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> Yooreal Engine Temperature Gauge, Tachometer, and Hour Meter (Model RL-HM035A1) User Manual

YOOREAL RL-HM035A1

Yooreal Engine Temperature Gauge, Tachometer, and Hour Meter

Model: RL-HM035A1

1. INTRODUCTION

Thank you for choosing the Yooreal RL-HM035A1 Multifunctional Meter. This device is designed to monitor engine temperature, engine RPM, total operating hours, and clock time. It is suitable for a wide range of gasoline-powered equipment, including scooters, snowmobiles, mini bikes, motorcycles, lawn mowers, generators, and dump trucks. This manual provides essential information for proper installation, operation, and maintenance of your meter.

TEMPERATURE GAUGE METER



The measurement range is -20°C to $+300^{\circ}\text{C}$ (-4°F to $+572^{\circ}\text{F}$)
Max temperature (resettable).

Figure 1: Yooreal RL-HM035A1 Multifunctional Meter

2. SAFETY INFORMATION

Please read all safety instructions before installing or operating the meter. Failure to follow these instructions may result in product damage or personal injury.

- Ensure the engine is off and cool before installation.
- Avoid contact with hot engine parts during and after operation.
- Do not attempt to modify the device.
- Keep the device away from excessive moisture or extreme temperatures beyond its operating range.
- Properly secure all wiring to prevent interference with moving parts.

3. PACKAGE CONTENTS

Verify that all items are present in the package:



Figure 2: Product Dimensions and Included Accessories

- Yooreal Color Box x1
- RL-HM035A1 Product x1
- User Manual x1
- Cut-out Sticker x1
- TS002 Probe Sensor x1 (with cable)
- Cable Tie x2
- Flat Washer x2
- Bolt x2
- Nut x4
- Screwdriver x1
- 3M Velcro x1
- CR2032 Battery x1 (pre-installed or separate)

4. PRODUCT FEATURES

4.1 Multi-Screen Display

The device features a multi-screen display that can show Total Hours (TOT), Engine RPM, Temperature (TEMP), Clock, and remaining battery life simultaneously for user convenience.

TACHOMETER



The RPM range : :0-25000 RPM , Reset max RPM.

Range Selection	Measurement Range	Remarks
r1	0-25000 RPM	<ul style="list-style-type: none"> ▪ Different measurement RPM ranges are selected to ensure better anti-jamming performance of the tachometer to obtain accurate RPM data. ▪ The default speed measurement range is r1. ▪ Real-time RPM data beyond the RPM measurement range will not be displayed accurately. ▪ The RPM data obtained under different RPM measurement ranges may be different.
r2	0-18000 RPM	
r3	0-12000 RPM	
r4	0-6000 RPM	

Figure 3: Multi-Screen Display showing TOT, RPM, TEMP, Clock, and Battery

4.2 Temperature Gauge Functions

The temperature probe is designed with removable screws, allowing for angle adjustment. Two different temperature probes are included to suit various installation scenarios. The unit supports switching between Celsius (°C) and Fahrenheit (°F). The measurement range is -20°C to +300°C (-4°F to +572°F). The meter can also measure and display the maximum temperature (resettable) and allows setting a temperature alarm.



Figure 4: Icons representing various product features including temperature monitoring

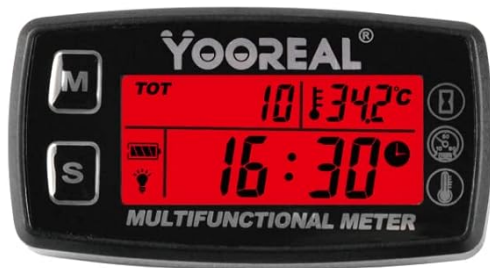
4.3 Hour Meter Functions

This product includes TOT (Total Hours), JOB (Job Hours), and SVC (Service Reminder) functions. You can configure an initial value for TOT to replace an old meter. The TOT/JOB range is 0-99999H. JOB hours can be reset. The SVC range is 5-1000H or OFF.

BACKLIGHT DISPLAY



Overspeed



Overtemperature



Maintenance reminder

Settable backlight: Auto/ON/OFF.

Figure 5: Hour Meter displays for Total Hours (TOT), Job Hours (JOB), and Service Reminder (SVC)

4.4 Tachometer Functions

The tachometer can be used on most gasoline engines. It features 9 programmable firing patterns and 4 selectable measurement ranges to accurately monitor RPM. The RPM range is 0-25000 RPM. It also allows resetting the maximum RPM and setting an overspeed alert.

Table 1: Tachometer RPM Measurement Ranges

Range Selection	Measurement Range	Remarks
r1	0-25000 RPM	Different measurement RPM ranges are selected to ensure better anti-jamming performance of the tachometer to obtain accurate RPM data. The default speed measurement range is r1.
r2	0-18000 RPM	Real-time RPM data beyond the RPM measurement range will not be displayed accurately.
r3	0-12000 RPM	The RPM data obtained under different RPM measurement ranges may be different.
r4	0-6000 RPM	

HOOR METER



TOT/JOB range : 0-99999H



JOB can be reset



SVC range:5-1000H/OFF.

Figure 6: Tachometer display and table of RPM measurement ranges

4.5 Backlight Display and Alerts

The meter features a settable backlight (Auto/ON/OFF). It also provides visual alerts for overspeed, overtemperature, and maintenance reminders.

2 FIXED METHOD

velcro installation ▶



screw installation ▶



REPLACEABLE BATTERY



Battery can be replaceable

Figure 7: Backlight display indicating Overspeed, Overtemperature, and Maintenance Reminder

4.6 Waterproof Rating

The meter has an IP67 waterproof rating, making it suitable for use in various outdoor conditions and applications such as lawn tractors, snowblowers, motorcycles, and scooters.



Figure 8: IP67 Waterproof Rating and example applications

5. SETUP AND INSTALLATION

5.1 Mounting Methods

The meter can be fixed using two methods: Velcro installation or screw installation. All necessary accessories are included.

- **Velcro Installation:** Clean the mounting surface. Attach the adhesive Velcro strip to the back of the meter and the corresponding strip to the desired mounting location. Press firmly to secure.
- **Screw Installation:** Use the provided screws, bolts, and nuts to securely fasten the meter to a suitable surface. A cut-out sticker is provided to mark drilling points.

EASY TO INSTALL

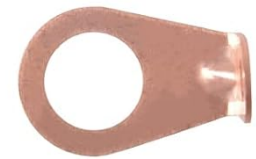
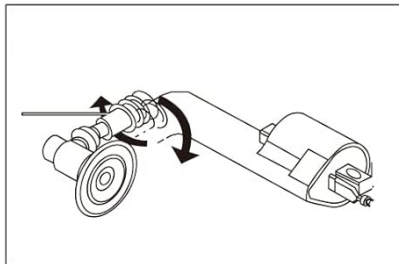
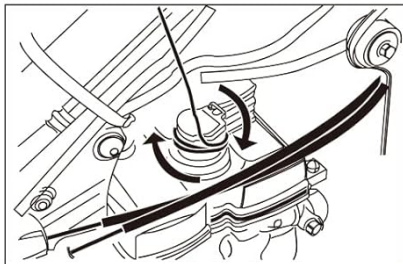
Engine firing patterns	Engine type	Spark plug firing and engine rotate laps	RPM Capacity
1P1R	4 stroke 2 cylinder	1 spark per revolution	0 - 25000
	2 stroke 1 cylinder		
1P2R	4 stroke 1 cylinder	1 spark 2 revolution	0 - 25000
2P1R	4 stroke 4 cylinder	2 spark per revolution	0 - 12500
	2 stroke 2 cylinder		
3P1R	4 stroke 6 cylinder	3 spark per revolution	0 - 8000
	2 stroke 3 cylinder		
3P2R	4 stroke 3 cylinder	3 spark 2 revolution	0 - 16000
4P1R	4 stroke 8 cylinder	4 spark per revolution	0 - 6250
5P2R	4 stroke 5 cylinder	5 spark 2 revolution	0 - 10000
6P1R	4 stroke 12 cylinder	6 spark per revolution	0 - 4000
	6 stroke 2 cylinder		
8P1R	4 stroke 16 cylinder	8 spark per revolution	0 - 3120



68.8inches (1.75m)



23.6inches (0.6m)



Temp sensor aperture
(ϕ 14mm (0.55inches)

Figure 9: Velcro and Screw Installation Methods

5.2 Inductive Wire Connection

For RPM and hour meter functions, connect the inductive wire by wrapping it 4-5 turns around the spark plug wire. Ensure a secure connection.

DIMENSION



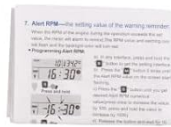
ACCESSORIES



Yooreal color box*1



Product*1



user manual*1



Cut-out sticker*1



TS002 probe sensor*1



cable tie*2



flat washer*2



bolt*2



nut*4



screwdriver*1



3M velcro*1



CR2032 Battery*1

Figure 10: Inductive wire wrapping around a spark plug wire

5.3 Engine Firing Pattern Setup

The meter supports various engine firing patterns. Refer to the table below to select the correct pattern for your engine type to ensure accurate RPM readings.

Table 2: Engine Firing Patterns and RPM Capacity

Engine Firing Patterns	Engine Type	Spark Plug Firing and Engine Rotate Laps	RPM Capacity
1P1R	4 stroke 2 cylinder	1 spark per revolution	0 - 25000
	2 stroke 1 cylinder		
1P2R	4 stroke 1 cylinder	1 spark 2 revolution	0 - 25000
2P1R	4 stroke 4 cylinder	2 spark per revolution	0 - 12500
	2 stroke 2 cylinder		
3P1R	4 stroke 6 cylinder	3 spark per revolution	0 - 8000
	2 stroke 3 cylinder		
3P2R	4 stroke 3 cylinder	3 spark 2 revolution	0 - 16000
4P1R	4 stroke 8 cylinder	4 spark per revolution	0 - 6250
5P2R	4 stroke 5 cylinder	5 spark 2 revolution	0 - 10000
6P1R	4 stroke 12 cylinder	6 spark per revolution	0 - 4000
	2 stroke 6 cylinder		
8P1R	4 stroke 16 cylinder	8 spark per revolution	0 - 3120

6. OPERATING INSTRUCTIONS

The meter typically has 'M' (Mode) and 'S' (Set) buttons for navigation and settings. Specific button functions may vary slightly, but generally:

- **'M' Button:** Press to cycle through display modes (TOT, RPM, TEMP, CLOCK). Long press to enter setting menus.
- **'S' Button:** Press to adjust values within a setting menu. Long press to confirm settings or reset specific values (e.g., JOB hours, Max RPM).

6.1 Setting Initial TOT Hours

To set an initial value for Total Hours (TOT), long press the 'M' button until the TOT setting appears. Use the 'S' button to adjust the value, and 'M' to move to the next digit or confirm.

6.2 Resetting JOB Hours

When in JOB mode, long press the 'S' button to reset the current job hours to zero.

6.3 Setting Service Reminder (SVC)

Access the SVC setting via the 'M' button. Use the 'S' button to set the desired service interval (5-1000 hours) or turn it OFF. The meter will display a reminder when the set hours are reached.

6.4 Temperature Unit and Alarm Settings

In temperature display mode, use the 'M' button to access settings for switching between °C and °F. You can also set a maximum temperature alarm and reset the recorded maximum temperature.

6.5 Tachometer RPM Range and Overspeed Alert

Select the appropriate RPM measurement range (r1-r4) based on your engine type (refer to Table 1). You can also set an overspeed alarm and reset the recorded maximum RPM.

6.6 Backlight Control

Adjust the backlight setting to Auto, ON, or OFF through the menu options.

7. MAINTENANCE

7.1 Battery Replacement

The meter is powered by a replaceable CR2032 Lithium metal battery. When the battery indicator shows low power, replace the battery by carefully opening the battery compartment on the back of the unit using the provided screwdriver.

EASY TO INSTALL

Engine firing patterns	Engine type	Spark plug firing and engine rotate laps	RPM Capacity
1P1R	4 stroke 2 cylinder	1 spark per revolution	0 - 25000
	2 stroke 1 cylinder		
1P2R	4 stroke 1 cylinder	1 spark 2 revolution	0 - 25000
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8P1R	4 stroke 16 cylinder	8 spark per revolution	0 - 3120



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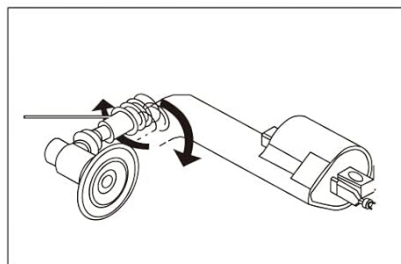
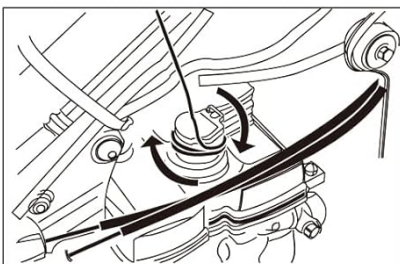


Figure 11: Battery replacement procedure

8. TROUBLESHOOTING

- **No Display:** Check battery level and ensure it is correctly installed.
- **Inaccurate RPM/Hours:** Verify the inductive wire is wrapped 4-5 turns around the spark plug wire and that the correct engine firing pattern is selected in the settings.
- **Inaccurate Temperature:** Ensure the temperature probe is securely connected and properly positioned.
- **Display Freezes:** Try removing and reinserting the battery to perform a soft reset.

9. SPECIFICATIONS

Table 3: Product Specifications

Feature	Detail
Model Number	RL-HM035A1
Material	Aluminum
Power Source	1 Lithium metal battery (CR2032) - included
Weight	118 Grams
Temperature Measurement Range	-20°C to +300°C (-4°F to +572°F)
Tachometer RPM Range	0-25000 RPM (selectable ranges)
Hour Meter Range (TOT/JOB)	0-99999H
Service Reminder (SVC) Range	5-1000H / OFF
Waterproof Rating	IP67
Country of Origin	China
UPC	728062406713

10. WARRANTY AND SUPPORT

YOOREAL provides a 2-year after-sales warranty and technical support for this product. If you encounter any quality issues with the product within two years of purchase, YOOREAL will provide a replacement service.

For professional customer service and support, please contact YOOREAL via the Amazon platform. The YOOREAL Care team is available to assist you with any questions or concerns, even if the Amazon return window has closed. An electronic version of the manual in different languages can also be obtained from YOOREAL customer service.