



# PRO TACHOMETER

(Microprocessor controlled rotor blades tachometer)



Thank you for purchasing the 'Pro Tachometer'. Pro Tachometer is a very accurate optical tachometer to read out the RPM of helicopter rotor blades (two blades). Please read these instructions fully and handle the Pro Tachometer correctly.

### Specifications:

RPM range : 800 to 6500 RPM (5rpm by a click)  
Inboard battery: 4.8V, 800mAh NiMH

### Charging the Pro Tachometer

The Pro Tachometer has its own internal NiMH battery pack of 800mA, 4.8V to supply the power to the circuit. It is an essential source to perform the tachometer. The charging port is located at the left-side of the unit and is designed to accept Futaba-type female jack which is included in the kit.

Before using the unit, charge it for 24 hours with an over-night AC wall charger or any rapid charger capable of charging a 4 cells of NiMH battery at about 0.8A of charging current.

The Pro Tachometer has automatic power-off function after 2 minutes of inactivity.

Latest RPM data will be saved automatically.

### How to use Pro Tachometer

1. Press and hold the enter button more than 2 seconds to activate the Pro Tachometer.



Display while you hold enter button.

The tachometer is ready to use now.



Display after you release enter button.

2. You can check the latest RPM data by pushing increment or decrement button.

3. Set the initial RPM value by pushing increment or decrement button.

4. Press Enter button shortly, then the view window's optic sensor motor will activate.

5. Look at the rotating rotor blades through the view window. The image may flicker if the timing is mismatched with the RPM of rotor blades.

6. By pushing increment or decrement button, adjust the timing until the image is a freeze-frame.

7. Read out the number on the RPM monitor which is the current RPM of the rotor blades.

8. The data will automatically be save when power is off.

9. Press enter button to finish the procedure.



10. Press and hold enter button to turn off the Pro Tachometer.



### CAUTION

Make sure there's no obstacles between the helicopter and the tachometer's optic sensor.

The helicopter should be hovering steadily during the measurement. Pay attention to rotating rotor blades, do not get closer to the helicopter unnecessarily.

Keep your hands and all equipment away from the rotating rotor blades. Do not operate near water or fire.

Do not operate with wet hands.

the Pro Tachometer is not intended for use by unsupervised children.

the Pro Tachometer is designed only for R/C products.

Do not modify or disassemble the Pro Tachometer unit.

Do not connect batteries directly to the output terminals.

In case the rpm does not go up, stop using and recharge the internal battery.

When you connect a charging jack, make sure the polarity is correct.

Some of charger may fail to check the internal battery due to the Pro Tachometer has a protection system against reverse connection.

Be careful not to drop the Pro Tachometer unit and avoid any kind of impacts.

Keep the Pro Tachometer away from heavy vibration, moisture, dust or excessive heat.

Please refer to your original helicopter manual and observe any additional cautions stated there.

### PRODUCT WARRANTY

All products from Muchmore Racing are manufactured according to the highest quality standards. Muchmore Racing guarantees this product to be free from defects in materials or workmanship for 120days from the original date of purchase verified by sales receipt. This limited warranty doesn't cover defects, which are result of normal wear, misuse or improper maintenance. This applies among other things to:

- Cut off original power plug or not using reverse polarity protected plugs
- Mechanical damage of the case
- Mechanical damage of electronic components/PCB Soldered on the PCB (except on external solder-tabs)

With Limited Lifetime Warranty products, the warranty terms on the Limited Lifetime Warranty card do also apply. To eliminate all other possibilities or improper handling, first check all other components and the trouble shooting guide before you send this product for repair or warranty. Product sent in for repair, that operate perfect have to be charged with a service fee. By sending in this product, you assign Muchmore Racing to repair the product, if it is no warranty or Limited Lifetime Warranty case. The original sales receipt including date of purchase needs to be included. Otherwise, no warranty can be granted. For quick repair and return service, add your address and detailed description of the malfunction. Our limited warranty liability shall be limited to repairing the unit to our original specifications. In no case shall our liability exceed the original cost of this unit. Because we don't have control over the installation or use of this product, we can't accept any liability for any damages resulting from using this product. By installing or operating this product, the user accepts all resulting liability.

The specifications like weight, size and others should be seen as guide values. Due to ongoing technical improvements, any change for the interest of the product might happen. Muchmore Racing does not take any responsibility for the accuracy of these specs.

### MUCHMORE RACING DISTRIBUTOR SERVICE

Package your product carefully and includes sales receipt and detailed description of malfunction.

Send parcel to your national Muchmore Racing distributor. Distributor repairs or exchanges the product.

Shipment back to you usually by COD(cash on delivery), but this is subject to your national Muchmore Racing distributor's general policy.



127-1, Poongdong, Ilsangu,  
Goyangcity, Gyeong-gi do,  
411-842, Korea  
TEL +82 31 903 0487 FAX +82 31 903 0497

KOREA...[www.much-more.co.kr](http://www.much-more.co.kr)  
JAPAN....[www.muchmore.co.jp](http://www.muchmore.co.jp)  
UK.....[www.much-more.co.uk](http://www.much-more.co.uk)  
USA.....[www.muchmoreusa.com](http://www.muchmoreusa.com)