NUCLEUS-NII

TILTA WIRELESS LENS CONTROL SYSTEM

原力NII无线跟焦系统

01 免责声明

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注意事项和警告

使用本产品前,请严格遵守以下说明,如因失误操作或者不正当使用等造成的相关后果,我司不负任何责任。

配件要求

- 充电环境温度高于 40 °C 或低于 5 °C可能导致电池性能下降、膨胀、漏液、过热等损坏。
- 切勿将电池存储在超过60°C的环境下。理想的存储环境温度为 22 °C 至 28 °C。
- 电池必须使用TILTA官方提供的充电设备进行充电。对于使用非TILTA 官方提供的充电设备进行充电所造成的一切后果,TILTA将不予负责。

操作环境

- 本设备内含强磁,为避免产生磁化影响,请远离磁卡、IC卡、植入性医疗设备(如心脏起搏器)、硬盘、RAM 芯片等易受干扰设备。
- 请在温度为 -20 °C 至 45 °C之间的环境中使用电池。温度过高将会引起电池异常膨胀、着火,甚至爆炸。在低温环境下使用之前,建议先在常温环境中将电池充满电量,以延长电池使用寿命。
- 请勿将设备放置在易燃、可燃物(如地毯和木制品)附近充电。请时刻留意充电过程,谨防发生意外。
- 请在干燥的环境下存储设备,理想的设备存放环境湿度不高于 40%。

电池安全

⚠【警告】本设备配有不可拆卸的内置电池,请勿自行更换电池,以免损坏电池或设备。

- 禁止在强静电或者磁场环境中使用电池,以免引起设备内部电路故障。
- 请勿将电池暴露在高温处或发热设备的周围,如日照、取暖器、微波炉、烤箱或热水器等。电池过热可能引起爆炸。
- 请勿拆解或改装电池、插入异物、或浸入水或其它液体中,以免引起电池漏液、过热、起火或爆炸。
- 电池内部电解液具有强腐蚀性,如果不小心接触到皮肤或眼睛,请立即用清水冲洗至少 15 分钟并马上就医。
- 请勿把电池扔到火里,否则会导致电池起火和爆炸。
- 请勿跌落、挤压或穿刺电池。避免让电池遭受外部大的压力,从而导致电池内部短路和过热。
- 请勿使用已经损坏的电池。
- 切勿将电池彻底放完电后长时间存储,以避免电池进入过放状态而造成电芯损坏,将无法恢复使用。
- 务必将电池彻底放电后,再将电池废置于指定的电池回收箱。电池是危险化学品,严禁弃置于普通垃圾箱。相关细节,请遵循当地电池回收和废置的法律法规。如电池无法彻底放电,请勿将电池直接弃置于电池回收箱,应联系专业电池回收公司做进一步的处理。

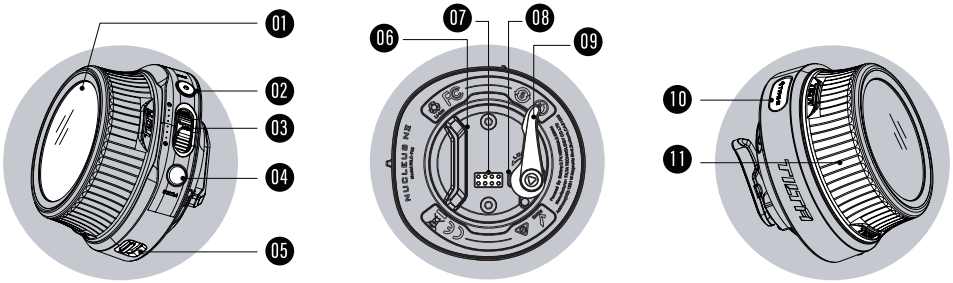
维护和保养

- 请保持设备清洁,无沙尘等异物。使用干净、干燥的布料及时清理产品上的异物。
- 请勿使设备及其配件受到强烈的冲击或震动,以免损坏设备及其配件,导致设备故障。
- 如果设备碰撞硬物或设备受到外界的强烈撞击造成屏幕部分破碎,切勿触摸或试图移除破碎的部分,请立即停止使用并及时联系TILTA售后服务。

温馨提示

- 设备在工作状态中会产生轻微发热,此为正常现象。

02 认识原力N II控制手轮



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01 1.6寸圆形触摸屏
镜头及相机参数显示/调整

02 【REC】键
01 单击：REC录制启停功能
02 开/关机
长按3S：开/关机
长按8S：强制关机

03 拨杆
上下拨动，可控制一路电机

04 【FUNC】功能键
01 打标记
02 行程校准

05 限位开关
切换TF/DF档（TF档：全面覆盖TILTA无线控制系统；DF档：兼容DJI稳定器跟焦电机控制）

向上拨为打开TF档（TILTA Focus模式，手轮限定转动角度<360°）
向下拨切换为DF档（手轮旋转无角度限制）

06 NATO接口
外接拓展设备

07 电子触针
可与DJI RS 2/RS 3 PRO稳定器通讯

08 安全销
具备NATO防脱功能

09 扳扣
锁紧NATO结构

10 Type-C接口
充电/固件更新

11 手轮
转动控制电机

产品特点

圆形触摸屏
灵性交互设计/350ppi

TYPE-C
支持PD快充

内置大容量电池/超长续航
不间断工作超7小时/智能待机

规格参数

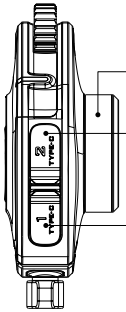
- 材质：铝合金+塑胶
- 尺寸：73*72*53mm
- 重量：175g
- 颜色配置：黑色

电池使用须知

手轮内置电池容量
3.7V 1800mAh 6.66Wh

(1)工作温度：充电：0°C～45°C；放电：-10°C～60°C
(2)存储温度：-5°C～45°C
(3)运行湿度：45±20%(Max.)
(4)质保期：12个月且循环次数少于500次

03 认识原力N II跟焦电机

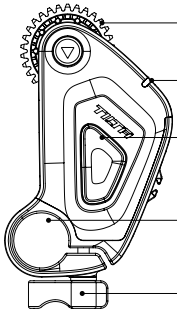


01 驱动马达

02 Type-C接口2
支持PD输入和相机通信

03 Type-C接口1
支持PD输入输出

<左侧面>



04 镜头驱动轮
0.8M直齿轮

05 指示灯

06 配对按键
单击：切换颜色　双击：进入配对模式
长按3S：行程校准

07 15mm管夹
外接15mm圆管

08 手扭
锁紧15mm圆管

<背面>

规格参数

- 材质：铝合金+塑胶
- 尺寸：83*46*31mm
- 重量：80g
- 颜色配置：黑色

指示灯灯语

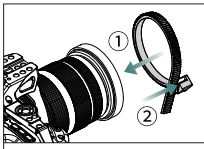
○ 白灯：电机无配对状态

配对完成后电机根据手轮的设置对应显示以下颜色，以区分手轮控制端对应的电机频道

- 紫色：Focus
- 绿色：Iris
- 蓝色：Zoom
- 黄色：其他

装配电机于镜头上

(1)安装镜头跟焦环



将①跟焦环扣在镜头上，按指示方向②扣紧完成装配。

注：套装内附带的可调式跟焦环或TILTA无缝镜头跟焦环(另购)，使镜头适配于0.8模齿轮的跟焦环系统。

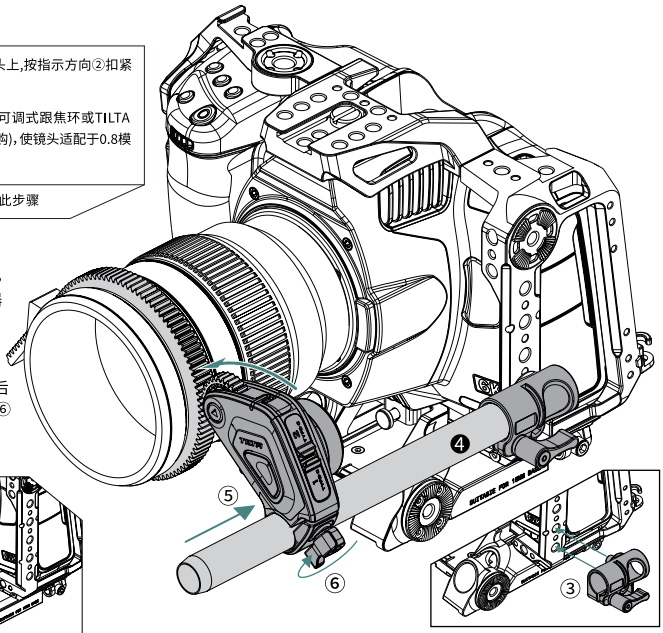
注意：如果镜头自带0.8模数的齿轮环可忽略此步骤

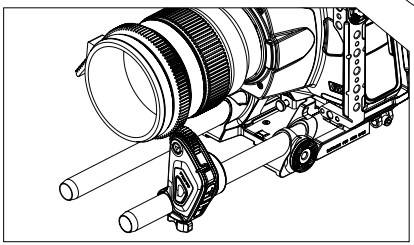
(2) 安装双孔导管适配器和15mm导管

将③导管适配器安装在笼子侧臂的1/4螺纹孔上，锁紧螺丝；再将15mm导管④锁紧在导管适配器上，便于装配电机。

(3) 安装电机

将⑤电机安装在15mm导管上，调整电机的角度后将M0.8齿轮搭在可调式跟焦环上，锁紧导管手扭⑥即可完成装配。





注：套装内附带双孔导管适配器和15mm导管，可根据需求另购TLTA导管适配件装配电机，如左图。

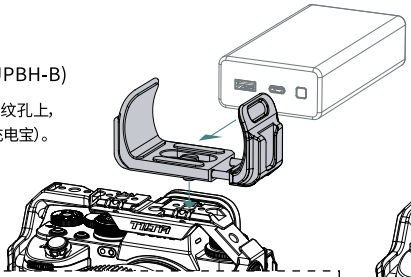
04 跟焦电机供电及录制线连接

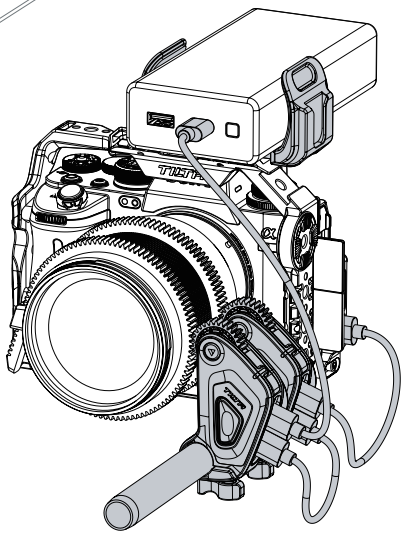
跟焦电机供电说明

可搭配TILTA的移动电源支架或NP-F供电底板(另购)来装配供电设备,再通过Type-C接口(PD协议)为跟焦电机供电。

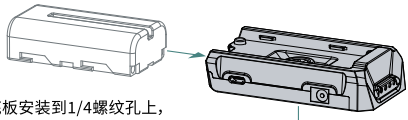
安装移动电源支架 (TA-UPBH-B)

将移动电源支架安装到1/4螺纹孔上,
拧紧螺丝后装配供电设备(如充电宝)。

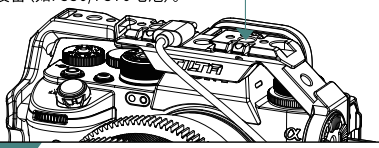




安装NP-F供电底板 (TA-BTP2-F970-B)



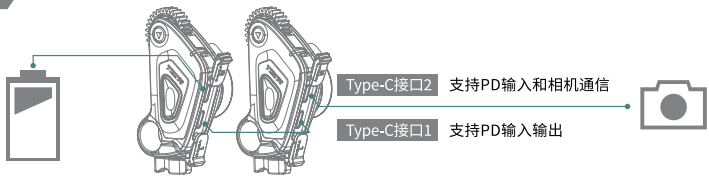
将NP-F供电底板安装到1/4螺纹孔上,
拧紧螺丝后装配供电设备(如F550/F570电池)。



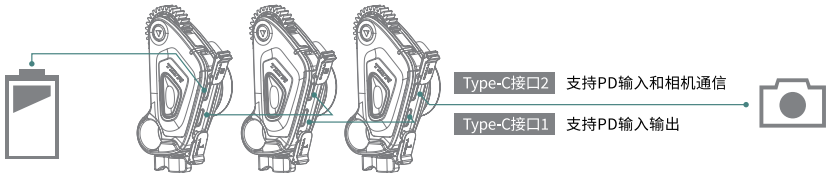
多个电机同步供电

多个电机同时使用时,可使用Type-C(PD协议)接口串连,同步供电。
多电机串联时,接口2输入--接口1输出;在最后一个电机时,接口1输入--接口2连接录制线,控制相机。

2个电机串联时:



多个电机串联时(≥3个):

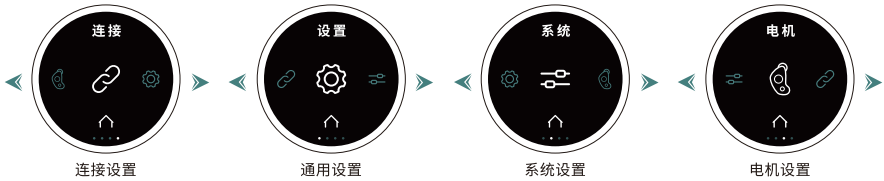


录制线连接说明 录制线一端连接电机Type-C接口2,一端连接相机,再通过手轮即可控制相机录制功能和参数。

05 认识手轮UI主界面

原力N II控制手轮UI由三大主屏和四项设置菜单组成
三大主屏分别为相机控制界面、电机参数界面、焦点距离界面
四项设置菜单分别为连接设置、通用设置、系统设置、电机设置

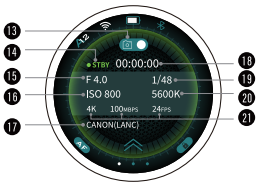
开机后，控制手轮会进入[电机参数界面]，在此界面下，左右滑动屏幕可切换三大主屏，自屏幕底部向上滑动可进入四项设置菜单，左右滑动选择需要的设置菜单并点按中心图标，进入详细的设置界面。



连接设置　通用设置　系统设置　电机设置

自下向上滑-进入菜单选项

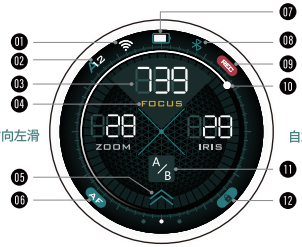
相机控制界面-REC



相机控制界面-STBY

- 13 相机参数锁定按键
- 14 REC（录制）/STBY（待机）标识
- 15 光圈参数信息
- 16 感光度参数信息
- 17 相机通讯协议信息
- 18 本次录制/待机时间
- 19 快门参数信息
- 20 色温参数信息
- 21 分辨率/码率/帧率

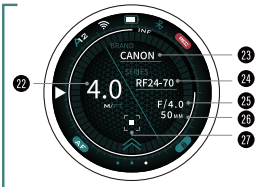
自右向左滑



自左向右滑

电机参数界面

- 01 WIFI状态
- 02 通讯频道
  （A:自动搜索标识　M:手动搜索标识　数字:频道序号）
- 03 电机参数(0-999)
- 04 电机指示
  （Focus电机指示 /Zoom电机指示/ Iris电机指示）
- 05 自下向上滑动进入菜单选项
- 06 AF/MF切换按键
- 07 电量信息
- 08 蓝牙状态
- 09 录制状态标识
- 10 手轮位置
- 11 打点图标 [标记点（Mark）　起始/终止点（Range）]
- 12 触摸屏锁定按键



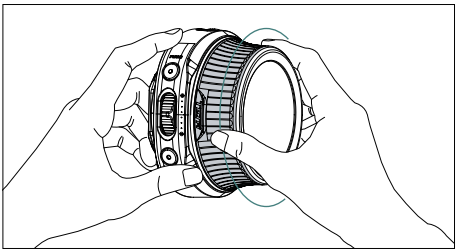
焦点距离界面

- 22 焦点位置
- 23 镜头品牌
- 24 镜头型号
- 25 光圈信息
- 26 焦段信息
- 27 打点图标

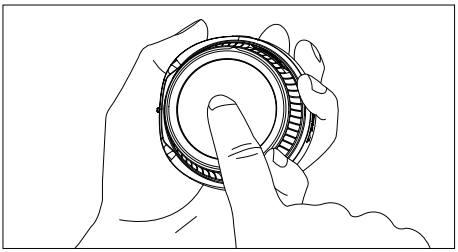
06 手轮的使用

(一)单独使用

原力N II控制手轮可单独使用。
通过旋转手轮或调整拨杆控制跟焦电机。



通过触摸屏可控制部分相机参数。

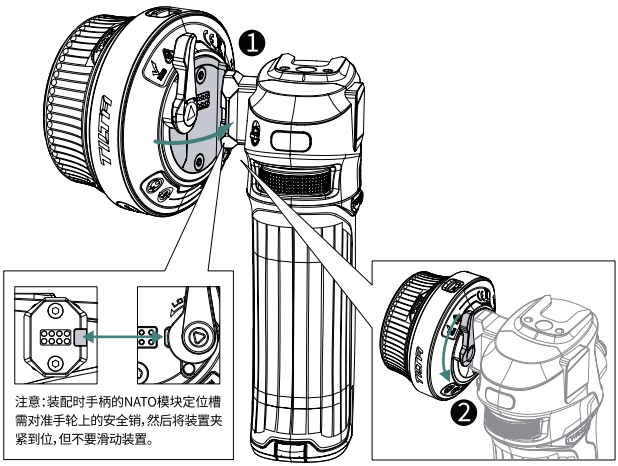


(二)在其他设备上拓展

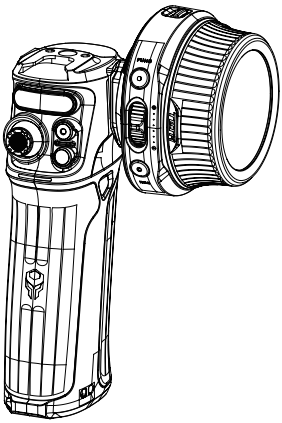
原力N II 控制手轮采用标准NATO规格快装接口，可装配在任意NATO拓展位上。
(如带NATO结构的机身兔笼/稳定器侧边/稳定器提壶手柄侧边/监视器兔笼侧边等)

注： 装配和拆卸时，都需注意手轮背面的电子触针，防止外力损坏。

搭配原力N II 多功能控制手柄使用(如图)
手轮可通过NATO结构装配在手柄上，锁紧扳扣完成装配。



装配组合图

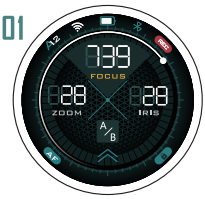


07 基本操作

配对操作（频道设置）

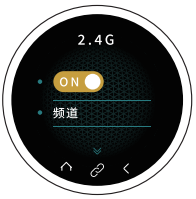
电机和手轮在出厂时已配对完成，开启电源即可正常使用。如需更换新电机或手轮，请根据以下步骤进行手动操作配对：

01



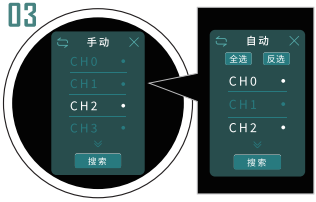
进入手轮UI主界面，自下向上滑动进入菜单。

02



选择【连接设置】-【2.4G】模式，再打开【ON】并点击【频道】进入自动/手动搜索模式。

03

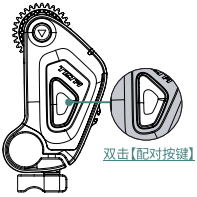


手动频道模式 ⇆ 自动频道模式

通过自动/手动频道模式搜索可用频道

注：点击左上角切换图标⮌可切换搜索模式

04



然后电机端双击【配对按键】，电机指示灯闪烁，即开始配对。配对完成后将自动分配电机号。

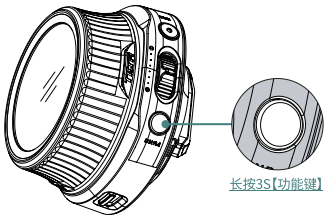
注：FOCUS/ZOOM/IRIS依次配对，可减少后期二次分配电机号的操作

镜头行程校准(一)

当电机和手轮完成配对后，需要用户对电机和所使用镜头的跟焦行程进行校准。本产品支持自动和手动两种镜头行程校准。

跟焦电机快捷自动校准 >>>

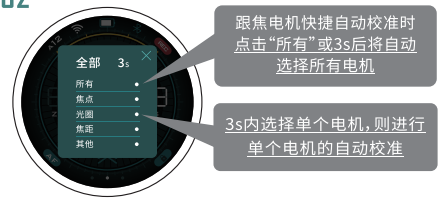
01



长按手轮的【功能键】3S，开启自动行程校准。

（同时校准连接的所有电机，无限位镜头需要手动校准。）

02



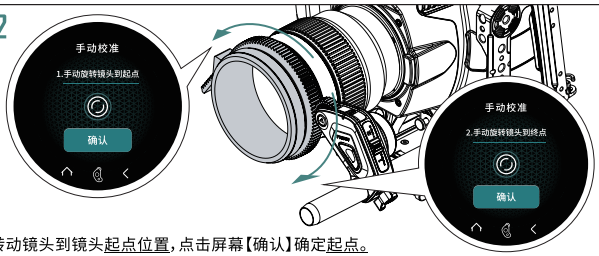
跳出弹窗后可选择自动校准单个电机，如3s内无操作，则自动校准全部电机。

镜头行程校准(二) 单个跟焦电机手动校准 >>>

01

从主界面进入菜单-【电机设置】-选择需要行程校准的电机(焦点/焦距/光圈/其他)-选择【手动校准】-确认【校准】

02



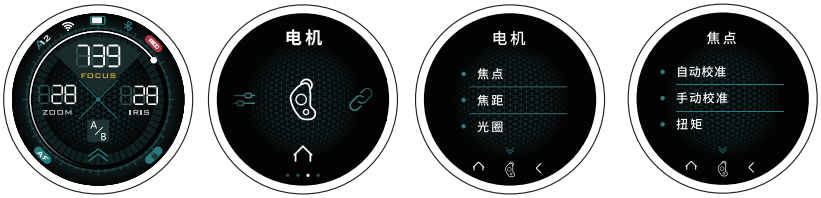
转动镜头到镜头起点位置，点击屏幕【确认】确定起点。
转动镜头到镜头终点位置，点击屏幕【确认】确定终点。

注：重新设置每个电机的手动校准时，会自动删除之前的校准信息。

03

(4)点击【OK】校准完成。

单个跟焦电机自动校准 >>>

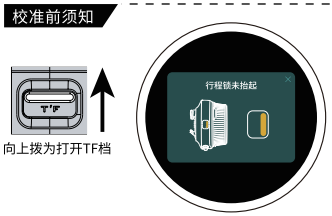


从主界面进入菜单-【电机设置】-选择需要行程校准的电机(焦点/焦距/光圈/其他)，
选择【自动校准】，即开始自动校准。

09 基本操作

复位及校准

校准前须知



需打开手轮的【限位开关】TF档才可进行校准，未打开时界面会弹出提示。

01

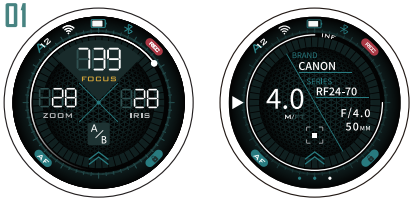
从主界面进入【通用设置】-【校准手轮】

02

点击【校准】进入，根据界面提示左右转动手轮完成校准过程。

打点操作-Mark（标记点）模式

01

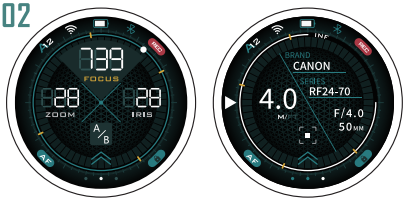


未打点状态

单击手轮【功能键】或单击触摸屏【打点图标】A/B /

注：双击【功能键】或双击触摸屏【打点图标】，取消上一个标记点

02

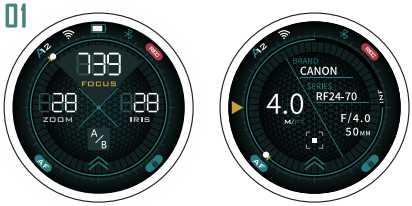


Mark状态表示

转动手轮进行Mark打点，最多可添加9个标记点（Mark点）。

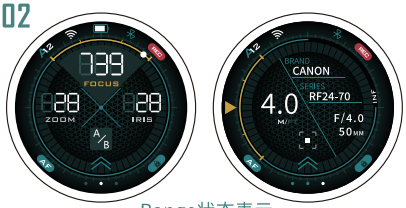
打点操作-Range（起始/终止点）模式

01



长按触摸屏【打点图标】A/B /，确定Range起始点。

02



Range状态表示

再转动手轮，单击【打点图标】，确定Range终止点。

注：Range设置完成后，长按触摸屏【打点图标】2S，清除Range设置。如需再设置Range，需重复上方第一步操作。

10 基本操作

设置手轮/拨杆功能


从主界面进入菜单-【通用设置】-【手轮设置】或【拨杆】，
点击白色箭头◁▷，选择相应的设备。

手轮设置 >>>

点击【恢复默认设置】，再点击【确认】可恢复默认设置。

拨杆设置 >>>

设置屏幕亮度

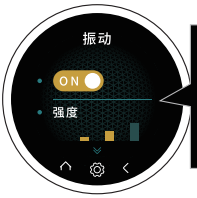

从主界面进入菜单-【通用设置】-【亮度】，选择自动或手动亮度设置（在手动模式下，左右滑动调整亮度）。

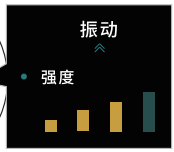
注：点击屏幕【自动】或【手动】按钮可进行切换

设置振动/熄屏功能


从主界面进入菜单-【通用设置】-【振动】或【熄屏】设置

振动设置 >>>





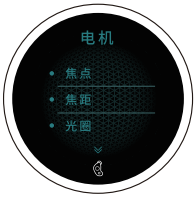
打开【ON】，可手动调节振动强度。

熄屏设置 >>>

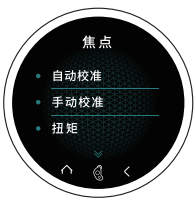
打开【ON】，可手动调节熄屏时间。

注：熄屏后，双击触摸屏退出熄屏模式。

11 基本操作-电机设置

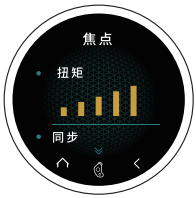


未配对跟焦电机时显示状态



从主界面进入菜单-【电机设置】-选择相应的电机(以下以“焦点电机”为例)，再根据列表，选择相应的功能设置。

扭矩设置 >>>



选择【扭矩】设置，可手动调节所选电机的扭矩强度。

同步设置 >>>

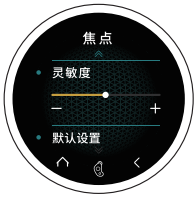
选择【同步】设置，依据功能点选对应电机的颜色；选择完成后，自动分配对应颜色给对应功能的电机。

- 紫色：FOCUS
- 绿色：IRIS
- 蓝色：ZOOM
- 黄色：其他

方向设置 >>>

选择【方向】设置，点击顺时针 或逆时针 图标可切换所选择电机的方向。

灵敏度设置 >>>



选择【灵敏度】设置，可左右调节电机的灵敏度。

默认设置 >>>

点击【默认设置】，再点击【确认】，恢复默认设置。

从主界面进入菜单-【系统设置】

信息设置 >>>

选择【信息】设置，可查看当前产品信息和固件信息。

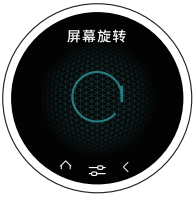
语言设置 >>>

选择【语言】设置，点击【ENGLISH】或【中文】图标，即可切换当前系统语言为目标选择。

固件升级设置 >>>

选择【固件升级】设置，在手轮已经接入网络的情况下，点击【更新】图标，并进行【确认】，即可进行固件升级。

屏幕旋转设置 >>>



选择【屏幕旋转】设置，点击中心旋转图标，可更改屏幕方向。(有0°/90°/180°/270°四种方向可供选择)

恢复出厂设置 >>>

选择【恢复出厂设置】，进行二次确认后即可使产品系统恢复出厂状态。

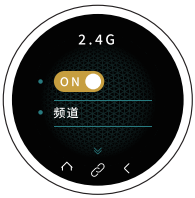
注：本操作不可逆，请谨慎选择。

13 基本操作-连接设置

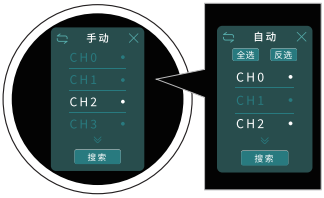
2.4G模式

从主界面进入菜单-【连接设置】-【2.4G】模式，
进行【频道】设置和【2.4G信号功率】设置。

频道设置 >>>

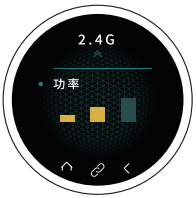


打开【ON】并选择【频道】
进入自动/手动频道模式



手动频道模式 ⇆ 自动频道模式
点击【搜索】图标搜索可用频道

2.4G信号功率设置 >>>



选择【功率】设置，
可手动左右调节信号强度。

注：
- 自动频道模式下，关闭指定频道，避免信号干扰。
- 手动频道模式下，手动选择单一频道，与原力M/原力N完成配对。
- 点击切换图标⇆可切换搜索模式。

14 DISCLAIMER

Thank you for purchasing a TILTA product.
Before using this product, please carefully read this document to ensure that the product has been set up correctly. The final interpretation of this document and all related documents for this product belongs to TILTA. For updates, please visit the official website at www.tilta.com for the latest product information. TILTA reserves the right to modify any information in this manual at any time without prior notice and without assuming any responsibility.
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WARNING & PRECAUTION

Before using this product, please strictly follow the instructions below. Our company assumes no responsibility for any consequences caused by improper operation or misuse.

ACCESSORY REQUIREMENTS

- Charging at temperatures higher than 40°C (104°F) or lower than 5°C (41°F) may result in decreased battery performance, swelling, leakage, overheating, and other damage.
- Do not store the battery in an environment exceeding 60°C (140°F). The ideal storage temperature is 22°C (71.6°F) to 28°C (82.4°F).
- The battery must be charged with the charging equipment provided by TILTA. TILTA will not be responsible for any consequences resulting from charging with non-TILTA official equipment.

OPERATING ENVIRONMENT

- This device contains strong magnets. To avoid magnetic interference, please keep it away from magnetic cards, IC cards, implantable medical devices (such as pacemakers), hard drives, RAM chips, and other devices that may be affected.
- Use the battery in an environment with a temperature between -20°C (-4°F) and 45°C (113°F). Excessive temperatures can cause the battery to swell abnormally, catch fire, or even explode. Before using the device in a low-temperature environment, it is recommended to fully charge the battery at room temperature to extend its service life.
- Do not place the device near flammable or combustible materials (such as carpets and wooden products) while charging. Always pay attention to the charging process to prevent accidents.
- Store the device in a dry environment, with an ideal storage humidity not exceeding 40%.

BATTERY SAFETY

⚠ **[WARNING]** This device is equipped with a non-removable built-in battery. please do not attempt to replace the battery yourself, as this may damage the battery or the device.

- Do not use the battery in environments with strong electrostatic or magnetic fields, as this may cause internal circuit failures in the device.
- Do not expose the battery to high temperatures or place it near heat-generating devices, such as sunlight, heaters, microwaves, ovens, or water heaters. Overheating the battery may cause it to explode.
- Do not disassemble or modify the battery, insert foreign objects, or immerse in water or other liquids, as this may cause the battery to leak, overheat, catch fire, or explode.
- The electrolyte inside the battery is highly corrosive. If it accidentally comes into contact with your skin or eyes, rinse immediately with clean water for at least 15 minutes and seek medical attention.
- Do not throw the battery into fire, as this can cause it to catch fire and explode.
- Do not drop, squeeze, or puncture the battery. Avoid subjecting the battery to external pressure, which may cause internal short circuits and overheating.
- Do not use damaged batteries.
- Do not store the battery for an extended period after it has been completely discharged, to avoid entering a deep discharge state that can cause damage to the battery cells, rendering it unable to be used again.
- Be sure to fully discharge the battery before disposing of it in a designated battery recycling bin. Batteries are hazardous chemicals and must not be disposed of in regular trash bins. For details, please follow the local laws and regulations regarding battery recycling and disposal.
- If the battery cannot be fully discharged, do not dispose of it directly in a battery recycling bin; instead, contact a professional battery recycling company for further processing.

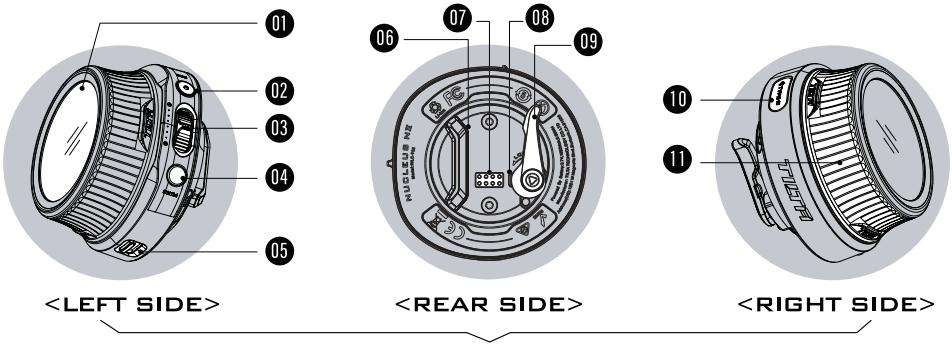
MAINTENANCE & CARE

- Please keep the device clean and free of sand, dust, and other foreign objects. Use a clean, dry cloth to promptly clean any debris on the product.
- Do not subject the device and its accessories to strong impacts or vibrations, as this may damage them and cause device failure.
- If the device collides with a hard object or the screen is broken due to a strong external impact, do not touch or attempt to remove the broken parts. Instead, immediately stop using the device and promptly contact TILTA customer service.

NOTE

- The device will generate slight heat during operation, which is normal.

INTRODUCING NUCLEUS N II HAND UNIT



01 1.6-inch Circular Touch Screen
Lens & Camera Data/Parameter Display

02 [REC] Button
01 Single Press: REC Run/Stop Function
02 Long Press 3s: Power On/Off
Long Press 8s: Force Power Off

03 Control Rocker
Control the Assigned Motor

04 [FUNC] Button
01 Set Marks
02 Hold to Calibrate Lens

05 Rotation Limit Switch
Switch TF/DF Mode (TF Mode: Compatible with TILTA Wireless Follow Focus Systems;
DF Mode: Compatible with DJI Follow Focus Systems)

Switch Up to TF Mode (Limits Focus Knob Rotation to 360 Degrees)

Switch Down to DF Mode (Focus Knob can Rotate Freely)

06 NATO Mount
For Mounting the Hand Unit

07 Contact Pins
Communicates with DJI RS2/RS3 Pro

08 Safety Pin
Prevents Accidental Disconnection

09 Tie Down
Lock to Secure the NATO Accessory

10 USB-C Port
For Charging/Firmware Updating

11 Hand Wheel
Rotate to control the Assigned Motor

FEATURES

Circular Touch Screen
Dynamic Interaction/350ppi

USB-C
Supports PD Fast Charging

Built-in High Capacity Battery with Extended Life
Continuous Operation for Over 7 Hours & Smart Standby

TECHNICAL DATA

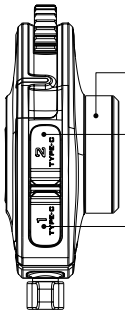
- Material: Aluminum Alloy+Plastic
- Dimensions: 73*72*53mm
- Weight: 175g
- Color: Black

BATTERY USAGE GUIDELINE

Built-in Battery Capacity
3.7V 1800mAh 6.66Wh

(1)Operating Temperature: Charging: 0°Cto 45°C (32°F to 113°F); Discharging: -10°Cto 60°C (14°F to 140°F)
(2)Storage Temperature: -5°C to 45°C (23°F to 113°F)
(3)Operating Humidity: 45±20% (Recommended)
(4)Warranty Period: 12 months and less than 500 charge cycles

INTRODUCING NUCLEUS N II MOTOR

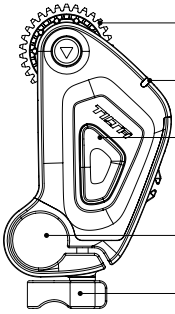


01 Motor Driver

02 USB-C Port 2
Supports PD input and camera communication

03 USB-C Port 1
Supports PD Input/Output

<LEFT SIDE>



04 0.8M Lens Gear
Connects to Lens

05 LED Indicator

06 Pairing Button
Single-Click : Switch Color ;
Double-Click : Enter EZ-Mode ;
Long Press 3s : Calibrate Lens

07 15mm Rod Holder
For Mounting via a 15mm Rod

08 Tie Down
For securing the Motor

<REAR SIDE>

TECHNICAL DATA

- Material: Aluminum Alloy+Plastic
- Dimensions: 83*46*31mm
- Weight:80g
- Color: Black

INDICATOR LIGHT

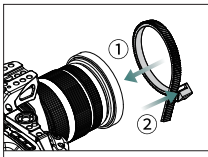
○ White: Motor is not assigned to any function

After pairing is complete, the motor will display the following colors according to the handwheel settings to distinguish which motor corresponds to which hand unit control option.

- Purple: Focus
- Green: Iris
- Blue: Zoom
- Yellow: Other

ATTACHING MOTOR TO LENS

(1) Attaching Lens Gears



Attach part ① lens gear to the lens, following the indicated direction. Secure part ② to complete the assembly.

Note: The adjustable lens gear included in the kit or the TILTA Seamless Focus Gear Ring (sold separately) enables lens adaptation to the follow focus ring system with a 0.8 pitch gear.

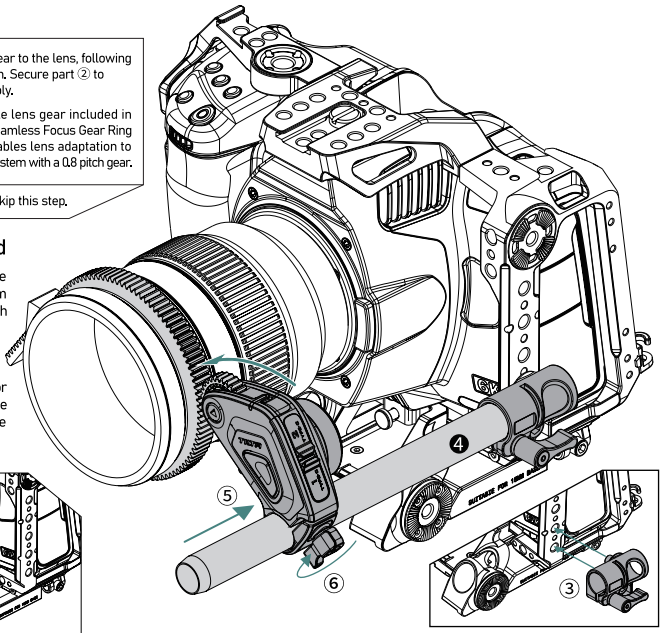
Note: If the lens comes with a 0.8 module gear ring, skip this step.

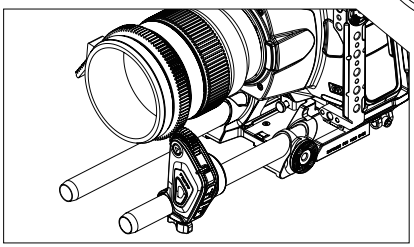
(2) Attaching Rod Holder & 15mm Rod

Attach the ③ rod holder to the 1/4" thread on the cage side arm, and tighten the screw. Then, secure the 15mm rod ④ to the rod holder, which will be used to attach the motor.

(3) Attaching Motor

Mount the ⑤ motor onto the 15mm rod, adjust the motor angle, and then engage the M0.8 gear with the adjustable lens gear and then tighten the tie down ⑥ to complete the assembly.





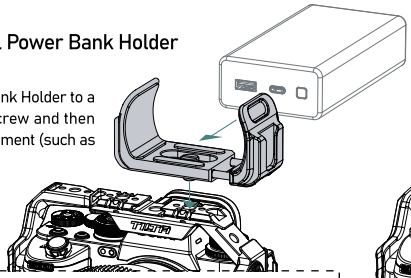
Note: The kit includes a 15mm Rod Holder to 1/4"-20 Adapter (side-mounted) and a 15mm rod. If needed, you can purchase additional TILTA Rod Holder Accessories for motor attaching, as shown in the image on the left.

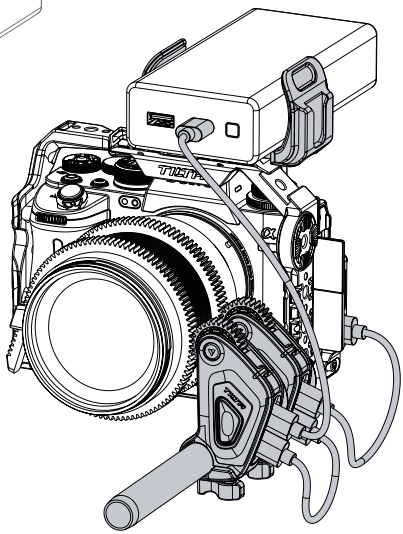
MOTOR POWERING GUIDLINE

You can use TILTA's Universal Power Bank Holder or F970 Battery Plate V2 (sold separately) for supporting various power options, in order to supply power to the focus motor via the USB-C port (PD protocol).

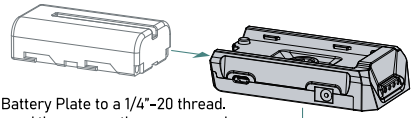
Attaching the Universal Power Bank Holder (TA-UPBH-B)

Attach the Universal Power Bank Holder to a 1/4"-20 thread. Tighten the screw and then secure the power supply equipment (such as a power bank).

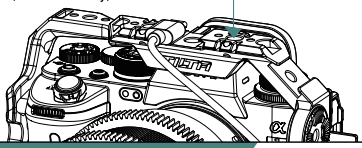




Attaching the F970 Battery Plate V2 (TA-BTP2-F970-B)



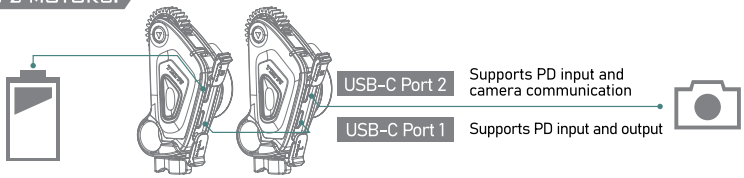
Attach the F970 Battery Plate to a 1/4"-20 thread. Tighten the screw and then secure the power supply equipment (such as an F970/F550 battery).



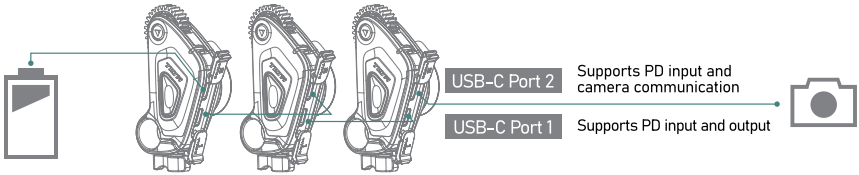
POWERING MULTIPLE MOTORS

When using multiple motors simultaneously, you can connect them in series using the USB-C (PD protocol) port for a synchronized power supply. When connecting multiple motors in series, use Port 2 input to Port 1 output; for the last motor, use Port 1 input to Port 2 output, connect the Run/Stop Cable to control the camera.

CONNECTING 2 MOTORS:



CONNECTING MULTIPLE MOTORS (≥3):



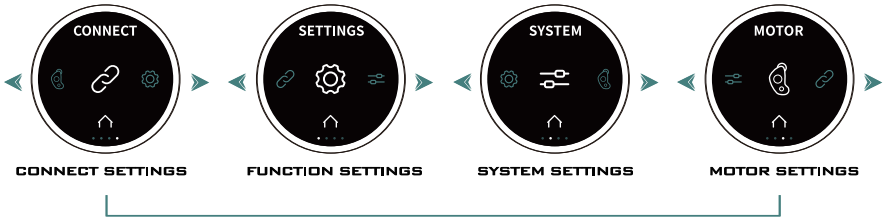
RUN/STOP CABLE:

Connect one end of the Run/Stop Cable to the motor's USB-C port 2, and the other end to the camera. You can then control the camera's recording functions and settings using the hand unit.

INTRODUCING THE MAIN UI

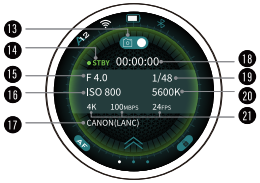
The Nucleus-N II hand unit UI consists of Three Main Screens and Four Settings Menus.
The Three Main Screens include the Camera Control Interface, Motor Parameter Interface, and Focus Distance Interface.
The Four Settings Menus are Connect Settings, Function Settings, System Settings, and Motor Settings.

After turning on the device, the hand unit will enter the Motor Parameter Interface. In this interface, swipe left or right on the screen to switch between the Three Main Screens. Swipe up from the bottom of the screen to access the Four Settings Menus. Swipe left or right to select the desired settings menu and tap the center icon to enter the detailed settings interface.



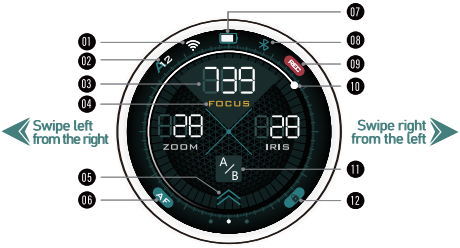
Swipe up from the bottom

Camera Control Interface- REC



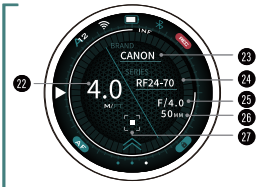
Camera Control Interface- STBY

13 Camera Settings Lock Button
14 REC/STBY Indicator
15 Iris Info
16 ISO Info
17 Communication Protocol Info
18 Recording Run Time
19 Shutter Speed Info
20 Color Temperature Info
21 Resolution/Data Rate/ Frame Rate



Motor Parameter Interface

01 WIFI Status
02 Wireless Channel Indicator
A : Auto Search M : Manual Search ;
Number : Channel No.
03 Motor Parameter (0-999)
04 Motor Indicator
Focus Indicator/Iris Indicator/Zoom Indicator
05 Additional Settings (Swipe Up)
06 AF/MF Switch Button
07 Battery Information
08 Bluetooth Status
09 REC/STBY Indicator
10 Focus Knob Range Indicator
11 Set Mark Button (A/B)
12 Touch Screen Lock Button

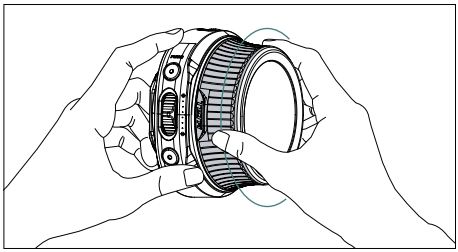


Focus Distance Interface

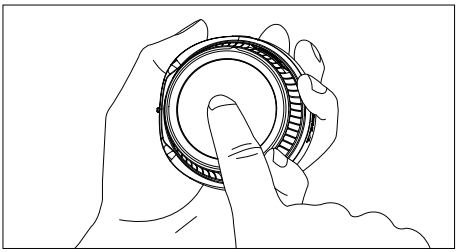
22 Focus Distance
23 Lens Manufacturer
24 Lens Model
25 Iris Info
26 Focal Range Info
27 Set Mark Button

USE INDEPENDENTLY

The Nucleus-N II hand unit can be used independently. The focus motor can be controlled by rotating the handwheel or using the control rocker.



Some camera settings can be controlled through the touch screen.



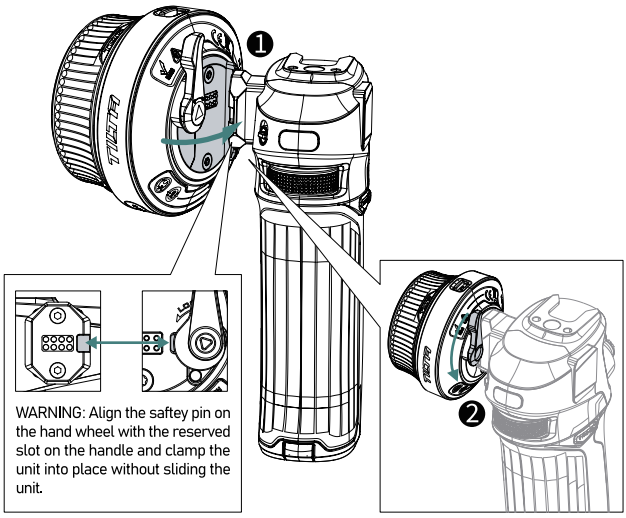
ATTACH TO OTHER ACCESSORIES

The Nucleus-N II hand unit features a standard NATO quick-release mount, allowing it to be attached to any NATO rail. (such as NATO rail on the side of a camera cage/DJI RS2, RS3 Pro gimbal/rear operating handle for DJI Ronin/ monitor cage, etc..)

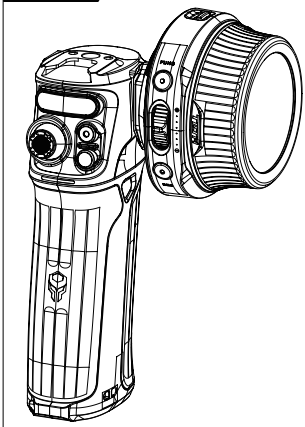
Note: When assembling and disassembling, pay attention to the contact pins on the back of the hand unit to prevent damage from external force.

USE WITH THE NUCLEUS NANO II CONTROL HANDLE (as shown below)

Attach the hand unit to the Control handle using the NATO mount, lock the tie down to secure.



ASSEMBLY



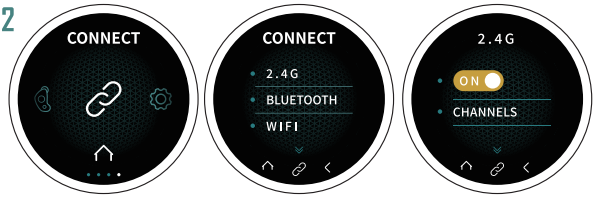
PAIRING (CHANNEL SETTINGS)

The motor and hand unit have been paired at the factory, and you can use them normally by powering them on. If you need to pair a new motor or hand unit, please follow the steps below for manual pairing:

01

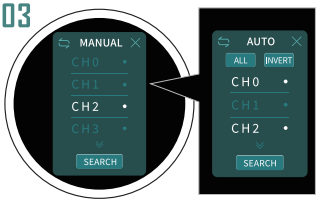
Enter the hand unit's main UI, and swipe up from the bottom to access the settings menu.

02



Select [CONNECT]-[2.4G] mode, then turn [ON] and press [CHANNELS] to enter the AUTO/MANUAL channel search mode.

03

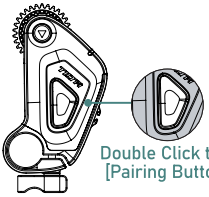


MANUAL MODE ⇆ AUTO MODE

Search for available channels using the AUTO/MANUAL channel search mode.

Note: Press the Switch Icon ⇆ in the top left corner to change the search mode.

04



And then, double-click the [Pairing Button] on the motor. The LED indicator on motor will flash, indicating the start of the pairing process.Once paired, the motor number will be automatically assigned.

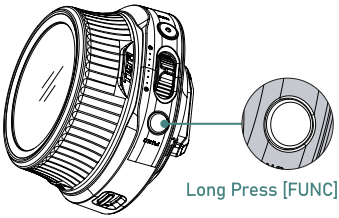
Note: Pair in the order of FOCUS/ZOOM/IRIS to reduce the need for reassigning motor numbers later.

LENS CALIBRATION (1)

After the motor and hand unit are paired, users need to calibrate the motor with the lens being used. This product supports both automatic and manual lens calibration.

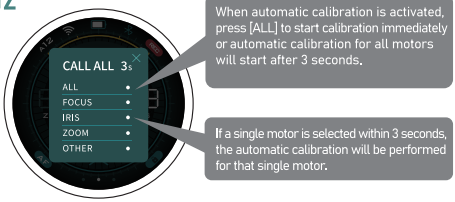
Quick Automatic Calibration for Motors >>>

01



Long press [FUNC] for 3s to activate the automatic lens calibration. Calibrate all connected motors simultaneously. For lenses without hard stops, manual calibration is required.

02



After the pop-up appears, you can choose to automatically calibrate a single motor. If there is no operation within 3 seconds, all motors will be automatically calibrated.

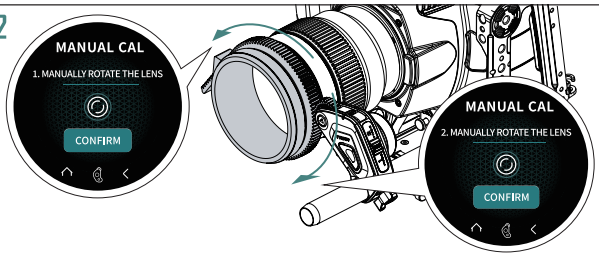
LENS CALIBRATION (2)

Manual Calibration For a Single Motor >>>

01

From the main UI, swipe up to enter the menu -[Motor Settings]-select the motor that needs calibration (Focus/Zoom/Iris/Others) -Select [MANUAL CAL]-Press [CALIBRATE]

02



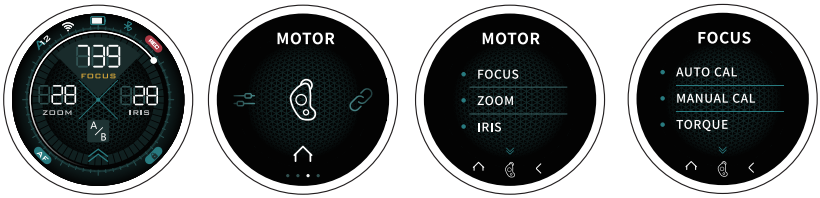
Rotate the lens to the starting position and Press [Confirm] to set the starting point.
Rotate the lens to the ending position and Press [Confirm] to set the ending point.

Note: When manually re-calibrating each motor, the previous calibration information will be automatically deleted.

03

Press [CONFIRM] to finish the calibration.

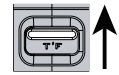
Auto Calibration For a Single Motor >>>



From the main UI, enter the menu - [Motor Settings] - select the motor that needs calibration (Focus/Zoom/Iris/Others). Select [AUTO CAL], and automatic calibration will begin.

CALIBRATE FOCUS KNOB

Note Before Calibration



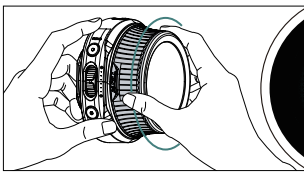
Switch upwards to TF mode

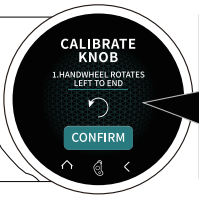
The Rotation Limit Switch needs to be switched to [TF], otherwise a reminder pop-up will appear.

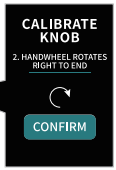
01

From the main UI, enter the menu - [General Settings]- Select [CALIBRATE KNOB]

02



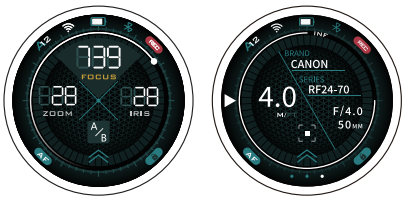




Press [CALIBRATE] to start, and follow the on-screen prompts to rotate the focus knob left and right to complete the calibration process.

MARKING OPERATION - MARK (MARKING POINTS) MODE

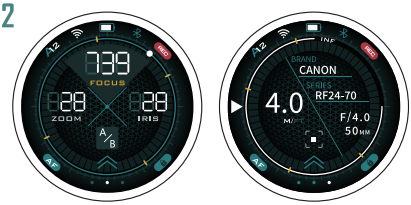
01



Display Before Making Marks

Single-Press [FUNC] button or click the [Set Mark Button] to set marking points.

02



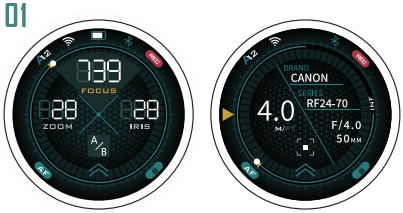
Display After Making Marks

Rotate the focus knob and set marks, there can be up to 9 marks at once.

Note: Double-Press [FUNC] button or [Set Mark Button] to delete the last mark.

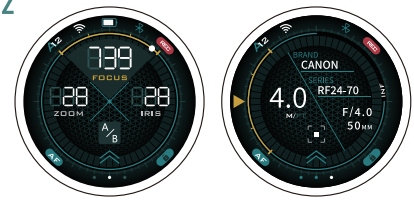
MARKING OPERATION - RANGE (START/END POINT) MODE

01



Long press [Set Mark Button] , for 2 seconds to establish the Start Point of the focus Range.

02



Display After the Range is Established

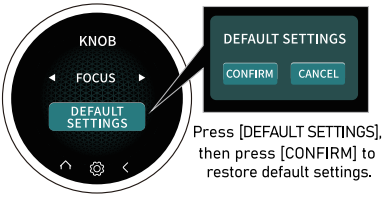
Rotate the focus knob and Single-Press the [Set Mark Button] to establish the End Point of the focus Range.

Note: Once the focus Range is set, long press the [Set Mark Button] for 2s to clear the Range, repeat the operation above if a new focus Range needs to be set.

FOCUS KNOB/JOYSTICK SETTINGS

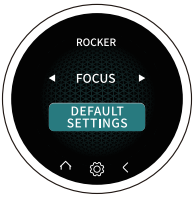
From the main UI, enter the menu - [General Settings]- select [KNOB] or [ROCKER], press the white arrow icon ◁ ▷ to select the corresponding device.

KNOB >>>



Press [DEFAULT SETTINGS], then press [CONFIRM] to restore default settings.

ROCKER >>>



SET SCREEN BRIGHTNESS

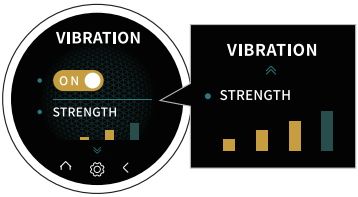
From the main UI, enter the menu - [General Settings] - [BRIGHTNESS], choose automatic or manual brightness mode (swipe left of right to adjust brightness in manual mode).

Note: Press the [AUTO] or [MANUAL] icon on the screen to switch modes.

SET VIBRATION & SCREEN STANBY

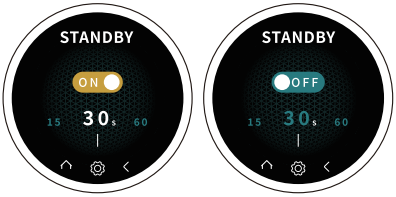
From the main UI, enter the menu - [General Settings] - select [VIBRATION] or [STANDBY]

VIBRATION >>>



Turn [ON], then manually adjust the vibration strength.

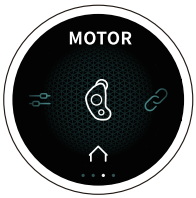
STANDBY >>>



Turn [ON], then manually set the time before the screen goes into standby mode.

Note: Double-tap the touch screen to exit standby mode.

Displayed status when motors are not paired.



From the main UI, enter the menu – [Motor Settings] – select the corresponding motor (using "Focus Motor" as an example) and then select function settings from the list.

TORQUE >>>

Select [TORQUE], then adjust the torque strength for the selected motor.

SYNC >>>

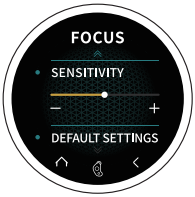
Select [Sync], press to choose the corresponding motor color based on the function; after making the selection, the corresponding color will be automatically assigned to the motor with the corresponding function.

- Purple: Focus
- Green: Iris
- Blue: Zoom
- Yellow: Other

DIRECTION >>>

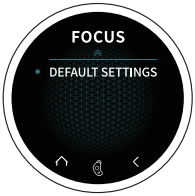
Select [DIRECTION], press the clockwise icon or the counterclockwise icon to switch the direction of the selected motor.

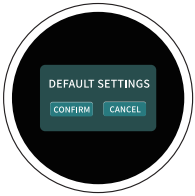
SENSITIVITY >>>



Select [SENSITIVITY] then swipe left or right to adjust motor's sensitivity.

DEFAULT SETTINGS >>>





Select [DEFAULT SETTINGS] then press [CONFIRM] to restore the default settings for the motor.

From the main UI, enter the menu - [System Settings]

INFORMATION >>>

Select [INFORMATION] to view the current product information and firmware information.

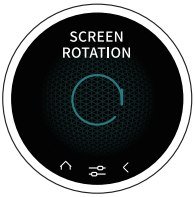
LANGUAGE >>>

Select [LANGUAGE] then press on the [ENGLISH] or [中文] icon, and you can switch the current system language to the target selection.

FIRMWARE UPDATE >>>

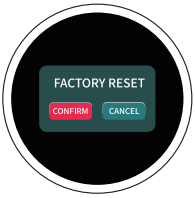
Select [FIRMWARE UPDATE],when the hand unit is connected to the internet, press [UPDATE], then select [CONFIRM] to start the firmware update.

SCREEN ROTATION >>>



Select [SCREEN ROTATION], Press the central rotation icon to change the screen orientation. (There are four directions to choose from: 0°, 90°, 180°, and 270°)

FACTORY RESET >>>



Select [FACTORY RESET], and after the second time selecting [CONFIRM], the product will factory reset.

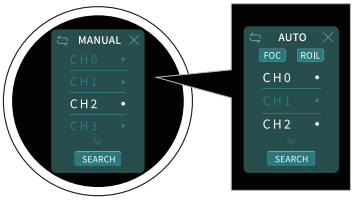
Note: This operation is irreversible, please use carefully.

2.4G MODE

From the main UI, enter the menu - [Connect Settings] - [2.4G], where you can set the [CHANNELS] and adjust the [POWER].

CHANNELS SETTING >>>

Press [ON] then select [CHANNELS] to enter automatic/manual channel search mode.



Manual Channel Search Mode ⇆ Automatic Channel Search Mode

Press [SEARCH] icon to search available channels.

2.4G POWER SETTING >>>

Select [POWER],then you can adjust the signal strength by sliding left and right.

Note:

- In Automatic Channel Search Mode, you can disable specific channels to avoid signal interference.
- In Manual Channel Search Mode, you can manually select a single channel to pair with the Nucleus M/Nucleus N.
- Press the switch icon ⇆ to change the search mode.

TILTA

NUCLEUS NANO II WIRELESS LENS CONTROL SYSTEM

For more instructions, please scan the QR code in the image. Enter the model number WLC-T05 to obtain the electronic version of the product manual.

更多操作说明请扫描图中二维码，输入相关产品型号(WLC-T05)，获取产品电子版说明书。

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