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Model: HM058A

1. PRODUCT OVERVIEW

The Runleader HM058A is a multi-functional digital hour meter and tachometer designed for various gasoline engines. It accurately measures engine RPM, tracks total operating hours, provides maintenance reminders, and includes a job timer. Its robust design is waterproof and features a multi-color backlit display for clear visibility.



Figure 1: Runleader HM058A Hour Meter Tachometer with wiring.

Key Features:

- **Multi-Functionality:** Combines tachometer, hour meter, service timers, and job timer.
- **Total Hours (TOT):** Displays non-resettable total engine run time (0-999999H).
- **Maintenance Reminders (SVC):** Programmable service interval timer (0-2000H/OFF).
- **Job Timer (JOB):** Resettable timer for specific work tasks.
- **Tachometer (RPM):** Real-time RPM display, resettable MAX RPM, programmable RPM alert.
- **Programmable Firing Patterns:** Adaptable to various engine types.
- **Initial Hours Settable:** Allows setting an initial value for total hours.
- **Multi-Color Backlit Display:** Enhanced visibility in different conditions.
- **Waterproof:** IP67 rated for durability in harsh environments.
- **Battery Replaceable:** Uses a CR2045 lithium metal battery.
- **User Shutdown:** Option to power off the device.

2. SETUP AND INSTALLATION

Proper installation ensures accurate readings and device longevity. Follow these steps carefully.

2.1 Engine Signal Connection

The tachometer receives RPM signals by wrapping its wire around the spark plug wire of the engine.

1. Locate the spark plug wire on your engine.
2. Wrap the signal wire from the HM058A around the spark plug wire at least 5 times. Ensure a snug fit for reliable signal detection.
3. Secure the wrapped wire with zip ties or electrical tape to prevent it from coming loose due to vibration.



Figure 2: Illustration of engine signal connection and two mounting methods.

Detailed description: This image shows two main installation steps. On the left, a close-up of an engine demonstrates how to wrap the signal wire around the spark plug cable for RPM detection. On the right, two diagrams illustrate mounting options: "Stick-on mounting" using adhesive backing, and "Screw-on mounting" using screws for a more permanent fixture.

2.2 Mounting the Device

The HM058A offers two primary mounting options:

- **Stick-on Mounting:** Use the adhesive backing provided to attach the meter to a clean, flat surface.
- **Screw-on Mounting:** For a more secure installation, use screws to fasten the meter to a desired location.

2.3 Initial Hour Setting

If replacing an existing hour meter, you can set the initial total hours on the HM058A to maintain continuity.

1. With the device powered on, press and hold the **MENU** button to enter the settings menu.
2. Navigate to the "Initial Time Setting" option (often displayed as "SET" or similar).
3. Use the **SET** button to adjust the hour value.
4. Confirm the setting to save the initial hours.

2 SETS OF USE SYSTEMS

DSP-1

Hours and RPMs related series functions are directly displayed and can be viewed continuously.



DSP-2

Hours related functions and RPMs related functions can be locked, and only the function data under the module can be displayed and viewed.

Hours module and RPMs module have different colors of backlight display.



Figure 3: The display showing "SET" for initial time configuration, with an example of setting the initial hours.

Detailed description: This image illustrates the "Initial Time Setting" feature. The top part shows the meter displaying "SET" with a small "TOT" indicator, indicating it's in the initial hour setting mode. The bottom part shows a close-up of the display with "00000.0" flashing, ready for the user to input the desired starting total hours.

3. OPERATION

The HM058A provides various display modes and settings for monitoring your engine.

3.1 Display Modes

Press the **MENU** button to cycle through the different display modes:

- **TOT (Total Hours):** Displays the cumulative operating hours of the engine. This value is non-resettable.
- **RPM (Revolutions Per Minute):** Shows the real-time engine RPM when the engine is running.
- **SVC (Service Reminder):** Counts down to the next scheduled maintenance. This timer is programmable.
- **JOB (Job Timer):** Measures the duration of a specific task or work session. This timer is resettable.
- **MAX RPM:** Displays the highest RPM recorded during operation. This can be reset.
- **ALERT RPM:** A programmable RPM threshold. If the engine RPM exceeds this value, the display

backlight will turn red and an icon will flash as a warning.

TOT

Display TOT(total hours)
when the engine is off.



RPM

Display real-time RPM when
the engine is on.



Figure 4: Top shows the "TOT" (Total Hours) display when the engine is off. Bottom shows "RPM" (Revolutions Per Minute) display when the engine is running.

SVC

Countdown tracking time, Reminding maintenance.
(e.g. Air filter replacement)



JOB

Used to measure the time of a particular work job.
(e.g. Oil filter change)



Figure 5: Top shows the "SVC" (Service Reminder) countdown. Bottom shows the "JOB" (Job Timer) for specific tasks.

MAX RPM

Display the maximum RPM recorded.



ALERT RPM

Programmable alert RPM
To set the value of warning reminder.



Figure 6: Top shows the "MAX RPM" recorded. Bottom shows the "ALERT RPM" setting, with a red backlight indicating a warning.

3.2 Programmable Firing Patterns

The HM058A can be configured for different engine firing patterns to ensure accurate RPM readings. Refer to the detailed instructions included with your product for specific programming steps. There are 4 RPM measurement ranges that can be set.

PROGRAMMABLE FIRING PATTERNS

Applied to all types of gasoline engines.



4 RPM Measurement Ranges can be set.

Figure 7: The display showing options for setting programmable firing patterns (e.g., "1P1r" and "1").

Detailed description: This image displays two meters showing different settings for programmable firing patterns. The top meter shows "1P1r", indicating a specific engine configuration. The bottom meter shows "1", representing another firing pattern option. These settings are crucial for accurate RPM measurement across various gasoline engines.

3.3 Backlight Modes

The display backlight can be adjusted to suit your preferences and environmental conditions.

- **L-Auto:** The backlight automatically turns off after a period of inactivity.
- **L-On:** The backlight remains continuously on.
- **L-Off:** The backlight is turned off.

To shut down the LCD display, press the **MENU** button and **SET** button simultaneously.

INITIAL TIME SETTING

The initial time can be set to replace an hour meter.



Figure 8: Displays showing "L-Off", "L-Auto", and "L-On" backlight settings, along with an illustration of pressing MENU and SET buttons for user shutdown.

Detailed description: This image illustrates the three backlight modes: "L-Off" (backlight off), "L-Auto" (automatic backlight), and "L-On" (backlight always on). It also shows how to shut down the LCD display by simultaneously pressing the MENU and SET buttons, resulting in an "OFF" display.

3.4 Two Sets of Use Systems (DSP-1 / DSP-2)

The HM058A offers two distinct operating systems:

- **DSP-1:** Hours and RPMs related functions are directly displayed and can be viewed continuously.
- **DSP-2:** Hours related functions and RPMs related functions can be locked. Only the function data under the module can be displayed and viewed. In this mode, the hours module and RPMs module have different colors of backlight display.

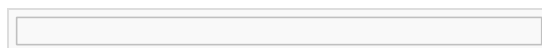


Figure 9: Comparison of DSP-1 and DSP-2 operating systems, showing different display behaviors and backlight colors.

Detailed description: This image compares the two operating systems. DSP-1 shows a continuous display of total hours (TOT) with a green backlight. DSP-2 shows a locked display where the hours module (TOT) has a teal backlight and the RPMs module has a blue backlight, indicating distinct display behaviors for each function.

4. MAINTENANCE

Regular maintenance ensures the longevity and accuracy of your Runleader HM058A.

4.1 Battery Replacement

The HM058A uses a replaceable CR2045 lithium metal battery. When the battery level is low, the display will show a "Bat-Lo" indicator, reminding you to replace it.

1. Carefully open the battery compartment, usually located on the back of the device.
2. Remove the old CR2045 battery.
3. Insert a new CR2045 battery, ensuring correct polarity.
4. Close the battery compartment securely.



Figure 10: Illustration of the HM058A's IP67 waterproof rating and the replaceable CR2045 battery with a "Bat-Lo" indicator.

Detailed description: This image highlights two features: the top section shows the meter covered in water droplets, emphasizing its IP67 waterproof rating. The bottom section shows a CR2045 battery next to the meter, with the meter's display showing "Bat-Lo", indicating a low battery and the need for replacement.

4.2 Service Reminders (SVC)

Utilize the programmable SVC timer to set maintenance intervals for your engine. This helps ensure timely servicing, such as oil changes or air filter replacements.

1. Access the SVC setting through the **MENU** button.
2. Set your desired maintenance interval (e.g., 50 hours, 100 hours).
3. The meter will count down and remind you when service is due.

4.3 Job Timer (JOB)

The JOB timer is useful for tracking the duration of specific tasks. It can be reset after each job.

1. Select the JOB display mode.
2. Start the timer for a specific task.
3. Reset the timer once the task is complete.

5. TROUBLESHOOTING

If you encounter issues with your Runleader HM058A, refer to the following common problems and solutions.

Problem	Possible Cause	Solution
Display is blank or "Bat-Lo" shown	Low or dead battery.	Replace the CR2045 battery. Ensure correct polarity.
Inaccurate RPM readings	• Signal wire not wrapped enough times. • Incorrect firing pattern setting. • Loose signal wire connection.	• Ensure the signal wire is wrapped at least 5 times around the spark plug wire. • Verify the firing pattern setting matches your engine type. • Secure the signal wire connection.
Display not responding to button presses	Device may be in a locked mode or frozen.	Try pressing MENU and SET buttons simultaneously to reset or power cycle the device. Check battery.
Water ingress/damage	Improper sealing or extreme conditions beyond IP67 rating.	Ensure battery compartment is sealed correctly. Avoid prolonged submersion or high-pressure water jets.

6. SPECIFICATIONS

Feature	Detail
Brand	Runleader
Model	HM058A
Material	Acrylonitrile Butadiene Styrene (ABS)
Dimensions (L x W x H)	2.95 x 0.8 x 1.69 inches
Item Weight	2.89 ounces (82 Grams)

Feature	Detail
Battery Type	1 Lithium Metal battery (CR2045, included)
Waterproof Rating	IP67
Total Hours Range	0-999999H (0.1 hours accuracy)
Service Timer Range (SVC)	0-2000H / OFF
Certifications	CE, RoHS



Figure 11: Visual summary of key features and certifications including RPM, MAX RPM, ALERT RPM, HOURS, INITIAL TIME, SVC, DUAL OPERATING SYSTEM, PARTIAL TIME, BACKLIGHT, USER SHUTDOWN, WORKING TIMES, and IP67 WATERPROOF, along with CE and RoHS logos.

Detailed description: This image presents a comprehensive overview of the Runleader HM058A's features and compliance. It shows the meter alongside icons representing its capabilities: RPM, MAX RPM, ALERT RPM, HOURS, INITIAL TIME, SVC (Service Reminder), DUAL OPERATING SYSTEM, PARTIAL TIME (Job Timer), BACKLIGHT, USER SHUTDOWN, WORKING TIMES, and IP67 WATERPROOF. Additionally, it prominently displays the CE and RoHS certification logos, indicating adherence to European safety and environmental standards.

7. WARRANTY AND SUPPORT

The Runleader HM058A Hour Meter Tachometer comes with a **2-year warranty** from the date of purchase.

For technical support, warranty claims, or any questions regarding the product, please contact Runleader customer service through their official website or the retailer where the product was purchased.

You can visit the official Runleader store for more information: [Runleader Store on Amazon](#).