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Runleader RL-HM32A

Runleader HM032R Digital Hour Meter Tachometer

INSTRUCTION MANUAL

Model: RL-HM32A

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your Runleader HM032R Digital Hour Meter Tachometer. This device is designed to accurately measure engine hours and RPM for various gasoline-powered equipment, including lawn mowers, tractors, generators, marine outboards, ATVs, jetskis, and dirt bikes.

2. Key Features

- **Hour Meter:** Tracks total running hours (TOT) and job-specific timer (JOB).
- **Maintenance Reminder:** Countdown tracking for service intervals (SVC & SVC2).
- **Tachometer:** Measures and records engine RPMs (0-20000 RPM) when the engine is running.
- **Max RPM & RPM Alert:** Records and allows recall of maximum engine RPM; features a red backlight RPM alert warning.
- **Backlit Display:** Green backlight with automatic, always-on, and off modes. Red backlight for RPM alerts.
- **Battery Replaceable:** Uses a replaceable CR2032 battery with a low battery reminder.
- **Waterproof:** IP65 rated for durability in various environments.

3. Setup and Installation

3.1. Battery Activation

Before initial use, ensure the battery is activated by removing the insulating sheet. The meter uses a replaceable CR2032 lithium metal battery.



Figure 3.1: Replacing the CR2032 battery. Unscrew the battery cover and insert a new battery.

3.2. Mounting the Meter

The meter can be mounted using the provided 3M Velcro adhesive. Choose a flat, clean surface on your equipment for optimal visibility and secure attachment.



Figure 3.2: Mounting the meter using the provided 3M Velcro adhesive.

3.3. Signal Wire Installation

For accurate RPM measurement, wrap the signal wire around the engine's spark plug wire. The recommended number of wraps is 5-8 circles. Secure the wire with cable ties if necessary.



Figure 3.3: Signal wire wrapping for RPM detection and engine firing patterns table.

Your browser does not support the video tag.

Video 3.1: This video demonstrates the installation and basic operation of the Runleader RL-HM032R Tach Hour Meter, including battery activation and signal wire connection.

4. Operating Instructions

4.1. Display Modes

The meter cycles through different display modes by pressing the 'M' (Menu) button.

- **TOT (Total Hours):** Displays the total accumulated engine running hours when the engine is off.
- **JOB (Job Timer):** Measures the duration of a specific task. This timer can be reset.
- **RPM (Revolutions Per Minute):** Shows the real-time engine RPM when the engine is running.
- **MAX RPM:** Displays the maximum RPM recorded during operation.
- **SVC (Service Reminder):** A countdown timer for scheduled maintenance.

TOT HOURS

Display TOT times when the engine is off.



RPM

Display real-time RPM when the engine is on.



Figure 4.1: Display showing Total Hours (TOT) and real-time RPM.

JOB TIMER

Used to measure the time of a particular job.
(e.g. Change oil)



JOB timer can be reset.

Figure 4.2: Display showing Job Timer (JOB).

4.2. Setting Firing Patterns

The meter is compatible with various gasoline engine types. To ensure accurate RPM readings, program the correct engine firing pattern:

1. Hold down the 'M' (Menu) button for 2-3 seconds to enter the setting mode.
2. Use the 'S' (Set) button to cycle through the firing patterns (e.g., 1P1R, 1P2R, 2P1R, etc.).
3. Refer to the table in Figure 3.3 or your engine's specifications to select the appropriate pattern.

4. Once the desired pattern is displayed, release the 'M' button to save the setting.

4.3. Backlight Modes

The meter offers three backlight modes:

- **L-Aut (Automatic):** The backlight will automatically turn off after a period of inactivity.
- **L-On (Always On):** The backlight remains continuously lit.
- **L-Off (Off):** The backlight is turned off. Pressing any button will temporarily illuminate it.

To change the backlight mode, navigate to the backlight setting within the menu (refer to the full operating instructions for detailed steps).



Figure 4.3: Backlight modes: L-Aut, L-Off, L-On.

4.4. RPM Alert Setting

You can program an RPM alert to warn you when the engine exceeds a set limit. When the alert is triggered, the display backlight will turn red.

MAX RPM

Display the maximum RPM recorded.



ALERT RPM

Programmable alert RPM
To set the value of warning reminder.
Red backlight display when reminding.



Figure 4.4: Red backlight indicating an RPM alert.

5. Maintenance

5.1. Service Reminders (SVC & SVC2)

The meter includes two programmable service reminders (SVC and SVC2) to help you keep track of routine maintenance. These timers count down from a set value, alerting you when maintenance is due.

SVC TIMER

Countdown tracking time, Maintenance reminder.
(e.g. Air filter replacement)



Figure 5.1: Service reminder display (SVC).

5.2. Battery Replacement

When the low battery indicator appears, replace the CR2032 battery promptly to ensure continuous operation. Refer to Section 3.1 for battery replacement instructions.

6. Troubleshooting & FAQ

Q: How do I use it to measure the RPM value of my equipment?

A: First, remove the insulated sheet from the battery cartridge to activate the meter. Then, wrap the signal wire 5-8 circles around the engine spark plug wire. Turn on your equipment to display the real-time RPM.

Q: Does it work on a motorcycle with a 4-stroke 2-cylinder engine?

A: Yes, it is applicable to 4-stroke 2-cylinder gasoline engines. You can program the engine firing patterns according to your gasoline engine type to tune the RPM value more accurately. Refer to the firing pattern table in Figure 3.3.

Q: Can the wire be extended longer?

A: Yes, the total length of the original wire is 1.75 meters (68.8 inches). You can extend it to a final total length maximum of 5.00 meters (approx. 196.0 inches).

Q: Can the green backlight be shut down?

A: Yes, you can set the backlight as "L-OFF" to shut down. Besides, it can be set as "L-ON" to always lighten the backlight, or "L-AUTO" to keep it sleeping, then press any button to wake the backlight up.

Q: Can the TOT hours be reset?

A: Yes, it can be reset to 0 for another new tracking. You can also set an initial hours from your old hour meter for following hours tracking.

Your browser does not support the video tag.

Video 6.1: This video provides answers to frequently asked questions about the hour meter's functionality, such as RPM measurement, firing pattern programming, backlight settings, and resetting total hours.

7. Specifications

Attribute	Value
Model Number	RL-HM32A
Item Weight	80 g
Product Dimensions	6.86 x 1.73 x 3.48 cm
Batteries	1 Lithium Metal battery (included)
Material	Acrylonitrile Butadiene Styrene (ABS)
Color	Black
Waterproof Rating	IP65
RPM Range	0-20000 RPM
Signal Wire Length	1.75 meters (68.8 inches)

8. Warranty and Support

For warranty information and technical support, please refer to the contact details provided with your purchase or

visit the official Runleader website. Keep your proof of purchase for any warranty claims.



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