

Tilta WLC-T05 TX

Tilta Nucleus Nano II Base Kit - Wireless Lens Control System User Manual

Model: WLC-T05 TX

INTRODUCTION

The Tilta Nucleus Nano II Base Kit is a compact and powerful wireless lens control system designed for precise control over focus, zoom, and aperture. This manual provides detailed instructions for setting up, operating, and maintaining your Nucleus Nano II system to ensure optimal performance.



Image: The Tilta Nucleus Nano II Hand Wheel Controller and a single Nucleus Nano II Motor, illustrating the core components of the wireless lens control system.

PACKING LIST

Verify that all components listed below are included in your Tilta Nucleus Nano II Base Kit package:

- 1: Nucleus Nano II Hand Wheel Controller (12009.00002.00.00) x1
- 2: Nucleus Nano II Motor (12009.00001.00.00) x1
- 3: USB-C Power Cable (30cm) (21114.00061.00.00) x1
- 4: 15mm Rod Holder to Dual 1/4"-20 Adapter – Black (12013.00010.00.00) x1
- 5: Aluminum Rod 15*100mm – Black (R15-100-B) x1
- 6: Photographic Lens Follow Focus Gear Ring (FR-T03) x1
- 7: 3/16 Allen Key (32123.00037.00.00) x1
- 8: Instruction Manual x1

- 9: Soft Carrying Case for Nucleus Nano II x1

PACKING LIST

BASIC KIT WLC-T05

Nucleus Nano II Hand Wheel Controller x1
15*100mm Rod x1
Soft Carrying Case x1
Photographic Lens Follow Focus Gear Ring x1

Nucleus Nano II Motor x1
15mm Rod Holder to Dual 1/4"-20 Adapter x1
USB-C Power Cable x1



Image: A visual representation of the complete packing list for the Tilta Nucleus Nano II Base Kit.

SETUP

1. Motor Attachment and Calibration

1. Attach the Nucleus Nano II Motor to your lens. For dolly zoom effects, two motors are required: one for focus and one for zoom.
2. Calibrate each motor by holding its function button until calibration is complete.

2. Hand Wheel Controller Pairing

1. On the Hand Wheel Controller, swipe on the main screen to access the "Connect" menu.
2. Select "2.4G" and then "Channels".
3. Ensure "Manual Search Mode" is active.
4. Select Channel 1 and press "Search".

5. Double-tap the function button on your zoom motor. Confirm the device when it appears on the Hand Wheel Controller's screen. This pairs the zoom motor to Channel 1.
6. Repeat the process for Channel 2, pairing your focus motor by double-tapping its function button and confirming.

3. Control Handle Setup (Optional)

If using the optional Control Handle, follow these steps:

1. Flip the switch on the back of the Control Handle to change from DF (Default) to TF (Tilta Focus).
2. Triple-press the power button to open the menu.
3. Navigate to "Wireless" > "2.4G" > "Channel" and set it to Channel 1 to communicate with the zoom motor.
4. Go back to the menu, select "Motor" > "Joystick Motor" > "Motor Number" and set it to Motor Number 3. This controls the blue LED function.
5. Ensure the mode is set to "Nano 2 Mode" to allow the joystick to control the motor.



Image: The Hand Wheel Controller features an upgraded USB-C port for efficient power management, supporting up to 20 hours of continuous power with its 1800mAh lithium battery.

Basic Controls

The Hand Wheel Controller provides intuitive control over your lens functions. The main wheel controls focus, while the rocker switch typically controls zoom. The touch screen allows for quick adjustments and access to advanced features.

TOUCH CONTROL

Intuitive interaction at your finger tips.



Image: The touch screen display offers intuitive interaction for controlling various settings and features.

Dolly Zoom Effect (Zolly Shot)

To achieve a dolly zoom effect, you will need to coordinate camera movement with lens zoom. The general principle is to push the camera in while zooming out, or pull the camera back while zooming in. The goal is to keep the subject in approximately the same frame while the background perspective changes dramatically.

Your browser does not support the video tag.

Video: This video demonstrates how to achieve a Dolly Zoom effect (also known as a Zolly shot) using the TILTA Nucleus Nano II Control Handle Kit. It covers motor setup, pairing, and practical application of the effect.

High Performance Motor

The Nucleus Nano II motor offers significantly improved performance, providing 5 times the torque of the original Nucleus N. It features an auto-adjustable torque design and a high-efficiency cooling system for reliable operation.



Image: The high-performance motor provides increased torque and efficient cooling for demanding applications.

Compatibility

The Nucleus Nano II system is highly compatible with various camera setups and existing Tilta wireless lens control systems. It supports:

- Tilta wireless lens control systems (e.g., Nucleus M, Nano)
- DJI Focus Motors
- DJI Ronin S Series Gimbals
- Selected models of Canon, Sony, and Blackmagic Design Cameras for camera communication (ISO, Shutter Speed, Frame Rate via Wifi, Bluetooth & USB-C).

HIGH COMPATIBILITY

Fully compatible with Tilta wireless lens control systems and the DJI Ronin lens control motor.

Compatible with
NUCLEUS-N •
Lens Control Motor

Image: The system is fully compatible with Tilta wireless lens control systems and the DJI Ronin lens control motor.



Compatible with
DJI RS
Lens Control Motor

Image: The system is also compatible with DJI RS Lens Control Motors.

Multi-Channel Communication

The Nucleus Nano II supports maximum 4-channel control, allowing for complex setups and expanded control options when used with additional motors or the Control Handle (optional).

MULTI-CHANNEL COMMUNICATION

Maximum **4**-channel control.

Create infinite possibilities.



Image: The system supports multi-channel communication, allowing for control of up to four motors.

CAMERA CONTROL,
FOCUS CONTROL,
AND MOTOR CONTROL
ALL IN ONE



Image: The display provides real-time information for camera control, focus control, and motor control, all in one interface.

MAINTENANCE

To ensure the longevity and optimal performance of your Tilt-Nucleus Nano II Base Kit, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the surfaces of the hand wheel controller and motor. Avoid using harsh chemicals or abrasive materials.
- **Storage:** Store the kit in its provided soft carrying case when not in use to protect it from dust, moisture, and physical damage.
- **Battery Care:** Charge the internal lithium-ion battery regularly, even if not in frequent use, to maintain battery health. Avoid fully discharging the battery for extended periods.
- **Firmware Updates:** Periodically check the official Tilt-Nucleus website for any available firmware updates. Keeping your device's firmware up-to-date ensures access to the latest features and performance improvements.
- **Environmental Conditions:** Avoid exposing the device to extreme temperatures, high humidity, or direct sunlight for prolonged periods.

TROUBLESHOOTING

If you encounter issues with your Tilta Nucleus Nano II Base Kit, refer to the following common troubleshooting steps:

- **Motors Not Responding:**

- Ensure motors are properly attached to the lens and calibrated.
- Verify that the Hand Wheel Controller is correctly paired to the motors on the correct channels (Channel 1 for zoom, Channel 2 for focus).
- Check battery levels of both the Hand Wheel Controller and any connected motors.

- **Connection Issues:**

- Confirm that the 2.4G wireless connection is active on the Hand Wheel Controller.
- Try re-pairing the motors to the Hand Wheel Controller.
- Ensure no strong wireless interference sources are nearby.

- **Inaccurate Focus/Zoom:**

- Re-calibrate the motors.
- Ensure the lens gear ring is securely attached and properly aligned with the motor gear.

- **Screen Unresponsive:**

- Perform a soft reset by holding down the power button until the device restarts.
- Ensure the device is adequately charged.

- **General Malfunctions:**

- Refer to the official Tilta user guide PDF for more detailed troubleshooting steps.
- Contact Tilta customer support if the issue persists.

SPECIFICATIONS

Feature	Detail
Product Dimensions	9 x 7 x 4 inches
Item Weight	2.42 pounds
ASIN	B0CBPHM3NG
Item Model Number	WLC-T05 TX
Batteries	1 Lithium Ion batteries required.
Manufacturer	Tilta
Date First Available	July 18, 2023

SUPPORT AND WARRANTY

For further assistance, detailed diagrams, or specific technical inquiries, please refer to the official Tilta User Guide PDF available online. This document contains comprehensive information not covered in this condensed manual.

Official User Guide (PDF): [Download Here](#)

For warranty information and customer support, please visit the official Tilta website or contact their customer service department directly. Warranty terms and conditions may vary by region and product.