

# ***Chinook Optical Tachometer***

**powered by Western Robotics Ltd.**

Congratulations on your purchase of the Chinook Optical Tachometer. The Chinook Optical Tachometer is designed and manufactured in Canada with a state of the art micro controller technology. It is universally designed to determine blade speed of any RC helicopter with a backlit LCD display. This allows you to easily optimize your helicopter head speed for any condition. ***Please read the entire manual before proceeding.***

## **Features:**

- **Reads a wide range of rotor head speed from 500 to 3000 RPM.**
- **High accuracy RPM readings.**
- **Monitors unit voltage level.**
- **Easy to use sleek and ergonomic handheld design.**
- **Large LCD display with backlight to allow for nighttime flying.**
- **Operates on one single 9V battery (sold separately) with battery compartment.**
- **Sleep mode operation with auto wakeup.**

## **Package Contents:**

- Chinook Optical Tachometer unit
- User Instruction Manual

## **Hardware Installation:**

1. Simply open the battery compartment on the back of the Tachometer unit by sliding the compartment lid towards the bottom of the unit
2. Install a 9V battery to the battery clip located inside the battery compartment and gently place the 9V battery into the compartment. Make sure the battery is sitting comfortably in the compartment that it will not prevent the compartment lid from closing. Replace battery compartment lid by carefully sliding the lid back on.
3. Your Chinook Optical Tachometer is ready to use!

## **Operation:**

1. To turn on the Chinook Optical Tachometer unit, simply switch on the on/off rocker switch located at the top of the unit.
2. Wait for the rotating disc to wind up 1500 RPM and the “Western Robotics” greeting on the LCD to disappear.
3. The LCD will initially greet you with 1500 RPM and the voltage reading of the unit’s battery. If no activity is given to the unit within 3 minutes then the unit will go into “Sleep mode”. If the unit is in sleep mode, the LCD will display “Sleep Mode”. By pressing the dial switch on the left hand side of the unit will cause the unit “wake up” and it resumes to the last RPM setting.
4. Sliding the dial switch on the left side of the unit will adjust the tachometers RPM speed. Sliding it upwards will increase the RPM speed while sliding it downwards will decrease the RPM speed. Used this dial to match the tachometer RPM to the helicopter RPM (as viewed through the window in the front case). When the viewing window RPM matches the helicopter’s blade speed, then the LCD will display the actual RPM speed of the helicopter’s rotor speed. The tachometer will function with right or left hand rotation rotors systems and with most multi-blade systems.
5. Pressing on the dial switch will either turn on or off the backlighting of the LCD.

6. When the tachometer is not in use, it is suggested to turn off the power to the unit with the on/off switch to prolong the battery life.

#### **Tachometer RPM reading guidelines:**

- Working in close proximity to the RC helicopter will result in visual distortion of the rotor blade causing a “boomerang” appearance which does not affect accuracy.
- The dial switch increments and decrements the RPM speed by 10 RPM. If the RC model blades drift very slowly from the window readout, the LCD will display the actual RPM reading within 10 RPM.
- Multi-blade rotor head systems with 3 blades will show a six blade image when the correct RPM is achieved

#### **Troubleshooting FAQ:**

**Q:** The Chinook Optical Tachometer rotary disc does not rotate?

**A:** The rotary disc can sometimes stop if the unit is violently shaken, in this case turn the unit power off and back on; then the disc should be able to start up properly. Or the battery voltage could be low and should be replaced.

**Q:** The RPM display is not displaying a correct RPM speed?

**A:** The battery voltage could be low which will affect the RPM readout accuracy. Please try replacing the 9V battery. Batteries reading under 8V should be replaced.

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#### **Limited Warranty (North America Only)**

The Chinook Optical Tachometer is guaranteed to be free from defects in material and workmanship for a period of 90 days from the date of purchase accompanied by the proof of purchase or invoice. Warranty does not cover damage due to improper use or incorrect installation.

During the 90 day warranty period, if the product shows defects caused by abuse, accident or misuse, it will be repaired or replaced upon Western Robotics Ltd. sole discretion, at a service charge not greater than 40% of the current retail list price. Please ensure to include your contact information before any repair(s) or replacement(s) can be conducted. Under no circumstances or condition will the purchaser be entitled to consequential or incidental damages. In no case shall our liability exceed the product's original cost. We reserve the right to modify warranty provision without notice. Because Western Robotics Ltd. has no control over connection and use of this product, no liability may be assumed nor will be accepted for damage resulting from the use of this product, user accepts all resulting liability. If you attempt to disassemble, modify or repair this unit yourself, it may void the warranty.

For warranty service on Western Robotics product(s) in, out or off warranty period, please send the defective unit(s) along with the proof of purchase and a description of the problem, postage paid, to the given address below.

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