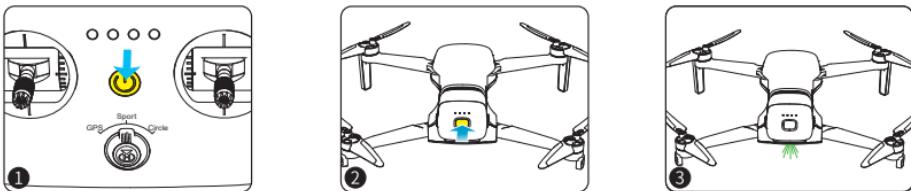


Ready to fly

Power on and connect

⚠ Note: Before the aircraft is powered on, make sure the Camera shield is removed to affect the aircraft self-test.

- 1) Long press the power switch to turn on the remote control.
- 2) Short press the battery power switch once, then long press the power switch for 3~5 seconds to turn on the aircraft.
- 3) Put the aircraft in the horizontal position, wait until the aircraft status indicator turns from yellow light flashing fast to green light flashing slow, and the buzzer turns to not beeping, which indicates the success of connection and pairing.



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Connect mobile devices

Open the WLAN setting item of the mobile device, wait for about 30 seconds, when WK-GRD-XXXXXX appears in the available WLAN list, click "WK-GRD-XXXXXX" and enter the password "12345678" to connect, exit the setting after successful connection interface.

Download offline maps

Find the "WK Fly" icon on the desktop of the mobile device system and click Run WK Fly APP → Click "Offline Map" → Drag and zoom the map on the screen with two fingers, place the map area to be downloaded in the yellow box, then click "Download" to download the offline map of the area, click "X" in the upper left corner of the APP to return to the main interface after the download is completed.

Activate and fly the aircraft and bind the device

The brand new T210 MINI must be activated and bound to the device by the WK Fly App, please turn on the power of the aircraft and the remote control respectively, run the WK Fly App after connecting the mobile phone, and operate according to the interface prompts. An internet connection is required during activation.

Click "**CONNECTION GUIDANCE**" → on the main interface Activate the aircraft and bind the device according to the interface prompts → Swipe left or right to find "T210 MINI" → Then click "**GO FLY**" to enter the flight interface.

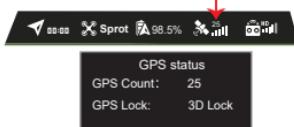


Note: Before flying, please download an offline map of the planned flight area (download the offline map when your mobile device is connected to the Internet).

Description of GPS satellite positioning signals

Click the GPS status icon of the aircraft in the status bar at the top of the mobile device APP to display the GPS status window of the aircraft to view the GPS status.

Number of satellites received by aircraft



Motor Unlock

After the code is successfully matched, move the left & right sticks down and toggle them outward simultaneously and hold still until the motor rotates. Once unlocked, the motor will rotate. then , quickly release the stickers .



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Motor Lock

When the aircraft is landed, move the throttle stick down and hold for 2 seconds. The motors will then stop.



Flight Control

⚠ Notes:

1. Make sure the remote controller, aircraft battery and mobile device are fully charged;
2. Make sure the aircraft has received the satellite positioning signal and the GPS status icon in the APP is green (the number of stars is greater than 10);
3. Please check and confirm the stick mode of the remote control before taking off (check in the upper right corner of the APP);
4. Please switch the flight mode before taking off (check the current flight mode on the mobile device APP interface);
5. Please unlock the motors before taking off.

Manual take-off

Perform the following stick movements to start the motor, then slowly push the throttle stick upward to take off.



Manual landing

Slowly pull down the throttle stick until the aircraft touches the ground. After the aircraft touches the ground, pull the throttle stick to the lowest position and hold it for 2 seconds, then the motor stops.



Automatic take-off

First, perform the following stick movements to start the motor, then toggle the Flight Mode toggle switch of the remote control to the "GPS" position on the left, and finally click the take-off icon on the APP interface, and the aircraft will take off automatically (the default height is 3m).



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Takeoff in Throwing Mode

After GPS positioning, grab the aircraft from the bottom of the aircraft and turn the nose of the aircraft vertically downward for about 2-3 seconds to trigger the throwing mode, the aircraft will make a "beep" sound and the WK-V8 controller voice broadcasts "You are ready to fly, please perform the throwing action within ten seconds". After being thrown, the aircraft will fall freely for 0.5 seconds, the motor will be unlocked automatically, the aircraft will automatically adjust its attitude, and hover automatically (height 2~2.5 meters).

Note:

Each time it enters the throwing mode, the state will be automatically maintained for 10 seconds, and the buzzer will stop beeping after 10 seconds. Please throw the aircraft within 10 seconds after it enters the throwing mode. If the time is exceeded, please re-enter the throwing mode and throw again.



Grab the aircraft from the bottom and hold the nose straight down for two seconds

The ground

Warning

- 1) Do not release the aircraft in a crowded place by taking off.

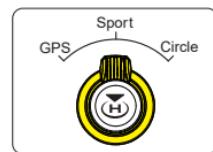
- 2) When the aircraft is released by throwing, it is strictly forbidden to grab the aircraft or the propeller from the top of the aircraft, otherwise the consequences will be at your own risk.
- 3) Only when the aircraft has received the GPS satellite positioning signal and the signal is good (the number of stars is greater than 10) and can be used to fly.
- 4) After the aircraft buzzer sounds, please throw the aircraft out within 10 seconds, otherwise it will automatically exit the throwing mode after timeout.
- 5) After entering the throwing mode, it is strictly forbidden to throw downwards or hold the aircraft downwards. When throwing, try to throw upwards or flatly forward.
- 6) After tossing, please switch the flight mode according to your needs.

Sport Mode

After the aircraft is powered on for the first time, unlocking and taking off will default to sports mode; When the aircraft is in the air, toggle the Flight Mode toggle switch of the remote control to the "Sport" position, the aircraft will be in sports mode.

Attentions:

- 1) The aircraft will default to sport mode for the first flight after each power-on.
- 2) In sports mode, it has the functions of altitude, fixed point and brake, and the flight speed is faster.
- 3) If the GPS signal is poor or there is no signal, only the height can be fixed, not the point.



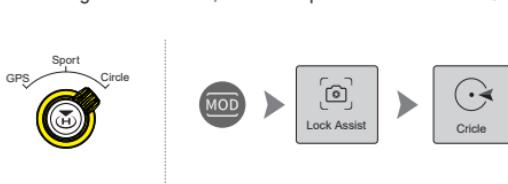
Circle Mode

When the aircraft is in the air and the flight mode is in GPS(Loiter) mode, Toggle the Flight Mode toggle switch of the remote control to the "Circle" position on the right end or click the icon in the APP interface → and then click the "Lock Assist" button → Finally, click the "Circle" button in the pop-up floating window, and the aircraft will enter the circle mode.

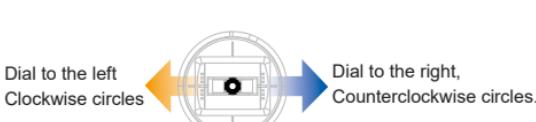
Note:

The center point of circle flight can be determined by clicking the lock button. You can turn on the waypoint marking function in the right column of the main interface of the App to check the location of the center point of circle on the map. If the target is not locked, the center point of circle will be 10 meters in front of the aircraft by default.

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- 1) When entering the automatic circle flight, the aircraft is in a hovering state, and the roll stick (AILE) is toggled left or right to set the speed and direction of the circle (-5m/s~+5m/s, the default is 0m/s) to fly in circles.

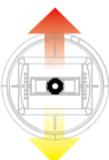


Speed: the larger volatility toggling and longer holding time, the faster circling. The slower on the contrary.



- 2) Move the tilt stick (ELEV) up or down to change the radius of the circle to control the aircraft to approach or move away from the target (5~50m, the default circle radius is 5m).

Pull up to increase the circle radius.



Pull down to reduce the circle radius.



★Note: Before operation, please check and confirm the current joystick mode of the remote control (check in the upper right corner of the APP).

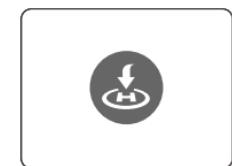
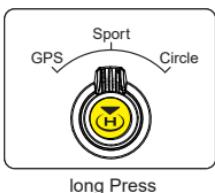
★Adjust the surround direction (roll rocker AILE): For American hands or Japanese hands, move the right stick to the left or right; for Chinese hands, move the left stick to the left or right.

★Adjust the surround radius (pitch rocker ELEV): For Chinese hands or Japanese hands, move the left stick up or down; for American hands, move the right stick up or down.

RTL Mode

During the flight, long press the return button “” on the remote control or click the return icon “” on the left side of the mobile device APP interface, the aircraft will enter the return mode and automatically fly to the take-off point and land; after the automatic return, it will automatically exit the return mode.

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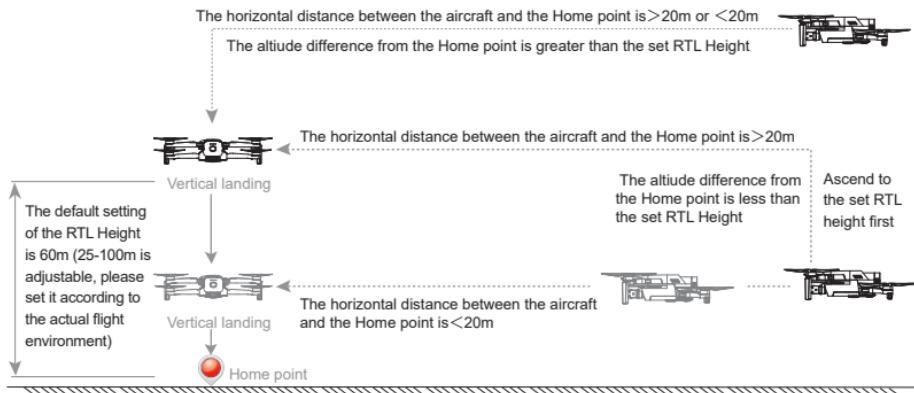


Horizontal distance between aircraft and Home point >20m

- When the aircraft flight altitude is higher than the set RTL Height, the aircraft will maintain the current altitude and fly back horizontally to the top of the Home point , then landing vertically.
- When the aircraft flight altitude is lower than the set RTL Height, he aircraft will climb vertically to the set RTL height and fly back horizontally to the top of the Home point , and then landing vertically.

The horizontal distance between aircraft and Home point <20m

- When the aircraft flight altitude is higher than the set RTL Height, the aircraft will maintain the current altitude and fly back horizontally to the top of the Home point , then landing vertically.
- When the aircraft flight altitude is lower than the set RTL Height, the aircraft will maintain its current altitude and fly back horizontally to the top of the Home point , then landing vertically.

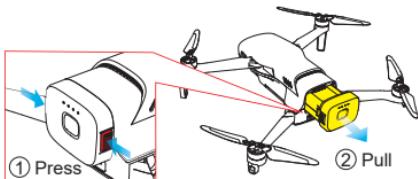
**Attentions:**

- 1) Do not operate other switches, buttons or click any other icon after long press the return button “” on the remote control or click the return icon “” on the left side of the mobile device APP interface
- 2) When the aircraft loses the signal of the remote control, it will automatically enter the Uncontrolled RTL mode.
- 3) If the GPS signal is abnormal or the GPS does not work, Return to Home is impossible. Please operate the aircraft to land manually.
- 4) During the RTL mode process, press and hold the return key “” again to cancel the RTL mode.
- 5) During the Uncontrolled RTL process, after the remote control signal returns to normal, the Uncontrolled RTL process will continue, but the RTL mode can be canceled by switching the flight mode switch to switch the flight mode.
- 6) If you find that the aircraft is landing too fast when the altitude is lower than 15 meters during the RTL mode landing process, you must manually push the throttle stick slightly to slow down the aircraft's descent speed and ensure the aircraft's safe landing.

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To End The Flight

- 1) Manual landing, low battery protection automatic landing or RTL mode landing, lock the motor after landing on the ground.
- 2) Turn off the power of the aircraft first, and then turn off the power of the remote control.
- 3) Take the flight battery out of the aircraft.

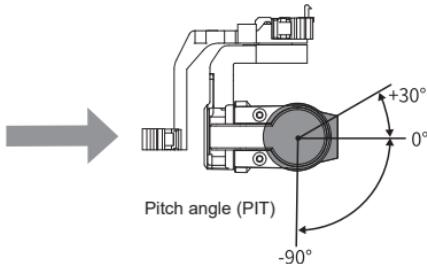
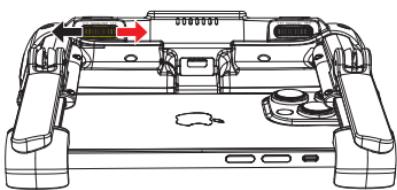
**Remove the battery:**

After pressing and holding the textured part of the snaps on both sides of the battery, pull it toward the rear of the aircraft to remove the battery.

Gimbal control

The three-axis stable gimbal provides a stable platform for the camera, so that the camera can also take a stable picture while the aircraft is flying at high speed. You can control the tilt angle (PIT) of the gimbal through left dial of the remote control.

The left dial of the remote control is dialed right or left



Camera control

Shooting screen brightness adjustment

Method 1: Set in the APP

When the image is too dark or too bright, you can click the icon “” → click the icon “” to enter the camera's professional settings, and adjust the brightness of the image by adjusting the ISO sensitivity, shutter speed, and exposure value.

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Light up the icon “” into automatic mode: the camera will automatically adjust the ISO sensitivity and shutter speed according to different environments, and only the white balance can be adjusted manually in the automatic mode.

Light up the icon “” into "Manual gear: Manual mode can manually adjust ISO sensitivity, shutter speed, exposure value to adjust the brightness of the screen



In automatic mode, only the white balance can be adjusted.



Manual ISO sensitivity, shutter speed, exposure value, white balance can be adjusted.

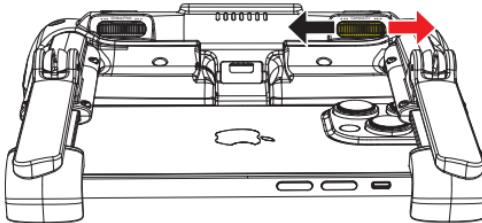
Attentions:

- 1) In video recording, no automatic or manual switching can be made; in automatic recording, burst dimming compensation can be adjusted; in manual recording, light sensitivity ISO and burst dimming compensation can only be adjusted, and the shutter speed value cannot be adjusted.
- 2) In manual gear, when the shutter speed value and the sensitivity ISO value are increased. If the camera lens hits the light, the shutter speed or sensitivity ISO is needed to readjust the image brightness. When the camera lens targets the light, adjust the shutter speed or sensitivity ISO to adjust the scene.

Method 2: Quickly adjust the camera exposure value through the right dial of the remote control

When the camera image is too bright, turn the right dial of the remote control to the left to quickly reduce the exposure value to darken the image;

When the camera image is dark, turn the right dial of the remote control to the right to quickly increase the exposure value to brighten the image.

**Take photos and video**

Taking pictures and videos can be done by taking pictures on the remote control, pressing the video button or operating in the camera window of the mobile device APP.

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1) Control in the mobile device APP interface

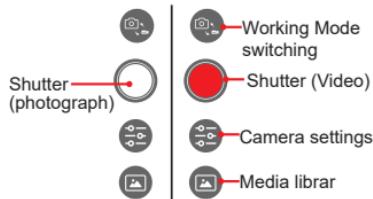
Tip: The camera window of the mobile device APP interface has received the picture transmitted by the aircraft camera, so that it can be controlled on the APP interface.

①Select the working mode:

Click the camera working mode change icon " " to switch the working mode to photo or video.

②Photo: Click the photo icon " " to take a photo.**③Recording:**

Click the recording icon " " to start recording. After recording, click the recording icon " " again to stop recording and save the recording to the aircraft TF card.

**2) Remote control physical buttons to control photo or video**

①Photo: Short press the photo button " " on the upper right of the remote controller once, the camera will take a photo and save it to the aircraft TF card.

②Recording: Short press the record button " " on the upper left of the remote controller once, the camera starts to record, short press the record button " " again, the camera stops and saves the record to the aircraft TF card.

Intelligent flight function description

Intelligent flight function provides different preset auxiliary shooting intelligent flight modes such as TimeLapse(Time-Lapse), and Lock Assist(auxiliary) functions. The aircraft can automatically follow the set auxiliary shooting flight mode to shoot a variety of classic aerial photography.

⚠ Warning

- 1) Please use the intelligent flight function in an open, unobstructed and obstacle-free environment, and always pay attention to whether there are obstacles such as people, animals, buildings, etc. on the path of the aircraft.
- 2) Always pay attention to objects from around the aircraft and manually operate to avoid accidents (such as collisions) and blockage of the aircraft.
- 3) Please do not use the intelligent flight function in places with poor GNSS signals, such as close to buildings and shelters, otherwise it may cause unexpected situations such as unstable flight trajectory of the aircraft.
4. When using the intelligent flight function, users must abide by the local laws and regulations on privacy.

⌚ TimeLapse

⌚ Free(FreeTime-Lapse)

By setting parameters, the aircraft will automatically take a certain number of photos within the set time and generate time-lapse video. When not taking off, it can shoot on the ground; when taking off, the user can freely control the aircraft through the left/right joystick on the remote control and control the pitch angle of the gimbal through the left dial.

Steps to use:

- ① Set shooting parameters, including shooting interval and composite video duration. The screen will display the number of shots and the shooting time.
- ② Click the shooting button to start shooting.

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⌚ **Lock Assist:** The Lock Assist functions include Cruise Control Mode, Target Lock Mode, Circle Mode, Rise(Soaring to the Sky) Mode, Far Away(Fading) Mode, Drift(Tail Flick) Mode, etc.

⌚ Cruise

Automatically maintain three-dimensional movement and spin speed, click the Cruise button on the App interface while manually flying the aircraft, and the flight control will automatically maintain the current climb speed, horizontal flight speed, and spin angle speed, and maintain the movement of manual flying at a constant speed, bringing a new play of camera movement. Click the Cruise button again or push the throttle joystick to the highest, to cancel the Cruise flight.

⌚ Target lock (target waypoint marking assisted camera movement):

In the flight process, adjust the gimbal to be aligned with the ground target, click the Target Lock button on the App interface, to open the target waypoint marking function, and view the target's latitude, longitude and height coordinates and distance. The gimbal is automatically and continuously aligned to lock the target, then the gimbal pitch and aircraft heading turn to automatic control state. At this point, it cannot be manually adjusted, instead, you can operate the joysticks to adjust the height and horizontal position of the aircraft. The gimbal can automatically lock the target while the position changes. To mark the waypoints for targets above the ground such as buildings, it is required to fly the aircraft to the top of the target, control the gimbal pitch towards the bottom, adjust the height of the aircraft to be 20 meters above the top of the building, then press the Target Lock button, and the gimbal will lock the position 20 meters right below the aircraft. Click the Target Lock button again, to cancel the gimbal lock.

Ⓐ Circle:

After locking the target, click the Circle button on the App interface, and the aircraft will be aligned with the target and keep circling. When it reaches the time limit or the Circle button is clicked again, the Circle flight will be canceled.

▲ Rise(Soaring to the Sky):

After locking the target, click the Soaring to the Sky button on the App interface, and the aircraft will be aligned with the target and automatically fly right above the target, start to ascend while slowly rotating its heading. When it reaches the time limit or the Soaring to the Sky button is clicked again, the Soaring to the Sky flight will be canceled.

↗ Far Away(Fading):

After locking the target, click the Fading button on the App interface, and the aircraft will be aligned with the target and automatically fly up and away from the target. When it reaches the time limit or the Fading button is clicked again, the Fading flight will be canceled.

○ Drift(Tail Flicker):

After locking the target, manually fly the aircraft backward away from the marked target, click the Tail Flicker button on the App interface, the drone will be aligned with the target and automatically perform the Tail Flicker shooting flight action. When it reaches the time limit or the Tail Flicker button is clicked again, the Tail Flicker flight will be canceled.

Additional instructions

Description of downward vision system and TOF ranging system

The T210 MINI downward vision system and TOF time-of-flight ranging sensing system are both located at the bottom of the aircraft. The downward vision system consists of a camera; the TOF ranging sensing system consists of a TOF detection light pulse sensor module, which can provide a reference for the height of the aircraft to ground and calculate the aircraft position information with the downward vision system.

Scope of application

The positioning function of the downward vision system is suitable for environments with no GPS signal or poor GPS signal but rich surface texture and sufficient light conditions, and the optimal working altitude range is 0.5~10 m. When flying beyond this range, the visual positioning performance may be degraded, so please fly with caution.



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Steps to use

- 1) Turn on the aircraft.
- 2) After takeoff, the aircraft status indicator double flashes green, and the visual positioning function will be turned on automatically.

Attentions

- 1) The maximum hovering height of the aircraft is 5 m when using the downward vision system in an open and flat field without GPS.
- 2) The downward vision system may not work properly on the water surface. It is recommended that the user maintains full control of the flight.
- 3) The vision system is not suitable for use in scenarios where the speed of the aircraft is too fast. For example, the flight speed shall not exceed 5 m/s at 1 m above the ground, and not exceed 10 m/s at 2 m above the ground.

- 4) The vision system cannot recognize surfaces without textural features, and cannot work properly in environments with insufficient or excessive light intensity.
- 5) Do not block or interfere with the vision system in any way, and avoid using it in an environment with too much dust and water mist, so as not to affect the clarity of the camera. Please do not block the TOF detection light pulse transceiver sensor in any way.
- 6) Avoid flying in rainy and foggy weather or in other scenarios with low visibility (visibility below 100 m).

The vision system does not work properly in the following scenarios:

- a) Solid color surfaces (e.g. solid black, solid white, solid red, solid green).
- b) Surfaces with strong reflections (e.g. ice surface).
- c) Surface of water or transparent objects.
- d) Surfaces of moving objects (e.g. above stream of people, above shrubs or grass blown by high winds).
- e) Scenarios with dramatic and rapid changes in lighting.
- f) Surfaces that are particularly dark (less than 10lux) or particularly bright (greater than 40,000lux).
- g) Material surfaces that have a strong absorption or reflection effect on square wave pulses (e.g. mirrors).
- h) Surfaces with particularly sparse texture.
- i) surfaces of objects with a high degree of texture repetition (e.g. small checkered tiles of the same color).
- j) Tiny obstructions (e.g. tree branches, wires, etc.)

Calibrating the Aircraft Compass

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⚠️ Notice:

- 1) The WK Fly App on the mobile device indicates that the magnetic compass of the aircraft is seriously interfered, or circles when hovering, or when the flying straight line deviates from the route, land in time to calibrate the compass. (The motor must be locked).
- 2)Please perform calibration in an open place outdoors and away from strong electromagnetic field interference.

Open the aircraft compass calibration

Method 1: When the mobile device, aircraft and remote control are all connected, open the compass calibration in the WK Fly APP settings of the mobile device (path: → → click the icon "▶" on the right side of the sensor → click the icon " Calib" on the right side of the compass → click the icon "[Start Calibration]" in the pop-up window);

Method 2: When the motor is locked and connected to the remote control, directly place the aircraft nose vertically upward for more than 6 seconds. The aircraft status indicator flashes quickly to indicate that it has entered the compass calibration state.

The compass calibration method is as follows:

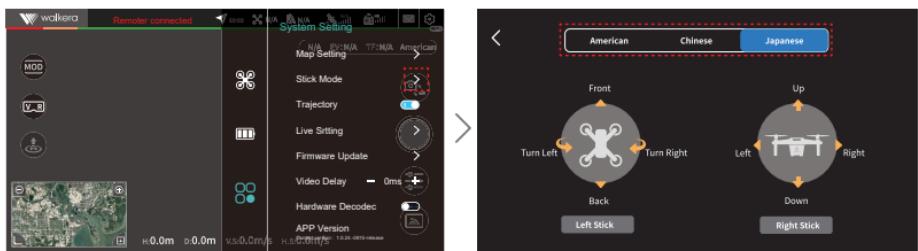
- 1) Hold the aircraft head vertically upward for more than 6 seconds for the aircraft status indicator to enter the flash, and then rotate the aircraft for 720° in the horizontal direction, and the aircraft indicator turns off.
- 2) Put the aircraft flat, then rotate 720° in the horizontal direction, the aircraft indicator light will be on, and then rest the aircraft in the horizontal position.



If the calibration is unsuccessful, please recalibrate as described above.

Remote control joystick modes switching

When the remote control and mobile device are connected, first click the icon "⚙️" in the upper right corner of the WK Fly APP interface to expand the setting pop-up window → then light the icon "🎛️" to expand the system setting menu → click "❯" on the right side of the "Stick Mode" to enter the stick mode switch Interface → On the stick mode switching interface, select the stick mode option "American Hand", "Chinese Hand" or "Japanese Hand" at the endpoint → click the "❮" icon in the upper left corner of the stick mode switching interface to exit the stick mode switching interface.



Pair the frequency

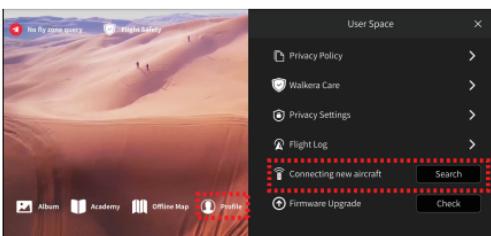
- The whole set of aircraft has been paired frequency before leaving the factory, under normal circumstances, there is no need to pair the frequency again, and it will be automatically connected after booting;
- If you have replaced a new aircraft or a new WKRC-H9/WK-V8 remote control after sales, you need to pair the frequency before connecting the new aircraft or new WKRC-H9/WK-V8 remote control, otherwise you will not be able to connect.

The operation is as follows

1) Turn on the remote control → the mobile device to connect the remote control wifi → Open the app;

2) Install the battery on the aircraft → Power on → Press and hold the battery button for more than 3 seconds, and the aircraft buzzer will sound;

3) Click "Profile" on the main interface of the App → Click the "Search" button on the right side of "Connecting new aircraft" in the pop-up window, the aircraft and the remote controller will automatically pair the frequency until the buzzer prompt tone ends, indicating that the pairing frequency has been successful.



Battery usage instructions and storage safety



- Always store batteries in a cool, dry place.
- Incorrectly use, charging or storage batteries can lead to fire and personal injury. Always use the battery according to the following safety guidelines.

Battery usage notice

- 1) Do not expose the battery to any liquid, do not dip the battery in water or wet it. Do not use batteries in rain or wet conditions. When the battery comes into contact with water, it may decompose with reactions, causing spontaneous combustion and even an explosion.
- 2) Using batteries not officially supplied by WALKERA are strictly prohibited. For replacement, please go to the WALKERA official website for the relevant purchase information. walkera is not responsible for battery accidents and flight failures caused by the use of batteries not officially provided by WALKERA.
- 3) It is strictly prohibited to use bulging, leaky and packaged damaged batteries. If the above situation occurs, please contact WALKERA or its designated agent for further processing.
- 4) Keep the battery off before installing or pulling it out of the vehicle. Do not unplug the battery when the battery power is on, otherwise the power interface may be damaged.
- 5) The battery shall be used at ambient temperatures of between -10°C and 45°C. Too high the temperature (above 50°C) can cause the battery to catch fire, or even explode. Too low temperature (below -10°C) can severely damage your battery life.
- 6) No use of batteries in strong electrostatic or magnetic field environments. Otherwise, the battery protection panel will fail, causing a serious failure of the aircraft.
- 7) Do not dismantle or puncture the battery with sharp objects in any way. Otherwise, it will cause the battery to catch fire or even explode.
- EN 8) The liquid inside the battery is highly corrosive, please stay away. If internal fluid sputters the skin or eyes, rinse with water for at least 15 minutes and seek medical attention immediately.
- 9) The battery shall not be used again if falling from the vehicle or hit by external forces.
- 10) If the battery accidentally falls into water during flight or otherwise, pull the battery immediately and place it in a safe open area away from the battery until the battery is completely dry. The dried batteries should not be used again and should be discarded and properly disposed of.
- 11) Do not place the battery in a microwave oven or in a pressure cooker.
- 12) Do not place the battery cell on the conductor plane.
- 13) Do not use wires or other metal objects to cause the battery short circuit to positive or negative electrodes.
- 14) Do not impact the battery. Do not place heavy objects on the battery or on the charger.
- 15) If the battery interface is dirty, wipe it clean with a dry cloth. Otherwise, it will cause poor contact, thus causing energy loss or an inability to charge.

Battery Storage Safety Warning

- 1) Do not bring the battery close to an open fire or a heater.
- 2) Please keep the battery out of the child's reach.
- 3) Ensure that the battery is kept at room temperature: around 25 ° C.
- 4) For a long-term unused battery, save the voltage should be controlled between 14.8V~15.8V.
- 5) When not in use for a long time, the battery should be checked every two weeks for any abnormality, and the battery should be activated by charging and discharging every two months to maintain the activity of the battery.

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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

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Product name: Sport Aerial Aircraft T210 MINI

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Subject to updates without notice.

You can check the latest version on the official website.



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