

RUISHAN

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Precision Balance

User Manual

Suitable for 0.1g and 0.01g accuracy



Made in China

RUISHAN

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Company Information

WARRANTY

The RUISHAN Precision Balance has a 1 Year Manufacturer's Warranty. Please contact the RUISHAN customer service department for more information.

ABOUT US

RUISHAN is a lab and scientific equipment manufacturer. We produce and sell an array of popular products, including analytical balances, Laboratory Balance, Precision Balance, Digital Weighing Scale, Digital Counting Scale, Digital Bench Weighing Scale, Digital Counting Bench Scale, Moisture Analyzer etc.

We stand behind all of our products, offering a 1 year warranty, and a responsive customer service team committed to solving any questions or issues you may have.

CONTACT

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Maintenance

MAINTENANCE AND STORAGE

- Always power off and unplug before cleaning or storing it.
- Do not clean the machine with elements that may corrode the machine.
- Do not immerse the machine in water or other liquids.
- Use proper safety gear (e.g. gloves, eyewear, etc.) when cleaning the machine to avoid injury.

Trouble Shooting

Malfunction	Judgment method	Solution
No boot, no work, no display	Check if the power cord is in good condition, Is there a breakpoint.	Replace the power cord
	Is the connection between the balance and the power cord reliable?	Ensure that both ends of the power cord are firmly connected to the device
The balance indication is unstable, The decimal point flashes continuously	Check whether the workbench where the balance is located is vibrating or shaking	Improve working condition to avoid vibration
	Check there is any object touching the weighing pan or under the weighing pan	Remove the weighing pan and clean the objects around the weighing pan and the tray
	Check if there is wind around the scale	Close doors and windows of room
	The temperature or humidity changes too much	Make the temperature or humidity stable
	Unstable supply voltage	Use a voltage stabilizer to power the scale.
	There are machinery and equipment that generate strong magnetism and radiation around the balance	Keep away from such machinery and equipment or use shielding devices
“- oL- -”displayed	The balance is overloaded	Take off the objects
	No signal from sensor	Contact factory
Scale measurement error is large	Place the standard weight on the weighing pan to compare the values	Calibrate the scale. See page 6 for details
Nothing happens on the scale	Tap the sensor and observe if it responds	Contact factory
	Chip damage	Contact factory

Summary

IMPORTANT!

Thank you for purchasing the RUISHAN Precision Balance. Please read the User Manual carefully before use and follow all operating and safety instructions!

PRODUCT FEATURES

- HIGH PRECISION READINGS YEAR AFTER YEAR: Get more accurate results in your lab, business or at-home projects! Built with lab-quality materials and a sensitive weighing pan, the RUISHAN digital scientific scale gives consistent, accurate readings for years.
- COUNTS HUNDREDS OF PIECES IN SECONDS: The analytical scale’s weighing and counting functions save time and money spent accounting for chemicals, powders, herbs, jewelry, precious metals, tickets and other small items. Easy conversions between grams (g), ounces (oz), carats (ct) and pounds (lb) make the scale ideal for laboratory, educational, industrial, and agricultural project.
- ADDED ACCURACY: The analytical balance has a leveling bubble, adjustable leveling feet; an overload alarm and error indication. The precision instrument can be set up in under 5 minutes and comes with a detailed, easy-to- understand instruction manual.

Summary

PRODUCT FEATURES

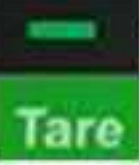
EASY-TO-USE INTUITIVE CONTROLS: The precision electronic balance features an intuitive, easy-to-read LED digital display; weighing, tare and counting functions; five-second stabilization; external calibration; and a sensitive stainless steel weighing pan.

SPECIFICATIONS

Model	RSTP series
Pan Size	170*170 mm
Power Supply	110V
Display	LED Display
Units	g, ct, oz, lb
Stabilization time	≤5s
Working Temp	5-40 °C
Functions	Weighing/Counting/Tare/Print/Menu
Warm up Time	15 minutes
Sensor	Strain Gauge Sensor
Materials	Durable ABS body, Stainless steel weighing pan, Aluminum base
Calibration	External Calibration

Operation

TARE (CONTINUED)

- When the weight of the item to be weighed is not more than 2% of the total range, short press TARE/CAL ($T < 2s$), and the balance will return to zero. The zero setting indicator on the display will light up. The balance can still weigh at full scale.
- When the weight of the item being weighed is greater than 2% of the total range, short press TARE/CAL ($T < 2s$), and the balance will return to zero, The tare setting indicator on the display will light up. The balance cannot be weighed in full capacity. At this time you should check the remaining weighing range on the loading progress bar. Only weigh in the remaining range.

COUNTING FUNCTION

- *Used to count number of parts by extrapolating from original sample.
- Press Pcs/Unit. The balance will display 10, 20, 50, 100 in cycles.
- Select from 10, 20, 50, 100.
- Place the corresponding number of units on the scale. For example, if you chose 10, then place 10 units on the scale.
- Press PCS key to confirm.
- Add or remove pieces from the pan and the scale will display the number of pieces used. For example, add 3 and the scale will display 13.
- Press Pcs/Unit again to exit counting function.

RS232 CONNECTION

This interface is used for Printer and Computer Connection. It can be used after the default connection.If you cannot use it, please contact: ruishan.am@aliyun.com

Operation

GETTING STARTED (CONTINUED)

- The balance will display numbers 1 through 9. Once it displays “0” the balance will be ready to calibrate.

CALIBRATION

- Turn on the scale.
 - Press Tare/Cal button until the display shows CAL.
 - The display will show a weight (eg.1000g). Place the corresponding standard mass on the weighing pan. (The balance has the function of automatically identifying the weight of the weight and calibrating it. It is forbidden to put weights that exceed the rated capacity)
 - Remove the standard mass once the display is stable and accurate.
- *NOTE: If this is the first time using the balance, repeat the calibration steps 2-3 times. Please make sure that the scale is placed stably during calibration or use.

Linear calibration

- Long press Tare/Cal, it will display “CAL”, release the button, the display will show a weight. Long press again the button of Pcs/Unit, the scale will again display CAL, release the button, the scale will display a weight (eg:2000.00), put a 2kg mass on the plat, a few seconds later it will stable display the number of “2000.00g”. Remove the mass on the scale, it will display a weight again(eg:1000.00), put a 1kg standard mass on the pan, follow the same step until the scale automatically return to zero after the weight is removed.
- Suitable for RSTP series products of 0.1g and 0.01g.

 Note: When the product can work normally, please do not operate this step.

Safety

WARNING!

- Ensure everyone operating the machine reads the user manual and understands the operating instructions, cautions and dangers associated with the machine. Only trained staff should operate the machine.

IMPORTANT!!

- Operate the machine in a safe environment away from hazards. Do not operate in a flammable, magnetic or dangerous environment. Keep the machine away from magnetic parts (e.g. watches, pacemakers, etc.)
- Before plugging the machine into an electrical outlet, make sure the voltage and frequency matches that of the machine.
- Place the machine on a flat and spacious work surface.
- Operate the machine in a safe, dry and well ventilated environment. The environment temperature should not exceed 5-40°C.
- Always power off and unplug the machine when not in use. Store it in a safe place away from hazards
- Do not exceed the max weight to avoid damaging the sensor.

OVERLOAD WARNING

- Do not overload balance to avoid damaging load cell.
- If the display shows OL, remove weight from scale.
- If there is a calibration error, OL will be displayed. Recalibrate the balance.

Display and Controls

Display



1. Battery level indicator (Only applicable to models with built-in battery, This product does not contain batteries) NOTE: Regardless of whether the battery is installed, it will light up when the scale is started. It will jump when there is a battery in the charging state, and it will not jump without a battery and remains in full state.
2. The balance is negative
3. Power Indicator
4. Level bubble
5. The Tare setting of the balance is activated.
6. The Zero setting of the balance is activated.
7. Current display unit "gram"
8. Current display unit "carat"
9. Current display unit "ounce"
10. Current display unit "pound"
11. Range progress bar. NOTE: All progress bars are lit, indicating that the scale is full range.

CONTROLS

- | | |
|------------|---|
| ON/OFF | Switch the machine on and off. |
| Print/Menu | Print and function menu. |
| PCS/UNIT | Counting Function and Unit conversion. |
| TARE/CAL | Reduce gross weight to tare weight (TARE) and Can be used to calibrate scale (CAL). |

Operation

PACKING LIST

- RUISHAN Precision Balance
- Weighing Pan
- Weigh Pan Holder (It is already fixed on the scale by default.)
- Power Cord
- User Manual
- 500g CAL.WEIGHT (0.1g accuracy products do not include CAL.WEIGHT.)

⚠ Note: This product does not contain batteries and data cable.

INSTALLATION

- CHECK FOR DAMAGE-Open the package and ensure no parts were damaged during delivery. Make sure all parts shown in the packing list are included.
- Place scale on a flat, stable working platform.
- Assemble the balance by snapping the weighing tray into the base.
- Attach power cord and plug in device. The scale accepts **110V**. Please confirm the correct voltage before using the scale.
- Do not overload the full capacity of the balance. If there is an error, calibrate the scale.

GETTING STARTED

- Place on a stable surface. Screws on bottom of balance can be adjusted to stabilize instrument.
- Press the Power button to turn instrument on. Allow the unit to warm-up for 15 minutes.
- When the balance is turned on, it will show the max weighing range and accuracy. For example:
 - "1000.01" means a capacity of 1000g and an accuracy of 0.01g.