RL-HM011F

Operating Instructions

FOR QUESTIONS AND CONCERNS, CONTACT US AT

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4. SERVICE — Maintenance interval time. **Note:** timing is countdown.

When the maintenance interval time is reached, and the LCD display will flashing, and press the "**M**" or "**S**" button to clear the status, the next maintenance interval time starts timing.

■ **Programming SVC time:**

a) Press the "**M**" button for twice until display shows "**SERVICE**" icon and "**OFF**" (maintenance interval time).

b) Press and hold the "**S**" button until display shows "**SERVICE**" icon and the right most digit "**00000**" on the LCD will flash.

c) Press the "**S**" button will cause the flashing digit to automatically increment. When the desired number has been reached release the "**S**" button and press "**M**" button to increment to the next digit. Repeat above steps until the service time interval has been entered.

d) Until you get desired hours, release the button, the LCD will flash for 5 seconds and return to HOURS (Total hours).

Note: When the maintenance interval time is reached 0, the "**SERVICE**" icon will flash.

5. To Reset Total Hours

a) Press the "**M**" button 3 times until display shows "**DATA**" and "**HOURS**" icon.

b) Press and hold the "**S**" button until display shows "**HOURS**" icon and "**SERVICE**" icon and "**00000**" will flash, release the "**S**" button ,the meter will perform a total reset.

6. To shut down LCD display.

a) Press and hold the "**M**" and "**S**" button simultaneously until display shows "**OFF**" icon, release the "**M**" and "**S**" button, the LCD display will shut down.

b) The LCD will be displayed when the engine signal is detected again or press the "**M**" button or "**S**" button.

c) When LCD screen is closed, the historical data will be retained and will not be cleared.

Others

1. About extending product life

To extend the life of your product, you can apply it as follows:

a) Avoid product are always in a very humid environment — there is a risk of moisture intruding inside the product, causing the product to consume more electricity;

b) Avoid product that are always in a high temperature environment (exceed 125°F) — high temperature environment has the risk of increasing the discharge rate of the internal battery CR2450.

c) Minimize the frequency of button operations — continuous button operation, function switching, the power consumption will increase

2. About the product battery life

There are several cases about the service life of the battery (this is the theoretical calculation, the actual life is related to the applicable conditions):

a) If you use 8 hours per day (RPM=4000), do not turn off the display when not in use: battery life is 6 years.

b) If you use 8 hours per day (RPM=4000), turn off the display when not in use: battery life is 9 years.

c) If you use 24 hours per day (RPM=4000): battery life is 4 years.

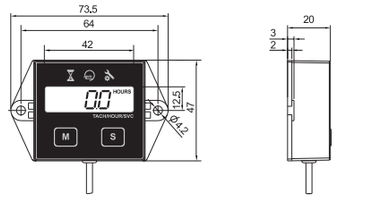
d) If you use 8 hours per day (RPM=15000), do not turn off the display when not in use: battery life is 4,5 years.

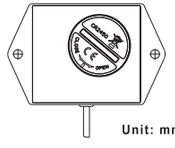
e) If you use 8 hours a day (RPM=15000), turn off the display when not in use: battery life is 6 years.

Specifications

Timing range	0-99999H	**SERVICE setting range**	0.0 - 9999.9H / OFF
Timing accuracy	0.1H/1H	**Display mode**	LCD
RPM range	0-20000RPM	**Display window size (visible)**	42x12.5mm
RPM accuracy	10RPM	**Product size**	73.5x47x20mm
RPM refresh	0.5S	**Battery type**	CR2450 540mAh
Firing Patterns	1P1R 2P1R 1P2R	**Splash-proof**	IP65

Product Dimension





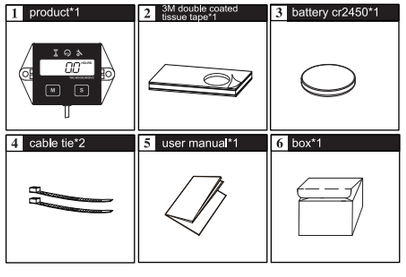
Unit: mm

Runleader®

OPERATING INSTRUCTIONS

Self Powered Digital Tach Maintenance Hour Meter

Product Accessories List

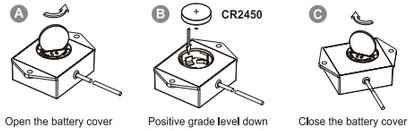


Please refer to the quick installation manual for installation method.
RLT-Fix4, Fix5
(The panel cut-out label is not included for non-branded product.)

Product Installation

This product can be directly installed with double-sided tape or screwed, the installation method is as follows:

1. Battery installation and replacement



Open the battery cover

Positive grade level down into the battery up negative

Close the battery cover

2. Signal wire installation

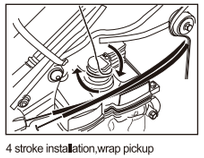
Ⓐ **Signal wire connection:** Wrap the signal wire around the spark plug, wrap it 4 to 5 turns, and fasten it with a cable tie to ensure it is effectively fixed and will not loosen. (If the connection is not strong, the tachometer will get insufficient signal, then the RPM and hour values will be inaccurate.)

⚠ a) For traditional ignition modes, wrap signal wire 4 to 5 turns tightly around the engine spark plug wire.

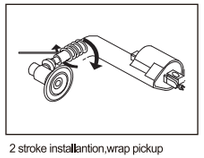
b) For "pencil coil" ignition, wrap signal wire around the plastic coil above the spark plug.

b) The spark plug signal generated by different engine types has the difference of strength and weakness. By adjusting the turns of winding, the appropriate adjustment can be made to improve the accuracy of the RPM and timing data. This is a skill that different degree spark plug signal that allows the induction wire to acquire.

Under normal condition, if the RPM is a little low, you can increase the winding turns, if the RPM is a little high, you can reduce the winding turns. For example, wrap 6-10 turns, if the RPM is a little high, you can reduce the winding turns. For example, wrap 2-4 turns, if the RPM is a little low, you can increase the winding turns.



4 stroke installation,wrap pickup wire around head of coil.



2 stroke installantion,wrap pickup wire around spark plug lead.

Ⓑ The test after the connection: Start the engine, the LCD of the tach hour meter displayed the RPM and timing, which means the connection is correct. If the rpm is inaccurate, please refer to clause Ⓐ to adjust the turns of the winding, or set the type of the engine (more information will be provided in the following instructions).

Product Operation

1. Programmable firing patterns— Determined the amount of pluses(sparks) per engine revolution

This product provides 3 programmable firing patterns, which can be selected according to the corresponding relationship in the form below.

Engine firing patterns	Engine type	Spark plug firing and engine rotate laps	RPM Capacity
1P1R	4 stroke 2 cylinder	1 spark per revolution	20000
	2 stroke 1 cylinder		
2P1R	4 stroke 4 cylinder	2 spark per revolution	12000
	2 stroke 2 cylinder		
1P2R	4 stroke 1 cylinder	1 spark 2 revolution	20000

Note: Some 4 stroke 1 cylinder engine is 1P1R, the setting is the same way as the 2 stroke 1 cylinder engine.

■ **TO set the tachometer (Spark plug firing revolution):**

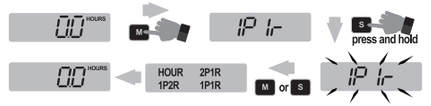
a) Press the "**M**" button until display shows "**1P1R**" icon.

b) Press and hold the "**S**" button until display shows "**1P1R**" icon start flashing, release and press "**M**" or "**S**" button to toggle through all engine firing patterns setting. (if selected the HOUR, the meter will display the HOURS, and will not display the RPM)

c) Stop at correct firing pattern setting for your engine.

d) Wait for 5 seconds and display will return to "**HOURS**" total hours. (Tachometer is now ready to use)

⚠ If the obtained RPM is not accurate, for example, the RPM is half of the actual RPM, you can adjust it by programming the firing patterns.



2. RPM—Typical rpm display during operation of the engine.

a) When the tach hour meter detect the engine spark plug signal for more than 1s continuously, the LCD will display the current RPM of the engine.

b) The RPM will be refreshed every 0.5s.

c) The RPM can be programmed for different pulses per revolution, Different programming setting will get different RPM; Please follow the instructions in section 1 to programming setting for accurate programming.

3. HOURS—Total hours of operation.

a) This is always displayed when engine is off.

b) Total Hours can reset.

c) The HOURS max value is 99999; When the "**HOURS**" timing range is 0.0-9999.9H, the timing accuracy is 0.1H; When the "**HOURS**" timing exceeds 9999.9H, the timing accuracy is 1H.

d) When the "**HOURS**" exceeds 99999 hours, the timing will restart from 0.