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> RUIZHAN RD3002 Lab Analytical Scale User Manual

## RUIZHAN RD3002

# RUIZHAN RD3002 Lab Analytical Scale User Manual

Model: RD3002 | Precision: 0.01g | Capacity: 3000g

## INTRODUCTION

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This manual provides detailed instructions for the safe and efficient use of your RUIZHAN RD3002 Lab Analytical Scale. This high-precision electronic digital balance is designed for accurate measurements in various applications, including laboratory, industrial, agricultural, chemical, and jewelry weighing. Please read this manual thoroughly before operating the device.



Figure 1: RUISHAN RD3002 Lab Analytical Scale overview.

## SETUP INSTRUCTIONS

- Unpacking:** Carefully remove the scale and all accessories from the packaging. Verify all components are present: scale unit, stainless steel weighing pan, power adapter, and 500g calibration weight.
- Placement:** Place the scale on a stable, level surface, free from vibrations, drafts, and direct sunlight. Ensure the operating environment is within recommended temperature and humidity ranges.
- Leveling:** Use the adjustable leveling feet located at the bottom of the scale to ensure it is perfectly level. Refer to the built-in bubble level (if present) for guidance.

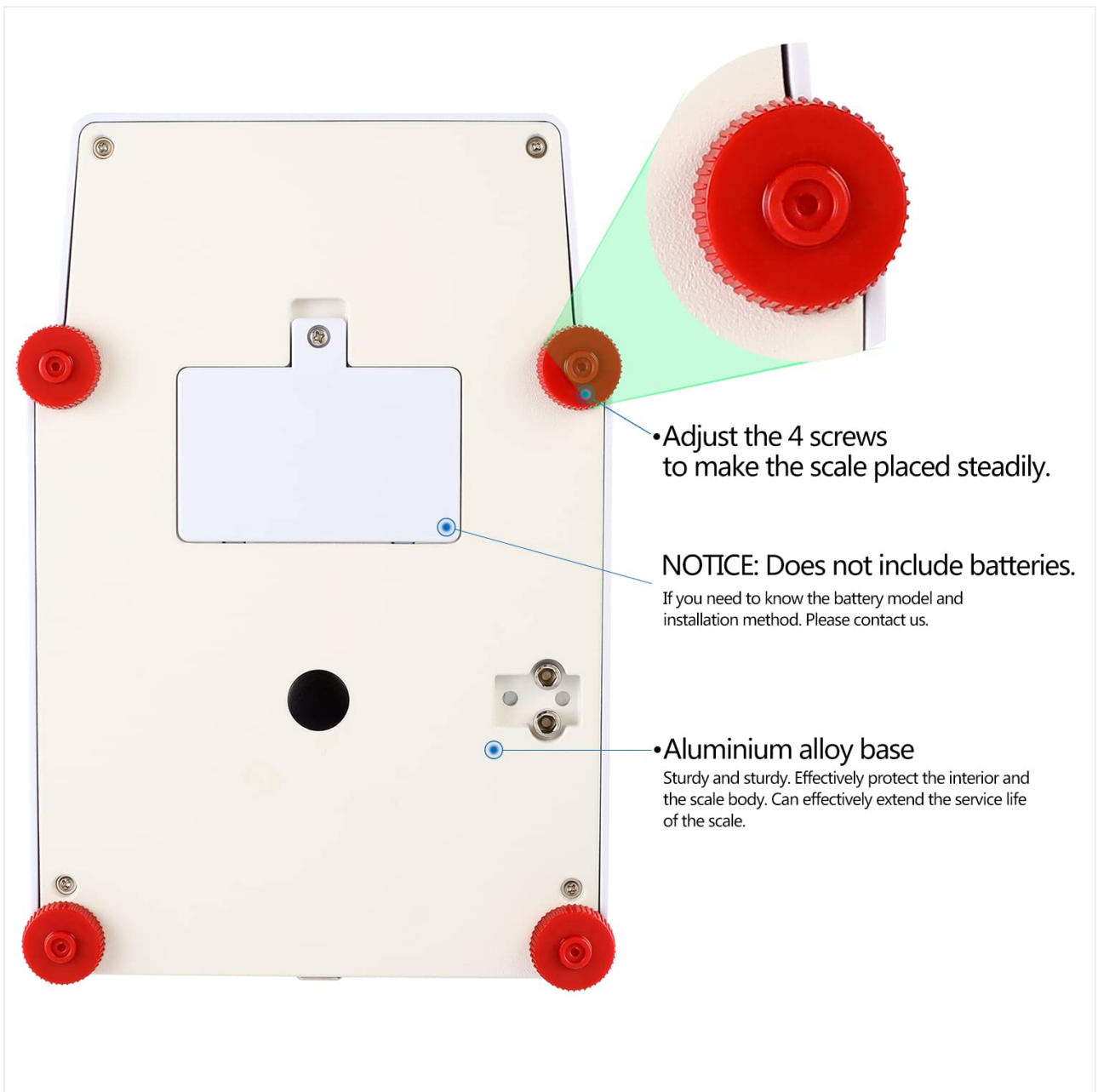


Figure 2: Adjusting the leveling screws for stable placement. The aluminum alloy base provides stability.

4. **Power Connection:** Connect the provided power adapter to the scale's power adapter interface and then to a suitable 100-240V AC power outlet.



Figure 3: Power adapter interface and optional RS-232 port for connecting to printers or computers (data cable not included).

5. **Preheating:** After connecting power, allow the scale to preheat for 3-15 minutes before use to ensure optimal accuracy and stability.
6. **Calibration:** The scale supports external calibration. Refer to the "Operating Instructions" section for details on performing calibration using the included 500g calibration weight.

## OPERATING INSTRUCTIONS

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Familiarize yourself with the control panel and display:



Figure 4: LCD display and function keys for operation.

- **Power On/Off:** Press the **ON/OFF** button to turn the scale on or off.
- **Zeroing/Tare Function:**
  - To zero the scale, ensure the pan is empty and stable, then press the **Tare/Menu** button briefly. The display will show "0.00g".
  - To tare (subtract the weight of a container), place the empty container on the pan, wait for the reading to stabilize, then press the **Tare/Menu** button. The display will show "0.00g", allowing you to weigh the contents accurately.
- **Unit Conversion:** Press the **Unit/Pcs** button repeatedly to cycle through available weighing units: grams (g), ounces (oz), carats (ct), pounds (lb), GSM, kilograms (KG), pennyweights (DWT), etc.
- **Counting Function (PCS):**
  - Place a known quantity of items (e.g., 10, 20, 50, 100 pieces) on the pan.
  - Press and hold the **Unit/Pcs** button until "PCS" appears.
  - Use the **Print/Cal** or **Tare/Menu** buttons to select the sample quantity you placed.
  - Press **Unit/Pcs** again to confirm. The scale will now display the count of items placed on the pan.
- **Calibration:**

- Ensure the scale is stable and empty.
- Press and hold the **Print/Cal** button until "CAL" appears on the display.
- The display will then show the required calibration weight (e.g., "500g").
- Carefully place the 500g calibration weight (included) onto the center of the weighing pan.
- Wait for the display to stabilize and show "PASS" or return to normal weighing mode. Remove the weight. Calibration is complete.

● **Weighing Procedure:**

- Turn on the scale and allow it to preheat.
- Ensure the display reads "0.00g". If not, press **Tare/Menu**.
- Carefully place the item(s) to be weighed onto the center of the stainless steel weighing pan.
- Wait for the reading to stabilize. The displayed value is the weight of the item(s).

## MAINTENANCE

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- **Cleaning:** Wipe the scale's exterior with a soft, damp cloth. Do not use abrasive cleaners, solvents, or immerse the scale in water. The stainless steel weighing pan can be removed for cleaning.
- **Storage:** When not in use, store the scale in a clean, dry environment, away from extreme temperatures, humidity, and direct sunlight.
- **Handling:** Handle the scale with care. Avoid dropping it or subjecting it to sudden shocks, as this can affect its precision.
- **Regular Calibration:** For consistent accuracy, perform calibration regularly, especially if the scale is moved or subjected to significant temperature changes.

## TROUBLESHOOTING

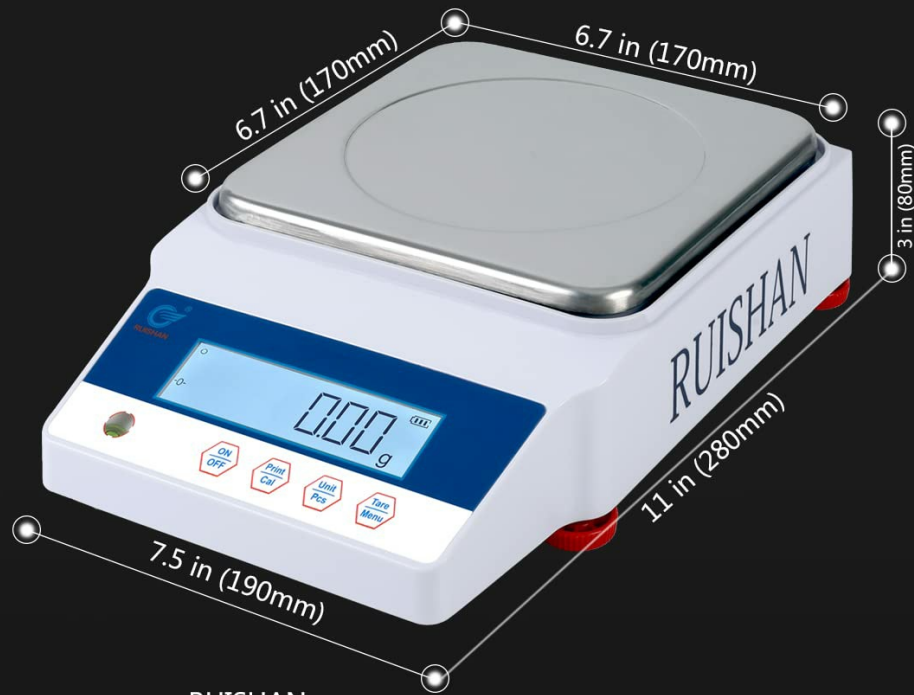
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If you encounter issues with your scale, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Inaccurate readings / Fluctuating display	<ul style="list-style-type: none"> <li>● Scale not level</li> <li>● Drafts or air currents</li> <li>● Vibrations</li> <li>● Insufficient preheating time</li> <li>● Needs calibration</li> </ul>	<ul style="list-style-type: none"> <li>● Adjust leveling feet.</li> <li>● Relocate scale away from drafts (e.g., AC vents).</li> <li>● Place on a stable, vibration-free surface.</li> <li>● Allow 3-15 minutes preheating.</li> <li>● Perform external calibration.</li> </ul>
"O-L" or "EEEE" error message	Overload	Remove excess weight immediately. Do not exceed the maximum capacity of 3000g.
Scale does not turn on	<ul style="list-style-type: none"> <li>● No power supply</li> <li>● Faulty power adapter</li> </ul>	<ul style="list-style-type: none"> <li>● Check power connection and outlet.</li> <li>● Ensure power adapter is functioning correctly.</li> </ul>
Counting function inaccurate	Incorrect sample quantity set during PCS mode setup	Repeat the counting function setup, ensuring the correct sample quantity is selected.

## SPECIFICATIONS

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Brand	RUISHAN
Model	RD series
Accuracy	0.01g (10mg)
Repeatability	±0.03g
Capacity	1kg, 2kg, 3kg, 5kg, 6kg
Screen display	Power saving LCD screen
Pan Dimensions	170*170 mm
Pan material	Stainless steel
Gross weight	2.8kg
Setting	Zeroing and peeling, Unit conversion, Counting, Print( RS-232 ) and function menu etc.

Figure 5: Key specifications and dimensions of the analytical scale.

Feature	Detail
Brand	RUISHAN
Model Number	RD3002
Accuracy	0.01g (10mg)
Maximum Capacity	3000g (3kg)
Readout Accuracy	0.01 Grams
Repeatability	±0.03g
Linearity Error	±0.02g
Stabilization Time	≤5s
Preheating Time	3-15 minutes
Weighing Pan Material	Stainless Steel

Feature	Detail
<b>Weighing Pan Dimensions</b>	170 x 170 mm (6.7 x 6.7 inches)
<b>Base Material</b>	Aluminium Alloy
<b>Body Material</b>	Durable ABS
<b>Display Type</b>	High-definition LCD (100x28mm screen size)
<b>Measurement Units</b>	g, oz, ct, lb, GSM, KG, DWT, etc.
<b>Connectivity</b>	RS232 interface (data cable not included)
<b>Power Supply</b>	100-240V AC adapter
<b>Special Features</b>	Built-in level, adjustable leveling feet, overload alarm, error indication, external calibration, counting function, adaptive temperature control system, power overload protection, new generation resistance strain sensor, automatic fault check at boot, quad-core CPU processing, 4.0-magnitude shockproof.

## WARRANTY AND SUPPORT

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The RUISHAN RD3002 Lab Analytical Scale comes with a **1-year warranty** from the date of purchase. Additionally, a **30-day return policy** is applicable. For any technical assistance, warranty claims, or customer support, please contact RUISHAN customer service. Detailed user instructions are also available with the product.