## YOOREAL RL-HM019C

# Yooreal Digital Tachometer RL-HM019C

### User Manual

## 1. Product Overview

The Yooreal YR-HM019J digital tachometer is designed to measure and display engine RPM (Revolutions Per Minute) for various small gasoline engines. It features real-time RPM recording, maximum RPM recall, and a durable, waterproof design. This device is suitable for a wide range of applications, including lawn mowers, generators, motorcycles, ATVs, and trucks.

- **Real-time RPM Measurement:** Records current RPM when the engine is running, with a measurement range of 0-25000 RPM and 10 RPM resolution.
- **Max RPM Recall:** Displays the highest RPM achieved since the engine started, which can be reset.
- **Programmable Firing Patterns:** Compatible with various engine types, including 2-stroke (1, 2, 3 cylinders) and 4-stroke (1, 2, 3, 4, 5, 6, 8, 12, 16 cylinders) gasoline engines.
- **Durable and Waterproof:** Features an IP68 waterproof rating with 100% epoxy resin sealing, protecting it from moisture and humidity.
- **Easy Installation:** Utilizes an alligator clip for quick and secure connection to spark plug wires.
- **Long Battery Life:** Built-in replaceable CR2450 battery for extended endurance.




Figure 1.1: The Yooreal digital tachometer, model RL-HM019C, features a compact design with a digital display, an attached wire, and an alligator clip for easy connection to spark plug wires.

## 2. Specifications

| Specification | Value |
|---|---|
| Model Number | RL-HM019C |
| Brand | YOOREAL |
| Battery Type | 1 Lithium metal (CR2450) - included |
| Product Dimensions (L x W x H) | 4.5 x 5 x 6.2 cm (1.77 x 1.97 x 2.44 inches) |
| Item Weight | 63 Grams (2.22 ounces) |

| | |
|---|---|
| Material | Plastic |
| Waterproof Rate | IP68 |
| RPM Measurement Range | 0-25000 RPM |
| Wire Length | 1.1 meters (43.3 inches) |
| Manufacturer | Ningbo Yooreal Electronics Technology Co.,Ltd |
| Country of Origin | China |
| UPC | 723093548340 |




Figure 2.1: Detailed dimensions of the Yooreal Digital Tachometer, showing its compact size for easy integration.

## 3. Setup and Installation

The Yooreal digital tachometer is designed for straightforward installation. Follow these steps to set up your device:

1. **Connect the Alligator Clip:** Locate the spark plug wire on your engine. Securely attach the alligator clip from the tachometer to the spark plug wire. Ensure a firm connection for accurate readings. This inductive connection allows the tachometer to sense engine pulses without direct electrical contact.




Figure 3.1: The tachometer uses an inductive pickup to measure RPM. The alligator clip connects directly to the spark plug wire of the engine.

2. **Mounting the Tachometer (Optional):** The tachometer can be permanently mounted using screws. Identify a suitable flat surface near the engine where the display will be visible and the wire can reach the spark plug. Use two screws (included in the accessories) to secure the unit through the designated mounting holes.




Figure 3.2: The tachometer can be permanently mounted using two screws through the designated holes on the unit.

3. **Cable Management:** Use the provided zip ties to neatly secure any excess wire, preventing it from interfering with moving parts or getting damaged.

## 4. Operation

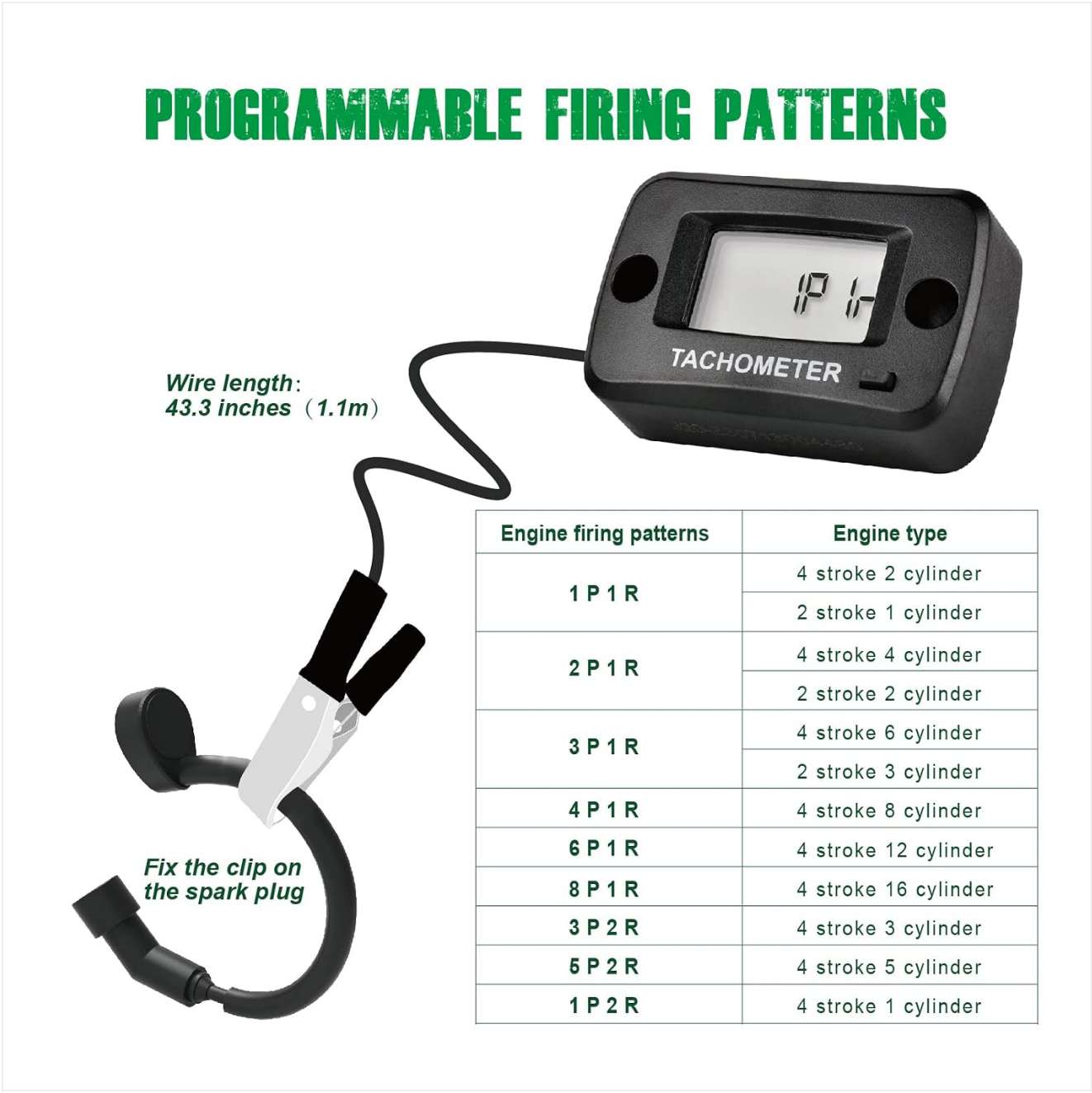
Once installed, the tachometer will automatically begin to display RPM readings when the engine is running. The device offers several operational features:

- **Real-time RPM Display:** The main screen continuously shows the current engine RPM.
- **Max RPM Recall and Reset:** The tachometer records the highest RPM achieved. To view the maximum RPM, press the button on the unit. To reset the maximum RPM, press and hold the button until the display clears or resets.




Figure 4.1: The display shows the maximum RPM recorded since the engine started, which can be recalled and reset.

- **Selecting Engine Firing Patterns:** The tachometer supports various engine types for accurate RPM measurement. Refer to the table below to understand the compatible firing patterns. The device typically allows selection of these patterns during initial setup or via a specific button sequence (refer to the included user manual for exact button operations if not immediately apparent).




| Engine firing patterns | Engine type |
|---|---|
| 1 P 1 R | 4 stroke 2 cylinder |
| | 2 stroke 1 cylinder |
| 2 P 1 R | 4 stroke 4 cylinder |
| | 2 stroke 2 cylinder |
| 3 P 1 R | 4 stroke 6 cylinder |
| | 2 stroke 3 cylinder |
| 4 P 1 R | 4 stroke 8 cylinder |
| 6 P 1 R | 4 stroke 12 cylinder |
| 8 P 1 R | 4 stroke 16 cylinder |
| 3 P 2 R | 4 stroke 3 cylinder |
| 5 P 2 R | 4 stroke 5 cylinder |
| 1 P 2 R | 4 stroke 1 cylinder |

Figure 4.2: The tachometer supports various engine firing patterns, allowing accurate RPM measurement for different engine types, including 2-stroke and 4-stroke engines with varying cylinder counts. The wire length is 43.3 inches (1.1m).

## 5. Maintenance

The Yooreal digital tachometer is designed for durability and requires minimal maintenance.

- **Waterproof Design:** The unit is IP68 rated, meaning it is highly resistant to dust and water ingress. It can withstand splashes and temporary immersion. However, avoid prolonged submersion or high-pressure water jets.




Figure 5.1: The device features an IP68 waterproof rating, ensured by 100% epoxy resin sealing, protecting it from moisture and humidity.

- **Battery:** The tachometer uses an internal, replaceable CR2450 battery. While designed for long endurance, if the display becomes dim or unresponsive, the battery may need replacement. Consult a qualified technician or refer to the detailed instructions in the physical user manual for battery replacement procedures.
- **Cleaning:** Wipe the unit with a soft, damp cloth to remove dirt or debris. Do not use harsh chemicals or abrasive cleaners.

## 6. Troubleshooting

If you encounter issues with your Yooreal digital tachometer, consider the following common points:

- **No RPM Reading:**
  - Ensure the alligator clip is securely attached to the spark plug wire.
  - Verify the engine is running.
  - Check if the battery is depleted.

- **Inaccurate RPM Reading:**
    - Confirm that the correct engine firing pattern is selected for your specific engine type. Incorrect settings can lead to inaccurate readings.
    - Ensure the alligator clip has a clean and strong inductive connection to the spark plug wire.
- **Display is Dim or Blank:**
    - The internal CR2450 battery may be low or depleted.
- **No Off Switch:**
    - This model does not feature a manual off switch. It is designed to operate continuously or enter a low-power state when no RPM is detected. The battery life is designed to accommodate this functionality.

For persistent issues, please contact Yooreal customer support.

## 7. Applications

The Yooreal digital tachometer is a versatile tool suitable for a wide array of small gasoline engine applications, including but not limited to:

- Lawn Mowers
- Generators
- Motorcycles
- ATVs (All-Terrain Vehicles)
- Snowmobiles
- Chainsaws
- Small Boats
- Pickup Trucks (for specific engine types)
- Compressors

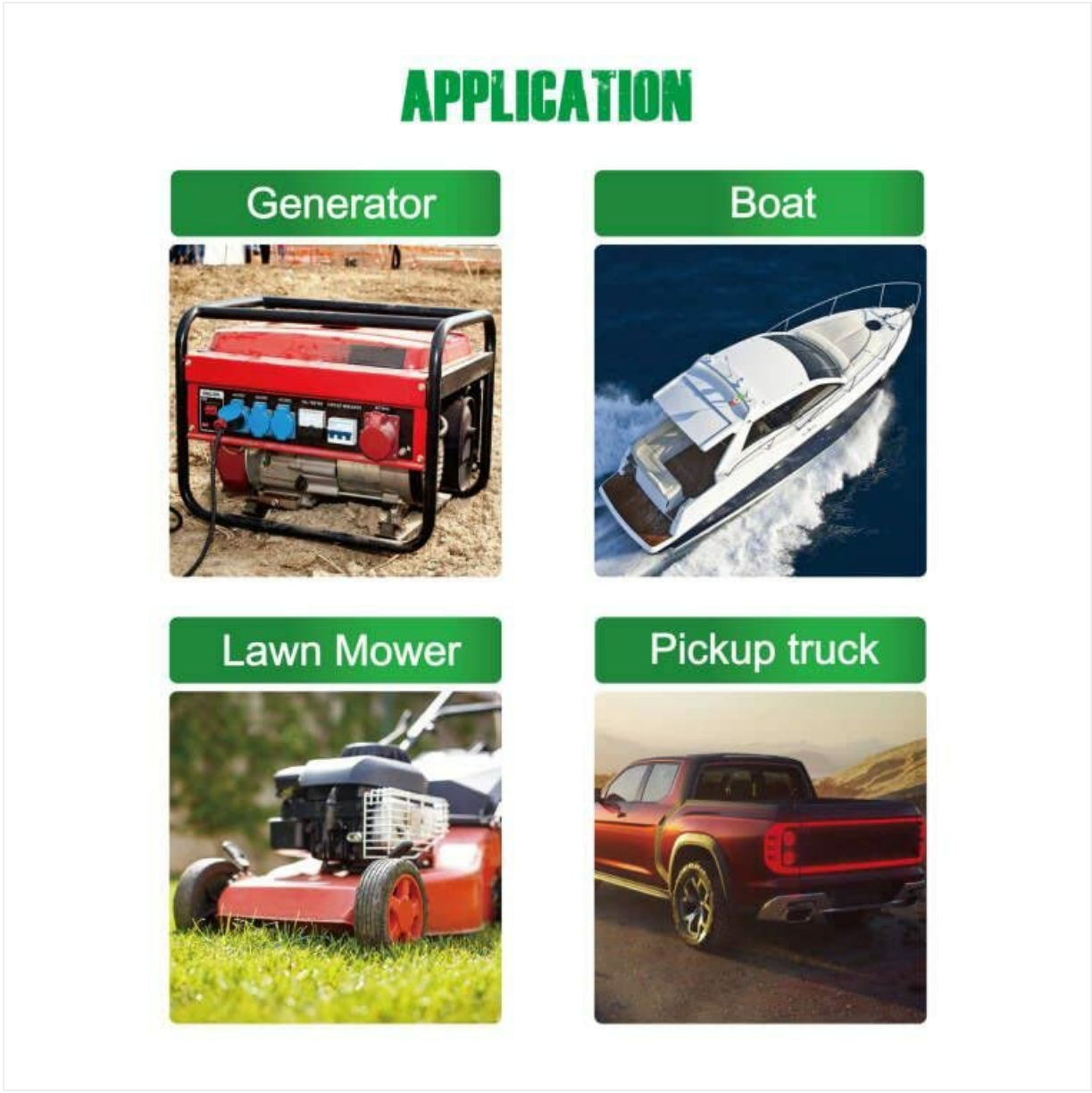



Figure 7.1: The Yooreal tachometer is versatile and can be used with various small gasoline engines, including those found in generators, boats, lawn mowers, and pickup trucks.

## 8. Warranty and Support

Yooreal is committed to providing high-quality products and excellent customer service.

- **Warranty:** This product comes with a 2-year warranty from the date of purchase. This covers manufacturing defects and ensures product reliability.
- **Spare Parts Availability:** Spare parts are available for 2 years.
- **Customer Support:** Yooreal offers professional 7x24 hour customer support. For any inquiries, technical assistance, or warranty claims, please contact the YOOREAL Care team. They are dedicated to providing hassle-free replacement or return services.

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**Question**

Example: How do I reset this device or fix this error?

**Details**

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question