Tilta Nucleus-Nano with P-Tap

Tilta Nucleus-Nano Wireless Focus Control System User Manual

Model: Nucleus-Nano with P-Tap

Introduction

The Tilta Nucleus-Nano is a revolutionary wireless lens control system designed for single-operator use. It allows for precise and responsive control over the focus of most DSLR, mirrorless, or cine-style lenses, making it an ideal tool for camera cages and gimbal systems like the Ronin S. This manual provides detailed instructions for the setup, operation, and maintenance of your Nucleus-Nano system.

Product Overview

The Tilta Nucleus-Nano system consists of several key components designed for seamless integration and operation.

Figure 1: The Nucleus-Nano Handwheel Controller (left) and the Nucleus-Nano Motor (right).

Figure 2: All components included in the Tilta Nucleus-Nano kit, including cables, mounting accessories, and batteries.

Figure 3: The Nucleus-Nano kit neatly organized within its dedicated carrying case for protection and portability.

Key Components:

- **Nucleus-Nano Handwheel Controller:** The primary control unit for precise focus adjustments.
- **Nucleus-Nano Motor:** Attaches to your lens to drive focus.
- **P-Tap Cable:** For powering the motor.
- **Mounting Accessories:** Various mounts for attaching the motor and controller to your rig.
- **Batteries:** Two Lithium Ion batteries (included) for the handwheel controller.

Setup

Follow these steps for initial setup of your Tilta Nucleus-Nano system.

1. **Install Batteries:** Insert the two included Lithium Ion batteries into the Nucleus-Nano Handwheel Controller. Ensure correct polarity.
2. **Mount Motor:** Attach the Nucleus-Nano Motor to your camera rig using the appropriate mounting accessories. Position it so the gear aligns with your lens's focus gear.
3. **Connect Power:** Use the P-Tap cable to connect the Nucleus-Nano Motor to a compatible power source (e.g., V-mount battery, D-Tap output).
4. **Mount Controller:** Secure the Handwheel Controller to your rig or gimbal handle in a comfortable operating position.
5. **Power On:** Turn on both the Handwheel Controller and the Motor. They should automatically pair.

Figure 4: The Nucleus-Nano Motor securely mounted on a camera rig, ready to engage with the lens focus gear.

Figure 5: The Handwheel Controller attached to a gimbal handle, providing ergonomic control.

Figure 6: A close-up view of the Nucleus-Nano Motor engaged with a lens, showing its compact design.

Figure 7: Proper connection of the P-Tap cable to power the Nucleus-Nano Motor.

Operating Instructions

Once your Nucleus-Nano system is set up, you can begin operation. The Handwheel Controller provides intuitive control over your lens's focus.

Handwheel Calibration:

It is crucial to calibrate the handwheel controller to ensure accurate and smooth focus pulls. If your motor jumps from one end to the other, it likely means the knob is uncalibrated. You can check the calibration by observing the three numbers at the bottom of the controller's screen. If they do not reach '000' and '999' at your end points, recalibration is needed.

1. **Enter Menu:** Hold the 'Up' button on the Handwheel Controller to enter the menu system.
2. **Navigate to CAL Knob:** Scroll down to find the 'CAL Knob' option.
3. **Select CAL Knob:** Double-click the 'Up' button to select 'CAL Knob'.
4. **Calibrate Clockwise:** The screen will prompt you to turn the knob clockwise to its end point. Once reached, double-click the 'Down' button to confirm.
5. **Calibrate Counter-Clockwise:** The screen will then prompt you to turn the knob counter-clockwise to its end point. Once reached, double-click the 'Down' button to confirm.
6. **Verify Calibration:** Rotate the knob fully clockwise and counter-clockwise. The display should now show '000' at one end and '999' at the other, indicating successful calibration.

Video 1: Detailed instructions on how to calibrate the Tilta Nucleus-Nano Handwheel Controller for accurate focus control.

Figure 8: The motor's display showing focus values, which should range from 000 to 999 after successful calibration.

Maintenance

Proper maintenance ensures the longevity and optimal performance of your Tilta Nucleus-Nano system.

- **Cleaning:** Use a soft, dry cloth to clean the surfaces of the controller and motor. Avoid abrasive materials or harsh chemicals.
- **Storage:** When not in use, store the system in its dedicated carrying case in a cool, dry place away from direct sunlight and extreme temperatures.
- **Battery Care:** Remove batteries from the controller if storing for extended periods to prevent leakage.
- **Gear Inspection:** Periodically check the motor's gear for any debris or wear. Clean as necessary.

Troubleshooting

If you encounter issues with your Nucleus-Nano system, refer to the common problems and solutions below.

Problem	Possible Cause	Solution
Motor jumps erratically or does not respond smoothly.	Uncalibrated handwheel controller.	Perform the Handwheel Calibration procedure as described in the Operating Instructions section.
System does not power on.	Low or dead batteries in controller; no power to motor.	Replace controller batteries. Ensure motor is properly connected to a working power source.
Controller and motor do not pair.	Interference or pairing issue.	Ensure both devices are within range and not obstructed. Try powering both off and on again. Refer to the full manual for manual pairing instructions if auto-pairing fails.

Specifications

- **Product Dimensions:** 0.89 x 3.15 x 0.94 inches
- **Item Weight:** 2.08 pounds
- **Model Number:** Nucleus-Nano with P-Tap
- **Batteries:** 2 Lithium Ion batteries (included)
- **Color:** Black
- **Brand:** Tilta
- **Compatible Devices:** Camcorder
- **UPC:** 682559365719
- **Date First Available:** July 25, 2019

Warranty and Support

For warranty information, technical support, or further assistance, please visit the official Tilta website or contact their customer service directly. Keep your proof of purchase for warranty claims.
Official Tilta Store: Tilta Store on Amazon