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> RUIZHAN Precision Lab Balance Scale User Manual

RUIZHAN RSTP10001-10kg/0.1g SP

RUIZHAN Precision Lab Balance Scale User Manual

Model: RSTP10001-10kg/0.1g SP

1. INTRODUCTION

This user manual provides detailed instructions for the operation and maintenance of your RUIZHAN Large Range 10kg x 0.1g Precision Lab Balance Scale. This digital electronic balance is designed for accurate weighing in various applications including industrial, agricultural, commercial, school, and scientific research settings. It features a high-precision resistance strain sensor, a stainless steel weighing pan, and a durable ABS body.



Figure 1: RUIZHAN Precision Lab Balance Scale (Model RSTP10001-10kg/0.1g SP)

2. KEY FEATURES

- High-precision strain gauge sensor for accurate measurements.
- Durable stainless steel weighing pan and reinforced ABS body.
- Easy-to-read high-definition LED display.
- Multiple weighing units: grams (g), pounds (lb), ounces (oz), carats (ct), etc.
- Functions include weighing, counting, tare, and unit conversions.
- Equipped with RS232 interface for data output (data cable not included).
- Built-in level and adjustable leveling feet for precise setup.
- Overload alarm and error indication for safe operation.



Figure 2: Key features and components of the scale.

3. SETUP

3.1 Unpacking and Inspection

Carefully remove the scale from its packaging. Inspect all components for any signs of damage. Ensure the stainless steel weighing pan is securely placed on the scale.

3.2 Placement

Place the scale on a stable, level surface free from vibrations, drafts, and direct sunlight. Avoid placing it near heat sources or air conditioning vents, as temperature fluctuations can affect accuracy.

3.3 Power Connection

Connect the provided power adapter to the scale's power input port and then to a suitable power outlet. Note that batteries are not included with this product and must be purchased separately if battery operation is desired.

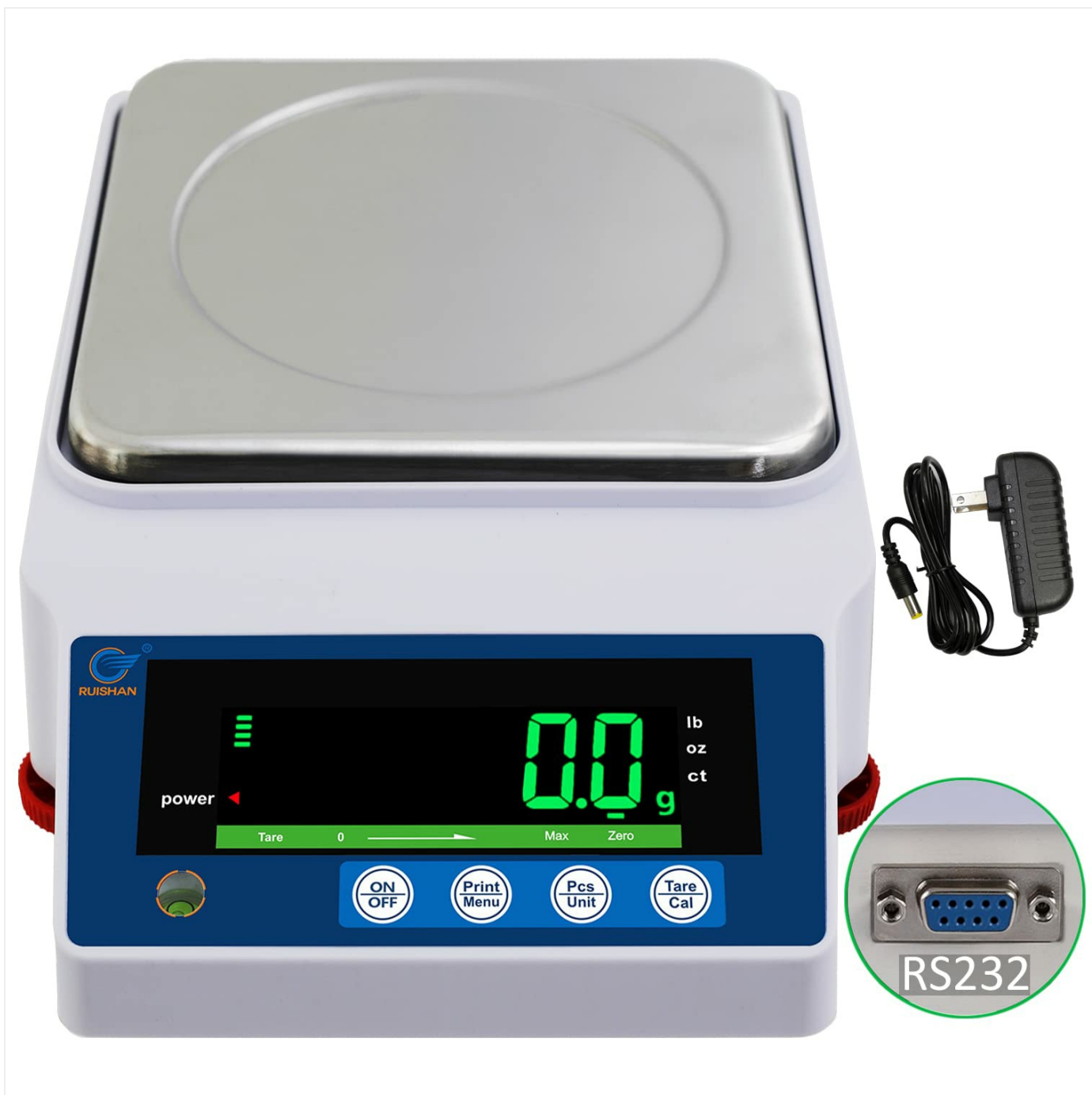


Figure 3: Rear view of the scale showing power input and RS232 port.

3.4 Leveling the Scale

The scale features adjustable leveling feet and a built-in level bubble. Adjust the feet until the bubble is centered within the circle, indicating the scale is perfectly level. This is crucial for accurate measurements.

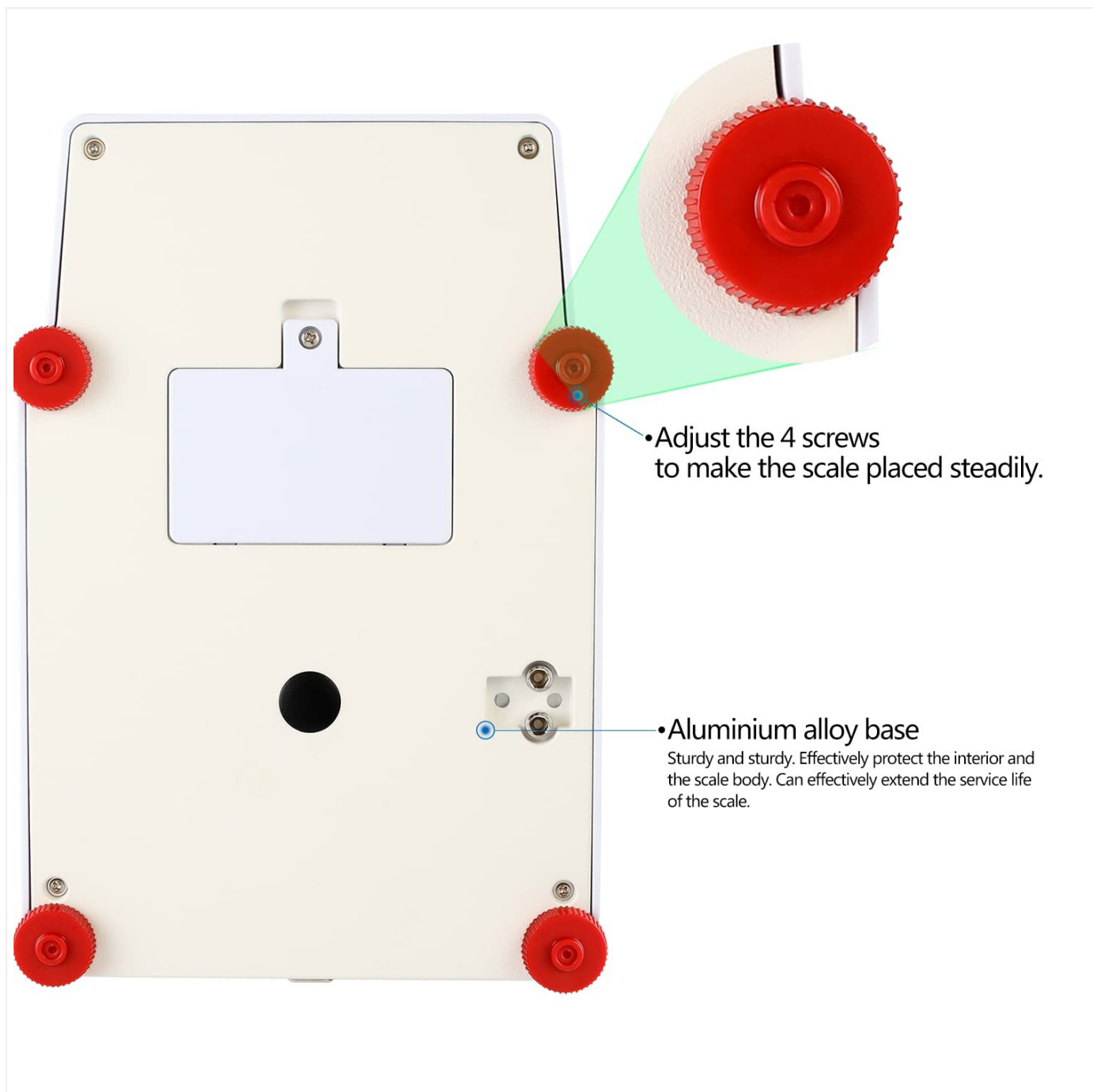


Figure 4: Bottom view illustrating adjustable feet for leveling.

3.5 Preheating Time

Allow the scale to preheat for 10-30 minutes after connecting power before performing any measurements. This ensures optimal performance and stability.

4. OPERATING INSTRUCTIONS

4.1 Basic Weighing

1. Press the **ON/OFF** button to turn on the scale.
2. Wait for the display to show "0.00g" (or your selected unit) and stabilize.
3. Place the item to be weighed on the center of the weighing pan.
4. Read the stable weight displayed on the screen.

4.2 Tare Function

The tare function allows you to subtract the weight of a container, so only the net weight of the contents is measured.

1. Place the empty container on the weighing pan.
2. Press the **Tare/Cal** button (short press). The display will reset to "0.00g".
3. Add the items to be weighed into the container. The display will show the net weight of the items.

4.3 Unit Conversion

To switch between weighing units (g, lb, oz, ct, etc.):

- Long press the **Pcs/Unit** button. The display will cycle through available units. Release the button when your desired unit is shown.

4.4 Counting Function

The counting function allows you to count multiple pieces of items of uniform weight.

1. Ensure the scale is at zero.
2. Short press the **Pcs/Unit** button. The display will show a sample quantity (e.g., 10, 20, 50, 100). Select the desired sample quantity by repeatedly short pressing the button.
3. Place the exact number of sample items (e.g., 10 pieces if you selected 10) on the weighing pan.
4. The scale will now display the count of items. You can add more items, and the scale will update the total count.
5. To exit counting mode, short press the **Pcs/Unit** button again.

4.5 Calibration

Calibration ensures the accuracy of your scale. It is recommended to calibrate the scale periodically or if you suspect inaccurate readings. Note that 0.1g accuracy products typically do not include calibration weights, and you may need to provide your own (e.g., 500g or 1kg weights).

1. Ensure the scale is placed stably and level.
2. With the scale turned on and empty, press and hold the **Tare/Cal** button until the display shows "CAL".
3. The display will then show a flashing weight value (e.g., "500.00g" or "1000.00g"). Place the corresponding calibration weight onto the center of the weighing pan.
4. The scale will automatically recognize and calibrate the current weight. Wait approximately 3 seconds; the number will stop flashing.
5. Remove the calibration weight. The display should show "0.00". If the balance does not reset to zero, repeat the operation.



CALIBRATION

take 2000g scale for example



1. Note: Please make sure that the scale is placed stably during calibration or use. (Adjustable feet to complete the level.)
2. Press and hold "CAL" until the scale displays "CAL".
3. Put the suitable calibration weights when the balance displays twinkles a weight. (The balance will automatically recognize and calibrate the current weight)
4. Wait about 3 seconds, number will stop flashing. Take away the calibration weights, the scale displays "0.00", it is finished. (If the balance is not reset to zero, repeat the operation again)

Figure 5: Visual guide for the calibration process.

4.6 Data Connectivity (RS232)

The scale is equipped with an RS232 serial port for connecting to external devices such as printers or computers. A crossover data cable is required and is not included with the product.



RS232 interface for connecting printers and computers

Note: The product does not include a data cable. Need to buy separately.

adapter interface

Figure 6: RS232 interface for connecting to printers and computers.

4.7 Bluetooth Connection (Functional Demo)

A functional demo for Bluetooth connectivity is available. If you require Bluetooth functionality, please contact the manufacturer for details on adding this feature.

5. PRODUCT DEMONSTRATION VIDEOS

5.1 RUIZHAN Precision Balance Overview and Operation

Your browser does not support the video tag.

This video provides a comprehensive overview of the RUIZHAN Precision Balance. It demonstrates the 360-degree panoramic display, highlights key components like the reinforced ABS body, adjustable feet, stainless steel pan, and RS232 interface. The video also includes practical demonstrations of weighing (1000g/0.01g accuracy), counting (counting hundreds of parts in seconds), multi-weighing unit switching, calibration, connecting to a printer, and connecting to a computer for data acquisition. It also notes that the product does not contain batteries.

5.2 RUIZHAN Precision Balance Features and Connectivity

Your browser does not support the video tag.

This video showcases the features of the RUIZHAN Precision Balance, including its 360-degree panoramic display, reinforced ABS body, adjustable feet, stainless steel pan, and RS232 interface. It demonstrates weighing with 3000g/0.01g accuracy, counting functionality, multi-weighting unit switching, and calibration. Additionally, it illustrates connecting the scale to a printer and a computer for data transfer, and briefly touches upon Bluetooth connectivity as a functional demo. The video also confirms that batteries are not included with the product.

6. MAINTENANCE

6.1 Cleaning

To clean the scale, use a soft, damp cloth with a mild detergent. Do not use abrasive cleaners or solvents, as these can damage the surface. Ensure no liquid enters the internal components. The stainless steel pan can be removed for thorough cleaning.

6.2 Storage

When not in use for extended periods, store the scale in a dry, dust-free environment. If using batteries, remove them to prevent leakage.

6.3 General Care

- Avoid dropping or subjecting the scale to sudden impacts.
- Do not overload the scale beyond its maximum capacity.
- Keep the scale away from strong electromagnetic fields.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Inaccurate readings	Scale not level, temperature fluctuations, drafts, need for calibration, unstable surface.	Ensure scale is level using adjustable feet and level bubble. Place in a stable environment away from drafts and temperature changes. Perform calibration as per section 4.5.
"EEEE" or "O-Ld" displayed	Overload.	Remove excess weight immediately. Do not exceed the maximum capacity of 10kg.
Scale does not turn on	No power, faulty adapter, dead batteries (if applicable).	Check power connection. Ensure adapter is working. If using batteries, replace them.
Display shows "UNST" or unstable readings	Vibrations, drafts, unstable surface, scale not warmed up.	Relocate the scale to a stable, vibration-free area. Avoid drafts. Allow adequate preheating time (10-30 minutes).

8. SPECIFICATIONS

Feature	Detail
Brand	RUIZHAN

Feature	Detail
Model Number	RSTP10001-10kg/0.1g SP
Weight Limit	10 Kilograms (10kg)
Precision / Accuracy	0.1g
Display Type	LED
Product Dimensions	11.02 x 7.28 x 3.15 inches
Item Weight	4.41 Pounds
Special Features	Strain Gauge, Backlit Display, Counting Function, Tare Function, Unit Conversion, RS232 Interface
Recommended Uses	Coins, Jewelry, Herbs, Powders, Lab, Industrial, Commercial
Preheating Time	10-30 minutes
Stabilization Time	≤5 seconds
Linearity Error	±0.3g
Country of Origin	China

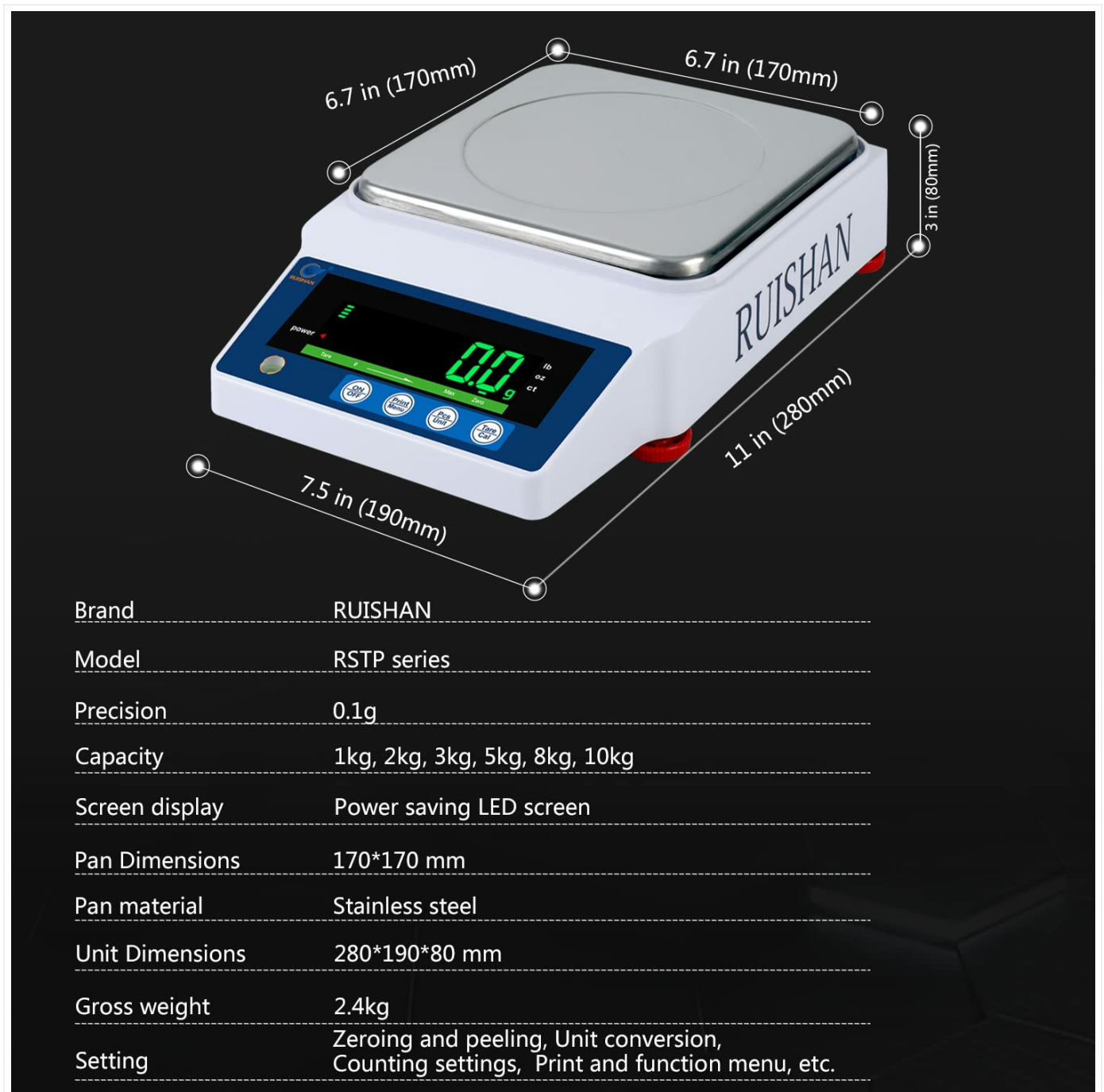


Figure 7: Product dimensions and key specifications.

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation included with your purchase or contact RUISHAN directly. The official user manual in PDF format can be accessed via this link: [RUISHAN User Manual \(PDF\)](#). For further assistance, you may visit the official RUISHAN store on Amazon: [RUISHAN Store](#).