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› Runleader Digital Hour Meter Tachometer User Manual

Runleader RL-HM011E

Runleader Digital Hour Meter Tachometer

Model: RL-HM011E

INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your Runleader Digital Hour Meter Tachometer. This device is designed to accurately track engine operating hours and display real-time engine revolutions per minute (RPM), making it an essential tool for monitoring engine performance and scheduling timely maintenance.

SAFETY INFORMATION

- Always ensure the engine is off and cool before attempting installation or maintenance.
- Follow all local safety regulations and guidelines when working with engines and electrical components.
- Do not attempt to open or modify the device, as it contains a non-replaceable internal battery.
- Ensure proper insulation of all wiring connections to prevent electrical shorts.
- While the device is IP65 waterproof, avoid prolonged submersion or high-pressure water jets.

PRODUCT FEATURES

- **Hour Meter:** Tracks total engine operating hours with 0.1-hour accuracy. Displays total hours when the engine is off. Total hours can be reset.
- **Tachometer:** Displays real-time engine RPM when the engine is running. Helps in setting engine idle and monitoring performance.
- **Maintenance Reminder (SVC):** Programmable service interval timer. A warning icon flashes when maintenance is due.
- **User Shutdown:** The device can be manually turned off. Data is retained after shutdown.
- **Waterproof:** IP65 rated for protection against dust and water splashes.
- **Internal Battery:** Powered by a built-in CR2450 lithium metal battery.
- **Programmable Firing Patterns:** Adjustable for various engine types (2-stroke, 4-stroke, 1-cylinder, 2-cylinder, 4-

cylinder) to ensure accurate RPM readings.

PACKAGE CONTENTS

PRODUCT ACCESSORIES LIST



product*1



box*1



User manual*1



double-sided tape*1



Cable tie*2

The package includes the following items:

- 1 x Runleader Digital Hour Meter Tachometer
- 1 x User Manual
- 1 x Double-sided Tape
- 2 x Cable Ties
- 1 x Box

SPECIFICATIONS

Feature	Specification
Model Number	RL-HM011E
Dimensions (L x W x H)	7.35 x 2 x 4.7 cm (2.89 x 0.79 x 1.85 inches)
Item Weight	80 grams (2.82 ounces)
Material	Plastic
Battery Type	Internal Lithium Metal (CR2450)
Waterproof Rating	IP65
Hour Meter Accuracy	0.1 hours
UPC	791296605221

SETUP AND INSTALLATION

1. Engine Signal Connection

To obtain RPM and hour readings, the signal wire must be wrapped around the engine's spark plug wire. This allows the device to detect the engine's ignition pulses.

USE AS HOUR METER ONLY

RPM shutdown, working as an hour meter only.



Wrap the signal wire around the engine spark plug wire for approximately 5 turns. Ensure a secure connection.



Example of the hour meter's signal wire connected to an engine for signal acquisition.

2. Product Mounting

The device offers two primary mounting methods:

- **Stick-on Mounting:** Use the provided double-sided tape to adhere the meter to a clean, flat surface.
- **Screw-on Mounting:** Utilize the pre-drilled holes on the device for screw mounting. Screws are not included and must be prepared separately.



Visual representation of the two mounting options: stick-on and screw-on.

OPERATING INSTRUCTIONS

Hour Meter Function (TOT Hours)

The device continuously tracks the total operating hours of your engine. When the engine is off, the display will show the accumulated total hours. The accuracy is 0.1 hours.

TOT HOURS

Display TOT times when the engine is off.



RPM

Display real-time RPM when the engine is on.



The display shows "TOT HOURS" when the engine is not running, indicating the total accumulated operating time.

Resetting Total Hours: The total hours can be reset. Refer to the specific instructions in the included user manual for the exact button sequence to perform a reset. This function is useful for tracking hours after an engine overhaul or for specific project durations.

RESETTABLE TOT HOURS

RPM shutdown, working as an hour meter only.



Visual representation of the total hours reset function, showing the display changing from a value to "0.0".

Tachometer Function (RPM)

When the engine is running, the device automatically switches to display the real-time engine RPM. This feature is crucial for tuning your engine, setting idle speeds, and ensuring optimal performance.

TOT HOURS

Display TOT times when the engine is off.



RPM

Display real-time RPM when the engine is on.



The display shows "RPM" when the engine is running, indicating the current engine speed.

Programmable Firing Patterns

For accurate RPM readings, the device can be programmed to match your engine's specific firing pattern. This setting ensures the tachometer correctly interprets the ignition pulses.

USE AS HOUR METER ONLY

RPM shutdown, working as an hour meter only.



SVC reminder can be set

SVC reminder shutdown

This image illustrates how to wrap the signal wire and provides a table of engine firing patterns (1P1R, 1P2R, 2P1R, and 'hour' for hour meter only mode) corresponding to different engine types (e.g., 4 stroke 2 cylinder, 2 stroke 1 cylinder).

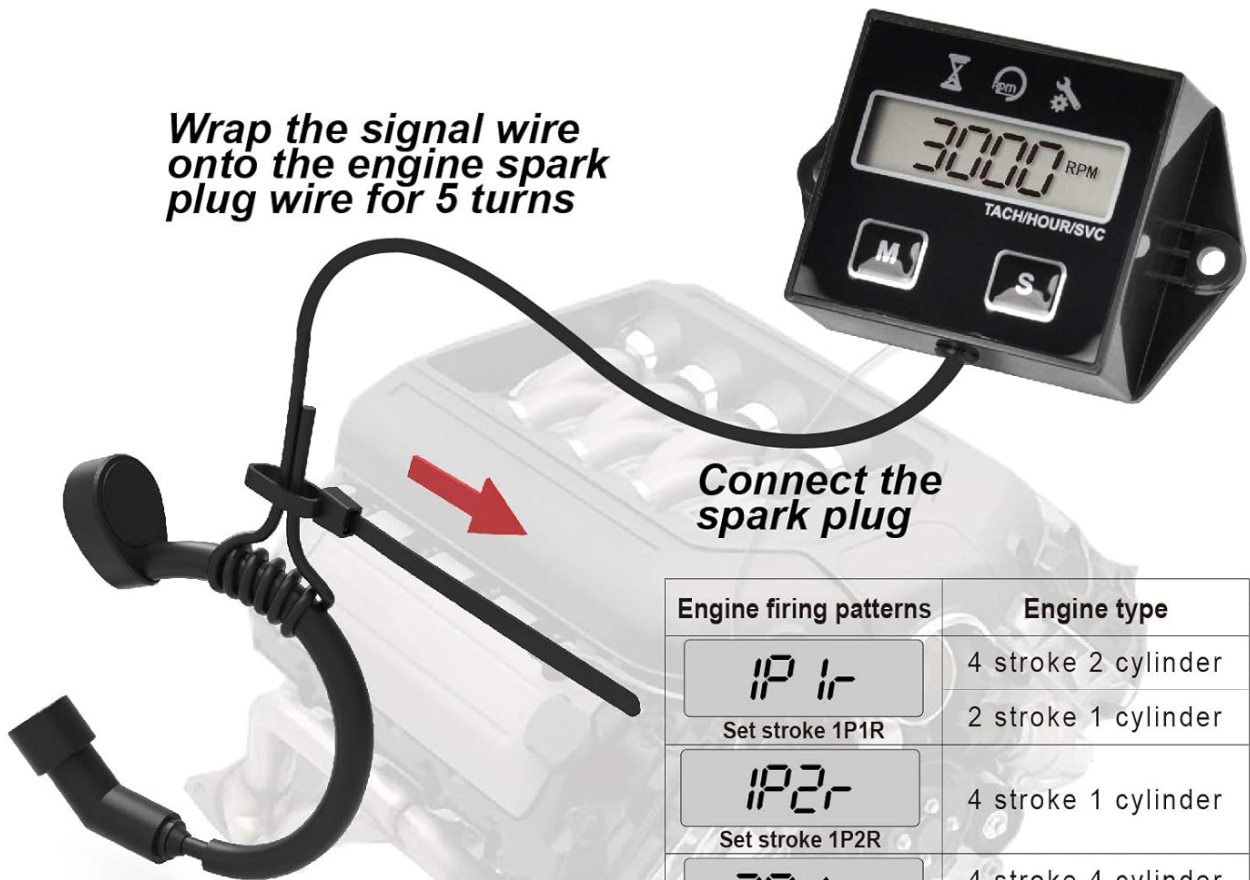
Consult the detailed instructions in your user manual for how to access and change these settings to match your engine type (e.g., 2-stroke, 4-stroke, number of cylinders).

User Shutdown

The device features a user shutdown function, allowing you to turn it off when not in use. All recorded data, including total hours, will be saved and retained even after shutdown.

PROGRAMMABLE FIRING PATTERNS

Wrap the signal wire onto the engine spark plug wire for 5 turns



Connect the spark plug

Help to get more accurate RPM value with setting.

Engine firing patterns	Engine type
1P 1r Set stroke 1P1R	4 stroke 2 cylinder 2 stroke 1 cylinder
1P 2r Set stroke 1P2R	4 stroke 1 cylinder
2P 1r Set stroke 2P1R	4 stroke 4 cylinder 2 stroke 2 cylinder
hour No RPM, only TOT	RPM shutdown, working as an hour meter only.

The image shows the option to shut down the SVC reminder, which is part of the user control features.

MAINTENANCE

Maintenance Reminder (SVC)

The device includes a programmable service timer. You can set a desired maintenance interval. Once the set time is reached, a maintenance warning icon will flash on the display, reminding you that service is due.

- **Setting the SVC Reminder:** Refer to the user manual for detailed instructions on how to program the service interval.
- **Disabling the SVC Reminder:** The SVC reminder can be temporarily or permanently disabled if desired.

PROGRAMMABLE FIRING PATTERNS

Wrap the signal wire onto the engine spark plug wire for 5 turns



Connect the spark plug



Help to get more accurate RPM value with setting.

Engine firing patterns	Engine type
1P 1r Set stroke 1P1R	4 stroke 2 cylinder 2 stroke 1 cylinder
1P 2r Set stroke 1P2R	4 stroke 1 cylinder
2P 1r Set stroke 2P1R	4 stroke 4 cylinder 2 stroke 2 cylinder
hour No RPM, only TOT	RPM shutdown, working as an hour meter only.

This image shows the SVC reminder countdown and the option to shut down the SVC reminder, allowing the device to function as an hour meter only.

Battery Information

The Runleader Digital Hour Meter Tachometer is powered by an internal CR2450 lithium metal battery. This battery is designed for long-term use and is **not replaceable** by the user. The device is sealed to maintain its IP65 waterproof rating.

WATERPROOF

IP65 
Waterproof



 Built-in battery CR2450.

The device is IP65 waterproof and features a built-in CR2450 battery.

TROUBLESHOOTING

If you encounter issues with your Runleader Digital Hour Meter Tachometer, please review the following common problems and solutions:

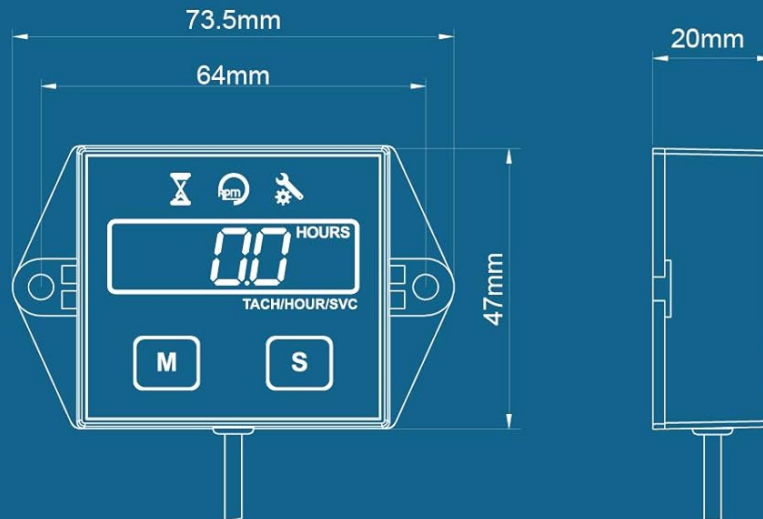
Problem	Possible Cause / Solution
No display / Device not turning on	<ul style="list-style-type: none"> ◦ Ensure the device is not in user shutdown mode. Press the 'M' or 'S' button to wake it up. ◦ The internal battery may be depleted. While not replaceable, the battery is designed for long life. If the device is new and not working, contact support.
Inaccurate RPM readings	<ul style="list-style-type: none"> ◦ Check the signal wire connection to the spark plug wire. Ensure it is wrapped securely for 5 turns. ◦ Verify that the programmable firing pattern setting matches your engine type (e.g., 2-stroke, 4-stroke, number of cylinders). Adjust as per the manual. ◦ Ensure the spark plug wire is not damaged or excessively shielded, which could interfere with signal detection.
Hour meter not accumulating hours	<ul style="list-style-type: none"> ◦ Confirm the engine is running and the signal wire is correctly connected. ◦ Check if the device is set to "RPM shutdown" mode, which means it functions as an hour meter only when the engine is off.
Maintenance reminder not working	<ul style="list-style-type: none"> ◦ Ensure the SVC interval has been correctly programmed and is not set to "OFF". ◦ Verify that enough operating hours have accumulated to trigger the reminder.

If these steps do not resolve the issue, please contact Runleader customer support for further assistance.

SCOPE OF APPLICATION

The Runleader Digital Hour Meter Tachometer is versatile and suitable for a wide range of gasoline-powered engines. Common applications include:

PRODUCT DIMENSION



SCOPE OF APPLICATION



Lawn Mower



Generator



Chainsaw



Outboard Motor



Compressor



Motorcycle



Snowblower



ATV



The device is applicable to a wide range of engines, including those found in lawn mowers, generators, chainsaws, outboard motors, compressors, motorcycles, snowblowers, and ATVs.

- Lawn Mowers (ZTR, push mowers, riding mowers)
- Generators
- Chainsaws
- Marine Outboard Motors
- ATVs (All-Terrain Vehicles)
- Motorcycles
- Snowmobiles
- Compressors
- Tractors
- Other small gasoline engines

WARRANTY AND SUPPORT

Runleader products are manufactured with high quality standards. For any questions, technical support, or warranty claims, please contact Runleader customer service. Refer to the contact information provided on the product packaging or the official Runleader website.

For more information, visit the [Runleader Store on Amazon](#).