UNI-T UT372

UNI-T UT372 Digital Laser Tachometer Instruction Manual

Model: UT372

1. Product Overview

The UNI-T UT372 is a non-contact digital laser tachometer designed for measuring the rotational speed (RPM) and count of objects. It utilizes a laser pointer and reflective tape to provide accurate and stable measurements without physical contact. This device is suitable for various industrial and scientific applications.

Key Features:

- 5-digit LCD screen with RPM/count and time dual display.
- Measurement modes: MAX (Maximum), MIN (Minimum), AVG (Average), and Normal.
- Adjustable sampling rate (0.5-255 seconds).
- Automatic power-off function (cancelable).
- Selectable laser pointer (on/off).
- Clock and time setting capabilities.
- Data hold function.
- Low power consumption, allowing for approximately 40 hours of continuous operation.
- Equipped with a USB interface for data transfer (UT372 only).
- Certified with CE and UKCA standards.

Image 1.1: The UNI-T UT372 tachometer displaying its main features and specifications.

2. Safety Information

Please read and understand all safety instructions before operating the device. Failure to follow these instructions may result in injury or damage to the device.

- Do not look directly into the laser beam. The laser is a Class 2 laser product.
- Do not attempt to modify or disassemble the device. Repairs should only be performed by qualified personnel.
- Ensure the battery compartment is securely closed before use.
- Remove batteries if the device will not be used for an extended period to prevent leakage.
- Keep the device away from water, dust, and extreme temperatures.

3. Package Contents

Carefully unpack the box and check if all items are present and undamaged. If any item is missing or damaged, contact your supplier.

- UNI-T UT372 Digital Laser Tachometer
- Reflective Tape
- USB Interface Cable (for UT372 only)
- PC Software CD (for UT372 only)
- English User Manual
- Batteries (1.5V LR6 x 4)

Image 3.1: The UNI-T UT372 tachometer and its standard accessories as packaged.

4. Product Layout and Panel Introduction

Familiarize yourself with the components and controls of your UT372 tachometer.

Image 4.1: Front and side view of the UT372 tachometer with labeled components.

- **Tachometer Light Source:** Emits the laser beam for measurement.
- **LCD Display:** Shows measurement readings, modes, and other indicators.
- **HOLD / ON/OFF Button:** Press to power on/off the device. Short press to activate/deactivate data hold.
- **MENU Button:** Accesses the menu for settings adjustments.
- **R/C (RPM / Counts) Button:** Toggles between RPM and Count measurement modes.
- **TUNE Button:** Used for adjusting settings within the menu.
- **M/M/A (MAX/MIN/AVG) Button:** Cycles through Maximum, Minimum, and Average measurement modes.
- **USB Port (UT372 only):** For connecting to a computer for data transfer.

5. Setup and Battery Installation

5.1 Battery Installation

1. Locate the battery compartment cover on the back of the device.
2. Open the cover by sliding or unscrewing it.
3. Insert four 1.5V LR6 (AA) batteries, ensuring correct polarity (+/-).
4. Close the battery compartment cover securely.

5.2 Applying Reflective Tape

For accurate non-contact measurement, apply a piece of reflective tape to the rotating object whose speed or count you wish to measure. Ensure the tape is clean and securely attached.

6. Operating Instructions

6.1 Power On/Off

Press the **HOLD** / **ON/OFF** button to turn the tachometer on or off.

6.2 RPM Measurement

1. Ensure the device is in RPM measurement mode (indicated on the LCD). If not, press the **R/C** button to switch.
2. Point the laser beam at the reflective tape on the rotating object.
3. Maintain a measurement distance between 50mm and 200mm (2 to 8 inches) from the target.
4. The RPM reading will be displayed on the LCD.
5. **Note:** If no signal is detected within 7 seconds, the LCD will display "0.0000". If the RPM exceeds 99999, the LCD will display "OL" (Overload).

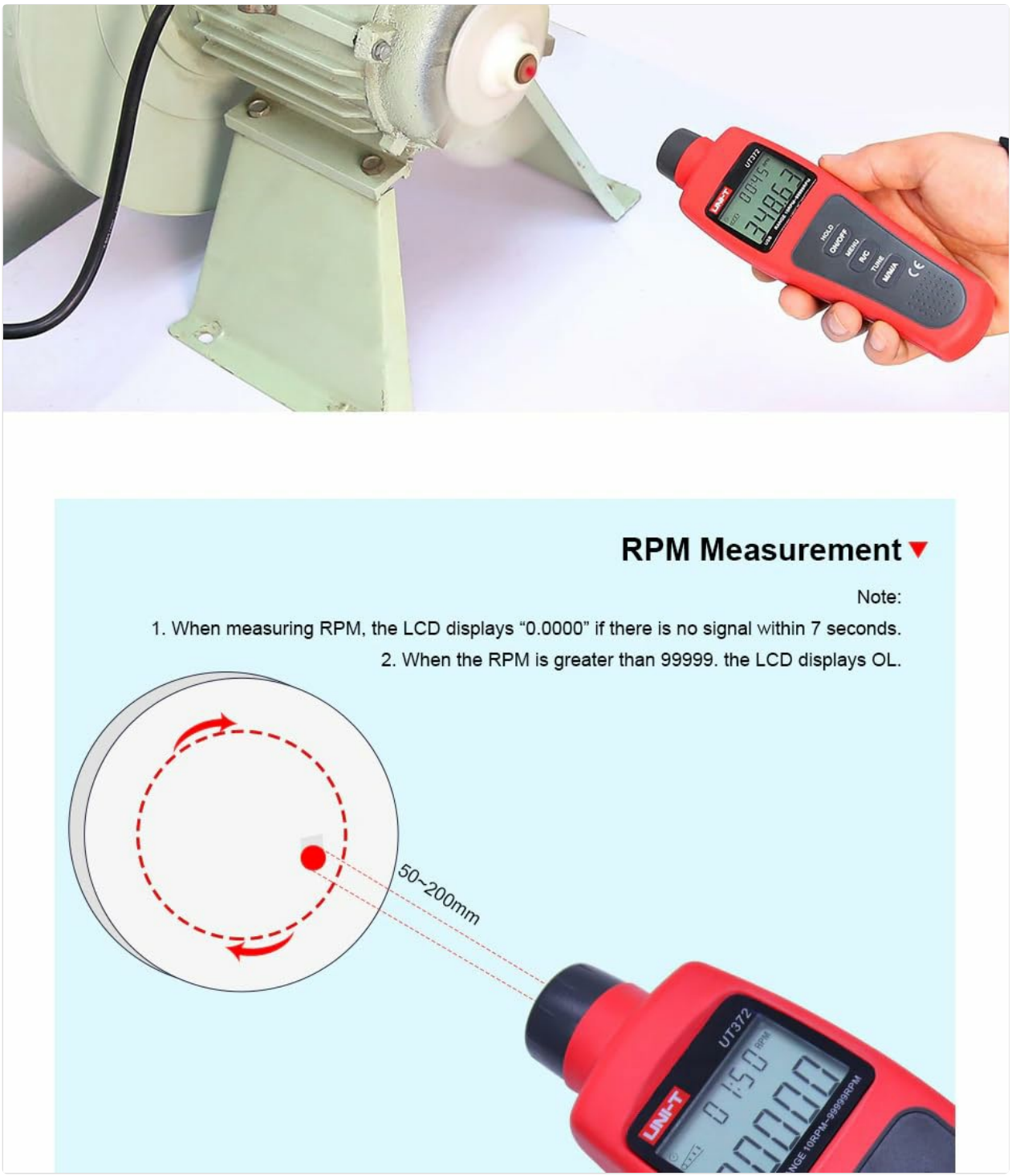

Image 6.1: Illustrates the correct distance and method for RPM measurement.

6.3 Counts Measurement

1. Press the **R/C** button to switch to Count measurement mode.
2. Point the laser beam at the reflective tape on the object.
3. The device will count the number of times the laser beam reflects off the tape.

6.4 Mode Selection (MAX/MIN/AVG)

Press the **M/M/A** button repeatedly to cycle through the following display modes:

- **MAX:** Displays the maximum measured value.
- **MIN:** Displays the minimum measured value.
- **AVG:** Displays the average measured value.

- **Normal:** Displays the current real-time measurement.

6.5 Data Hold

During measurement, a short press of the **HOLD** / **ON/OFF** button will freeze the current reading on the display. Press it again to release the data hold and resume live measurement.

6.6 Sampling Rate Adjustment

The sampling rate can be adjusted from 0.5 to 255 seconds. Refer to the detailed user manual for specific steps on how to access and change this setting via the **MENU** and **TUNE** buttons.

6.7 USB Interface (UT372 Only)

The UT372 model features a USB port for connecting to a computer. Use the provided USB cable and PC software CD to transfer measurement data for analysis and logging. Follow the instructions provided with the software for installation and operation.

7. Maintenance

- **Cleaning:** Use a soft, dry cloth to clean the device. Do not use abrasive cleaners or solvents.
- **Storage:** Store the tachometer in a cool, dry place away from direct sunlight and extreme temperatures. Remove batteries if storing for extended periods.
- **Reflective Tape:** Ensure the reflective tape is clean and free from damage for accurate readings. Replace as needed.

8. Troubleshooting

- **Device does not power on:** Check battery installation and ensure batteries are not depleted. Replace if necessary.
- **"0.0000" displayed during RPM measurement:** Ensure the laser is correctly aimed at the reflective tape and the measurement distance is within 50-200mm. Check if the reflective tape is properly applied and clean.
- **"OL" displayed:** The measured RPM exceeds the device's maximum range (99999 RPM).
- **Inaccurate readings:** Verify the reflective tape is securely attached and clean. Ensure the target object is stable during measurement. Check for any obstructions in the laser path.
- **Low battery indicator:** Replace batteries promptly when the low battery icon appears on the display.

9. Specifications

UT370 Series Non-contact Tachometers

UT370 series non-contact tachometers measure rotating speed of shaft or disk with a point laser and reflective tape on the object being measured. These meters can output RPM or count readouts without interfering with the equipment being measured.

● UT372

SPECIFICATIONS

	Range	UT371	UT372
RPM range	10RPM~99RPM	±(0.03%)	±(0.03%)
	100RPM~999RPM	±(0.04%+2)	±(0.04%+2)
	1000RPM~9999RPM	±(0.04%+2)	±(0.04%+2)
	10000RPM~99999RPM	±(0.04%+2)	±(0.04%+2)
Counts	Range: 0~99999	√	√
	Max. input frequency: 10kHz; bandwidth: 5%		
Target distance	50mm~200mm	√	√
Features			
Display count		100000	100000
Data hold		√	√
Auto power off	Around 15 minutes	√	√
Low battery indication	≤4.8V	√	√
MAX/MIN/AVG mode		√	√
USB interface			√

GENERAL CHARACTERISTICS

Power	1.5V battery (LR6) X4
Display	53mm x 41mm
Product color	Red and grey
Product net weight	100g
Product size	184mm x 56mm x 34mm
Standard accessories	Reflective tape, USB interface cable **(UT372)**, PC software CD **(UT372)**
Standard individual packing	Blister, English manual
Standard quantity per carton	20pcs
Standard carton measurement	420mm x 305mm x 370mm (0.047CBM per standard carton)
Standard carton gross weight	5kg

Image 9.1: Detailed specifications for the UT370 series tachometers.

UNI-T UT372 Tachometer Specifications

Parameter	UT372 Specification
RPM Range	10 RPM ~ 99999 RPM (Accuracy: ±(0.04%+2))
Counts Range	0 ~ 99999
Display Count	99999
Target Distance	50mm ~ 200mm
Max Input Frequency	10kHz, bandwidth: 5%

Parameter	UT372 Specification
Power	1.5V Battery (LR6) x 4
Display	53mm x 41mm LCD
Product Color	Red and Grey
Product Net Weight	100g
Product Size	184mm x 56mm x 34mm
Auto Power Off	Around 15 minutes (cancelable)
Low Battery Indication	<4.8V
USB Interface	Yes
Operating Temperature	0°C to 50°C (32°F to 122°F)
Storage Temperature	-20°C to 60°C (-4°F to 140°F)
Humidity	<80% RH (non-condensing)

10. Warranty and Support

UNI-T products are designed and manufactured to high quality standards. For warranty information, technical support, or service, please refer to the warranty card included with your product or contact your local UNI-T distributor or customer service center. Please have your product model number (UT372) and purchase date available when contacting support.