

DNT DNT000006

dnt UltraZoom PRO Digital Microscope DNT000006 User Manual

Model: DNT000006 | Brand: DNT

1. INTRODUCTION

The dnt UltraZoom PRO Digital Microscope is designed for the easy magnification and examination of small objects and components. It is an ideal tool for applications in biology studies, precision mechanics, and electronics. Featuring an integrated object illumination system and a polarizer, it ensures a uniformly lit and glare-free observation field. This high-resolution digital microscope offers an optical magnification range of 10x to 300x, with digital zoom capabilities extending up to 1200x.

This manual provides detailed instructions for the setup, operation, and maintenance of your dnt UltraZoom PRO Digital Microscope.



Image 1.1: The dnt UltraZoom PRO Digital Microscope in an operational setting, demonstrating its use for examining intricate electronic components.

2. PACKAGE CONTENTS

Please verify that all the following items are included in your package:

- UltraZoom PRO Digital Microscope
- 5V USB Power Adapter
- Mini USB Cable for Power and PC Connection
- 3.5 mm Jack to 1 RCA Video Cable
- CD with PC Software
- Calibration Template
- Object Retaining Clips



Image 2.1: Overview of the dnt UltraZoom PRO Digital Microscope and its complete set of accessories.

3. SETUP

3.1 Initial Charging

Before first use, fully charge the internal Li-ion battery. Connect the mini USB cable to the microscope's mini USB port and the other end to the 5V USB power adapter. Plug the adapter into a power outlet. The charging indicator will show the charging status. A full charge typically takes 2-3 hours.

3.2 Positioning the Microscope

Place the microscope on a stable, flat surface. Ensure adequate space around the unit for comfortable operation and to prevent accidental knocking.

3.3 Connecting to External Displays (Optional)

- **HDMI Output:** Connect an HDMI cable (not included) from the microscope's HDMI-OUT port to an HDMI input on a monitor or TV for high-definition display.
- **FBAS (Composite) Output:** Use the provided 3.5 mm jack to 1 RCA video cable to connect the microscope's TV-OUT port to a composite video input on a TV or monitor.



Image 3.1: The rear panel of the microscope, highlighting the TV-OUT and HDMI-OUT ports for external display connections.



Image 3.2: The side panel of the microscope, showing the 5V/USB port used for charging and PC connection.

3.4 PC Software Installation

Insert the provided CD with PC software into your computer's CD/DVD drive. Follow the on-screen instructions to install the software. The software is compatible with MS Windows 7/8/10 and macOS 10.14 or higher. This software enables PC image display, evaluation, storage, image processing, and calibration, as well as partial control and programmed recording from your PC.

4. OPERATING INSTRUCTIONS

4.1 Powering On/Off

Press and hold the power button (usually marked with a universal power symbol) on the front panel of the microscope to turn the device on or off. The integrated 5" color IPS display will illuminate upon startup.

4.2 Placing an Object

Place the object you wish to examine directly on the microscope's base plate, beneath the lens. Use the provided object retaining clips to secure smaller or lighter items if necessary.



Image 4.1: A circuit board positioned on the microscope's base, demonstrating the bottom LED illumination.

4.3 Adjusting Magnification and Focus

- **Optical Magnification:** Rotate the magnification ring on the lens barrel to adjust the optical zoom from 10x to 300x.
- **Digital Zoom:** Use the dedicated zoom buttons on the control panel to engage digital zoom, extending magnification up to 1200x.
- **Focus:** Turn the large focus knob on the side of the microscope stand to bring the image into sharp focus on the display.





Image 4.2: The main unit of the microscope, illustrating the display and control layout.

4.4 LED Illumination and Polarizer

- **LED Lighting:** The microscope features adjustable top and bottom LED lighting. Use the illumination control buttons to adjust the light intensity for optimal viewing.
- **Polarizer:** Rotate the continuously adjustable polarizer ring located around the lens to suppress glare and light interference, which is particularly useful when examining reflective surfaces.

4.5 Capturing Images and Videos

Insert a microSD card (up to 32 GB, not included) into the designated slot for storing recordings. The microscope supports still image recording up to 12 megapixels (JPEG format) and video recording in HD/FullHD (MP4 format).

- **Still Image:** Press the 'OK' or 'Capture' button to take a still image. You can set a self-timer (2/5/10 seconds) via the menu.
- **Video Recording:** Press the 'Record' button to start video recording. Press again to stop. Video clip lengths can be set to endless, 1, 3, 5, or 10 minutes via the menu.
- **Timestamp:** Image recordings can include a timestamp, which can be enabled in the settings.

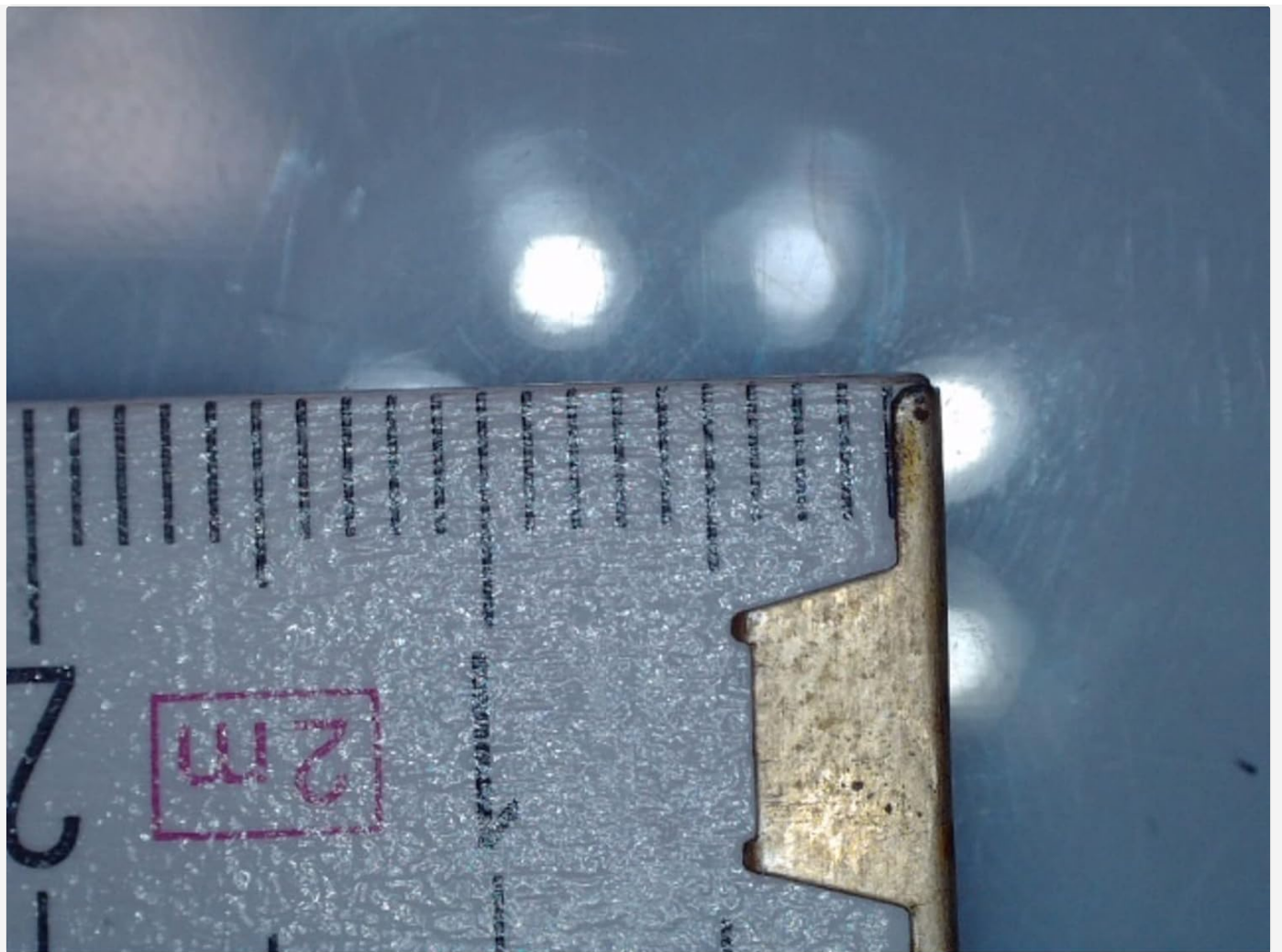


Image 4.3: A close-up of a ruler as seen through the microscope, illustrating the detail captured.

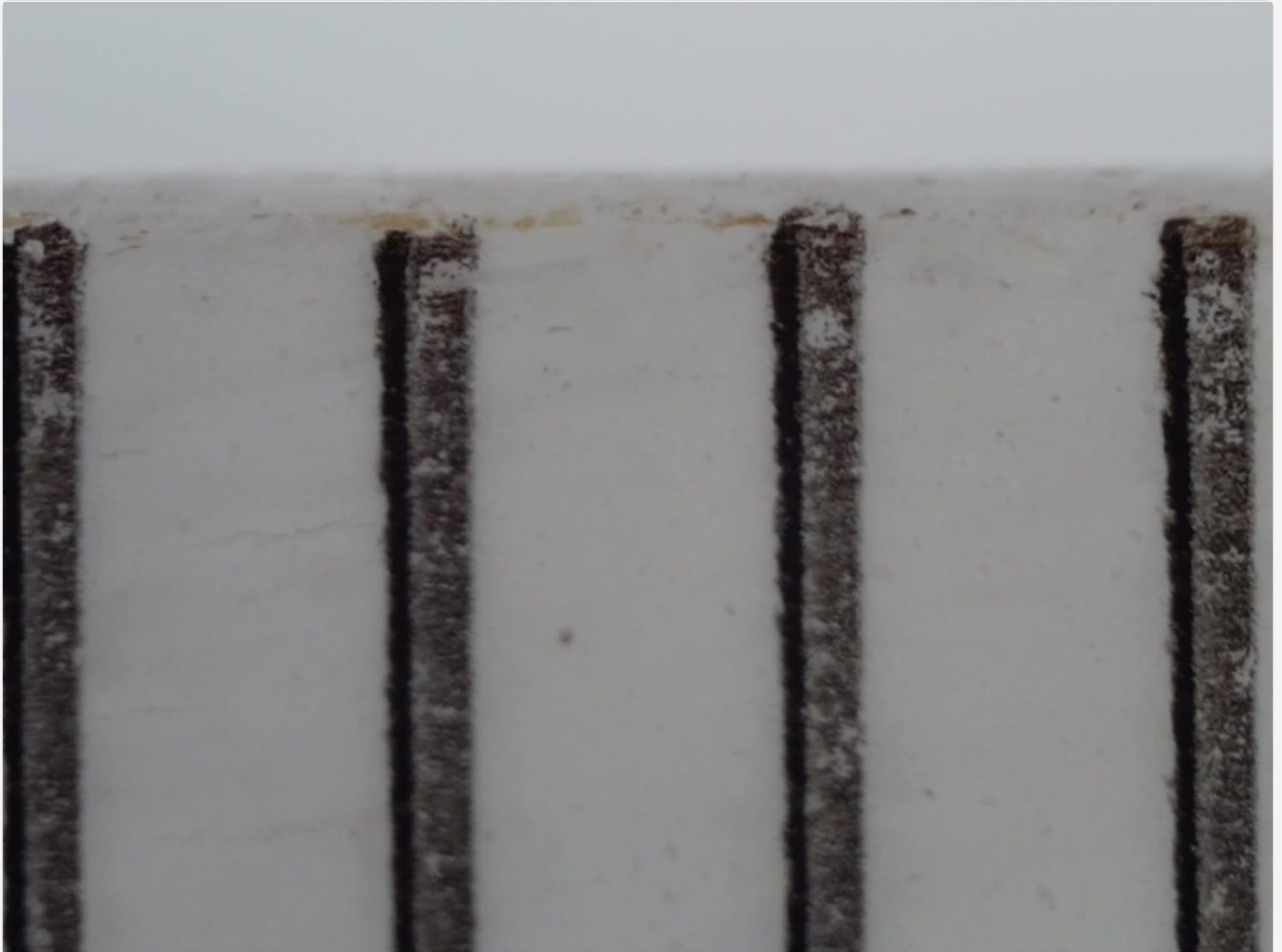


Image 4.4: A magnified view of a surface texture, demonstrating the microscope's detailed imaging capabilities.

5. MAINTENANCE

5.1 Cleaning

To clean the microscope, gently wipe the exterior with a soft, dry cloth. For the lens and display, use a specialized lens cleaning cloth and solution to avoid scratches. Do not use abrasive cleaners or solvents.

5.2 Storage

When not in use, store the microscope in a clean, dry place, away from direct sunlight and extreme temperatures. It is recommended to cover the lens to protect it from dust.

6. TROUBLESHOOTING

- **No Power:** Ensure the battery is charged. Connect the microscope to the power adapter and check if the charging indicator lights up. If using battery power, ensure it's not depleted.
- **Blurry Image:** Adjust the focus knob carefully. Ensure the object is placed correctly under the lens. Clean the lens if smudges are visible. Adjust LED illumination for better contrast.
- **No Image on External Display:** Verify that the correct input source is selected on your TV/monitor. Check cable connections (HDMI or FBAS) for secure fit.

- **Cannot Record Images/Videos:** Ensure a compatible microSD card (max. 32 GB) is inserted correctly and has sufficient free space. Check recording settings in the microscope's menu.
- **Glare on Display:** Adjust the polarizer ring around the lens to reduce reflections and glare from the object.

7. SPECIFICATIONS

Feature	Specification
Category	Digital Microscope
Magnification Factor	10x to 300x optical, up to 1200x digital zoom
Display	5" IPS, 960 x 450 pixels
Recording Medium	microSD memory card (max. 32 GB)
Recording Format	Video: MP4, Still Image: JPEG
Recording Resolution - Video	Full HD: 1920 x 1080, HD: 1280 x 720
Recording Resolution - Still Image	12/10/8/5/3/2 Megapixels
Still Image Self-Timer	2/5/10 seconds
Video Clip Length	Endless, 1/3/5/10 minutes
Outputs	FBAS (3.5 mm jack), HDMI, mini USB (PC)
Other Functions	Dimmable LED light, Polarizer
Power Supply	Internal 3.7 V Li-ion battery (non-replaceable, 2-3 hours operating time)
Charger	5VDC, 1A power supply, USB-A port
Dimensions (W x H x D)	165 x 267 x 158 mm
Weight	660 g
Compatible Devices	Personal Computer
Material	Plastic
Color	White

8. WARRANTY AND SUPPORT

For warranty information, please refer to the documentation provided at the time of purchase or contact your retailer. For technical support, please visit the official DNT website or contact their customer service department. Keep your purchase

receipt as proof of purchase for any warranty claims.

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Ask a question about this manual

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question