

Runleader RL-HM032BT 2PCS

Runleader RL-HM032BT Bluetooth Tach/Hour Meter User Manual

Model: RL-HM032BT (2 PCS)

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of your Runleader RL-HM032BT Bluetooth Tach/Hour Meter. This package includes two units of the RL-HM032BT model. The device is designed to monitor engine hours and RPM, provide maintenance reminders, and offer remote operation via a Bluetooth-enabled mobile application. It is suitable for a variety of gasoline-powered equipment such as lawnmowers, generators, boats, and snowmobiles.

2. PRODUCT FEATURES

- **Bluetooth Remote Operation:** Pair with Apple or Android phones via the "Moresee" app to check and adjust equipment data. Historical data can be exported for maintenance purposes.
- **Multiple Equipment Management:** Monitor various pieces of equipment using the "Moresee" App. Each device can be individually named with customized names and application scenarios.
- **Digital Hours Tachometer:** Records total hours (TOT) and displays real-time RPM when the engine is running. Displays total hours when the engine is off.
- **Maintenance Reminders:** Features 35 groups of maintenance timers to remind users of upcoming service intervals.
- **RPM Accuracy:** Offers 9 engine firing patterns for 12 types of gasoline engine usage to ensure precise RPM readings.
- **RPM Alert:** Notifies users when running RPM exceeds a preset value by lighting a red backlight and flashing the alert value.
- **Programmable Backlight:** Three modes available: always on, sleeping, or off.
- **Partial Hours (JOB) Record:** Allows tracking of specific job durations.
- **TOT Initial Hours Setting:** Enables setting initial total hours for new meter replacements.
- **Power Options:** Built-in replaceable CR2032 battery and support for DC 12V external power.

- **Calendar Display:** Shows clock, month, day, and year.
- **Water Resistance:** Favorable IP67 water resistance rating.

3. PACKAGE CONTENTS

The package includes:

- 2 x Runleader RL-HM032BT Bluetooth Tach/Hour Meters
- Mounting accessories (stick-on pads, screws)
- Signal wire for engine connection
- User Manual
- 2 x CR2032 Lithium Metal batteries (pre-installed or included)

4. SPECIFICATIONS

Feature	Specification
Model Number	RL-HM032BT 2PCS
Product Dimensions	2.6 x 1.38 x 0.69 inches
Item Weight	12.64 ounces (total for 2 PCS)
Material	Polycarbonate (PC)
Batteries	2 Lithium Metal batteries (CR2032) required (included)
Power Input	Internal CR2032 battery, optional external DC 12V
TOT Hours Range	0 to 99,999 hours
RPM Measurement Range	0 to 25,000 RPM
SVC Maintenance Setting Range	5 to 2000 hours (35 groups)
Water Resistance	IP67
UPC	760752455007

5. INSTALLATION

5.1 Mounting the Meter

The RL-HM032BT meter can be mounted in any suitable location using the provided accessories:

- **Stick-on Mounting:** Use the adhesive pads to secure the meter to a clean, flat surface.
- **Screw-on Mounting:** Use the provided screws to attach the meter to a surface for a more permanent installation.

5.2 Wiring for Engine Signal and Power

The meter requires a one-wire connection for engine signal receipt. For optimal functionality and to ensure continuous power, especially for Bluetooth communication, external DC 12V power is recommended.

1. **Signal Wire Connection:** Wrap the yellow signal wire around the spark plug wire of your engine. Typically, 5-8 wraps are sufficient to pick up the ignition signal. Secure the wrapped wire with a zip tie or electrical tape.
2. **External Power (Optional but Recommended):** Connect the red wire to a DC 12V positive (+) power source and the black wire to a DC 12V negative (-) or ground. This provides continuous power and ensures Bluetooth functionality. If external power is not used, the internal CR2032 battery will power the device, but Bluetooth features may require external power for reliable operation.
3. **Internal Battery:** The meter comes with a pre-installed CR2032 battery. Remove any plastic tab if present to activate it. This battery primarily serves as a backup or for basic hour tracking if external power is not connected.

Refer to the detailed connection guide within the "Moresee" app for specific wiring diagrams and instructions.



Image: Two Runleader RL-HM032BT meters. The top meter shows 'TOT 10.7' with a green backlight, indicating total operating hours. The bottom meter displays '4500' with a red backlight, indicating engine RPM, along with alert symbols.

6. BLUETOOTH & APP OPERATION

The RL-HM032BT meter integrates with the "Moresee" mobile application, available for Apple and Android devices, to provide enhanced monitoring and control.

6.1 Pairing with the App

1. Download and install the "Moresee" app from your device's app store.
2. Ensure your RL-HM032BT meter is powered on (preferably with external 12V DC power for stable Bluetooth connection).
3. Open the "Moresee" app and follow the on-screen instructions to search for and pair with your device.

6.2 App Functions

- **Data Monitoring:** View real-time engine data, including RPM and total hours.
- **Settings Adjustment:** Configure meter settings such as engine firing patterns, RPM alert values, and maintenance reminder intervals directly from your phone.
- **Historical Data:** Access and export historical operating data for analysis and maintenance planning.
- **Multiple Equipment Management:** Add and manage multiple RL-HM032BT meters within the app. Customize names and application scenarios for each connected device.

7. DIGITAL HOURS TACHOMETER FUNCTIONS

The meter provides accurate tracking of engine operation time and speed.

- **Total Hours (TOT):** The meter records the cumulative operating time of the engine. When the engine is running, it displays real-time RPM. When the engine is off, it displays the total accumulated hours. The TOT hours range from 0 to 99,999 hours.
- **Real-time RPM:** Displays the engine's revolutions per minute when the engine is active. The RPM measurement range is 0 to 25,000 RPM.
- **Engine Firing Patterns:** Select from 9 available engine firing patterns to match your specific gasoline engine type (supports 12 types) for accurate RPM readings. This setting can be adjusted via the app or directly on the device.
- **RPM Alert:** Set a maximum RPM threshold. If the engine's RPM exceeds this preset value, the meter's backlight will turn red and the alert value will flash, indicating an over-speed condition.
- **Partial Hours (JOB):** This function allows you to record the operating time for a specific task or job, which can be reset independently without affecting the total hours.

8. MAINTENANCE REMINDERS

The RL-HM032BT meter helps you keep track of engine service intervals.

- **Service (SVC) Timers:** The device supports 35 groups of maintenance timers. These timers can be set to remind you when service is due based on accumulated engine hours.
- **Setting Range:** SVC maintenance settings can be configured from 5 to 2000 hours per group.
- **Alerts:** When a maintenance interval is approaching or due, the meter will display a reminder to prompt necessary service.

9. OTHER FEATURES

- **Backlight Modes:** Choose from three programmable backlight modes: always on, sleeping (dims after inactivity), or off to conserve battery.
- **TOT Initial Hours:** For new meter replacements or specific applications, the total hours can be initialized to a desired value.
- **Battery Replacement:** The internal CR2032 battery is replaceable. Ensure proper polarity when replacing.
- **Calendar Display:** The meter can display the current clock time, month, day, and year.
- **Water Resistance:** With an IP67 rating, the meter is protected against dust ingress and immersion in water up to 1 meter for 30 minutes.

10. TROUBLESHOOTING

If you encounter issues with your Runleader RL-HM032BT meter, consider the following:

- **No Display/Power:**
 - Check if the internal CR2032 battery is correctly installed and has sufficient charge. Replace if necessary.
 - If using external 12V DC power, verify connections (red to positive, black to negative) and ensure the power source is active.
- **Inaccurate RPM/Hour Reading:**
 - Ensure the yellow signal wire is securely wrapped around the spark plug wire (5-8 wraps recommended).
 - Verify that the correct engine firing pattern is selected in the meter settings or via the "Moresee" app.
- **Bluetooth Connectivity Issues:**
 - Ensure the meter is powered by external 12V DC for stable Bluetooth communication.
 - Confirm Bluetooth is enabled on your mobile device.
 - Restart both the meter (by temporarily removing power/battery) and your mobile device.
 - Ensure the "Moresee" app is up to date.
- **Maintenance Reminders Not Working:**
 - Check the SVC timer settings in the meter or app to ensure they are correctly configured.

For persistent issues, refer to the "Moresee" app's help section or contact Runleader customer support.

11. WARRANTY AND SUPPORT

Runleader is committed to providing reliable technical support and excellent after-sales service for its products. If you have any questions, require assistance with installation, operation, or encounter any defects, please contact Runleader customer support through the official channels or the "Moresee" application.

Please retain your proof of purchase for warranty claims. Specific warranty terms and conditions may vary and are typically outlined with your product documentation or on the manufacturer's website.