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› Bonvoisin 500g x 0.01g Analytical Balance Instruction Manual

## Bonvoisin XXX-12

# Bonvoisin 500g x 0.01g Analytical Balance Instruction Manual

Model: XXX-12

## 1. INTRODUCTION

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This manual provides detailed instructions for the proper setup, operation, maintenance, and troubleshooting of your Bonvoisin 500g x 0.01g Analytical Balance. Please read this manual thoroughly before using the device to ensure accurate measurements and safe operation. Keep this manual for future reference.

## 2. PRODUCT FEATURES

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- **High Precision:** 0.01g resolution with fast response for quick and accurate results.
- **Stability Features:** Equipped with an upgraded high-sensitivity sensor, bull's eye level, and height-adjustable, non-slip feet for stable placement on uneven surfaces.
- **Multi-Unit Conversion:** Easily switch between Grams (g), Kilograms (kg), Carats (ct), Ounces (oz), Troy Ounces (ozt), Pounds (lb), Pennyweight (dwt), %, tol, and mm.
- **Multiple Functions:** Includes tare, auto-correct, memory, counting (PCS), and fault visualization functions.
- **Durable Construction:** Features a large 180 x 140mm stainless steel weighing platter, durable ABS shell, and strong strain gauge sensor.
- **Clear Display:** Large LCD display provides clear and precise results.

## 3. SETUP

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### 3.1 Unpacking and Inspection

Carefully remove the analytical balance from its packaging. Inspect all components for any signs of damage. Ensure all accessories, including the power adapter and any included calibration weights (for 500g-3000g models), are present.

### 3.2 Component Overview



Make sure that the scale is stable and level.

To make adjustments, twist the 4 feet until it is stable and the level bubble is close to the center of the inner circle, but it does not have to be exact.

**Figure 1:** Overview of the Bonvoisin Analytical Balance components, including adjustable feet, level bubble, LCD display, and control buttons.

### 3.3 Powering the Scale

The balance can be powered using the provided AC power adapter or a 9V battery (not included).

- **AC Power:** Connect the power cable to the balance and plug it into a suitable power outlet.
- **Battery Power:** Insert a 9V battery into the battery compartment located on the underside of the scale.



## Two Ways of Powering



Power Cable



9V Battery (not included)

Figure 2: Powering options: AC adapter or 9V battery.

### 3.4 Leveling the Scale

For accurate measurements, the balance must be perfectly level. Use the adjustable feet and the integrated bull's eye level bubble to ensure proper leveling.

1. Place the balance on a stable, flat surface away from vibrations or drafts.
2. Adjust the height of the feet by twisting them until the air bubble in the level indicator is centered within the inner circle.

### 3.5 Installing the Weighing Pan

Ensure the stainless steel weighing pan is correctly installed on the balance. The base plate should be oriented with the dented side facing upwards for proper function.

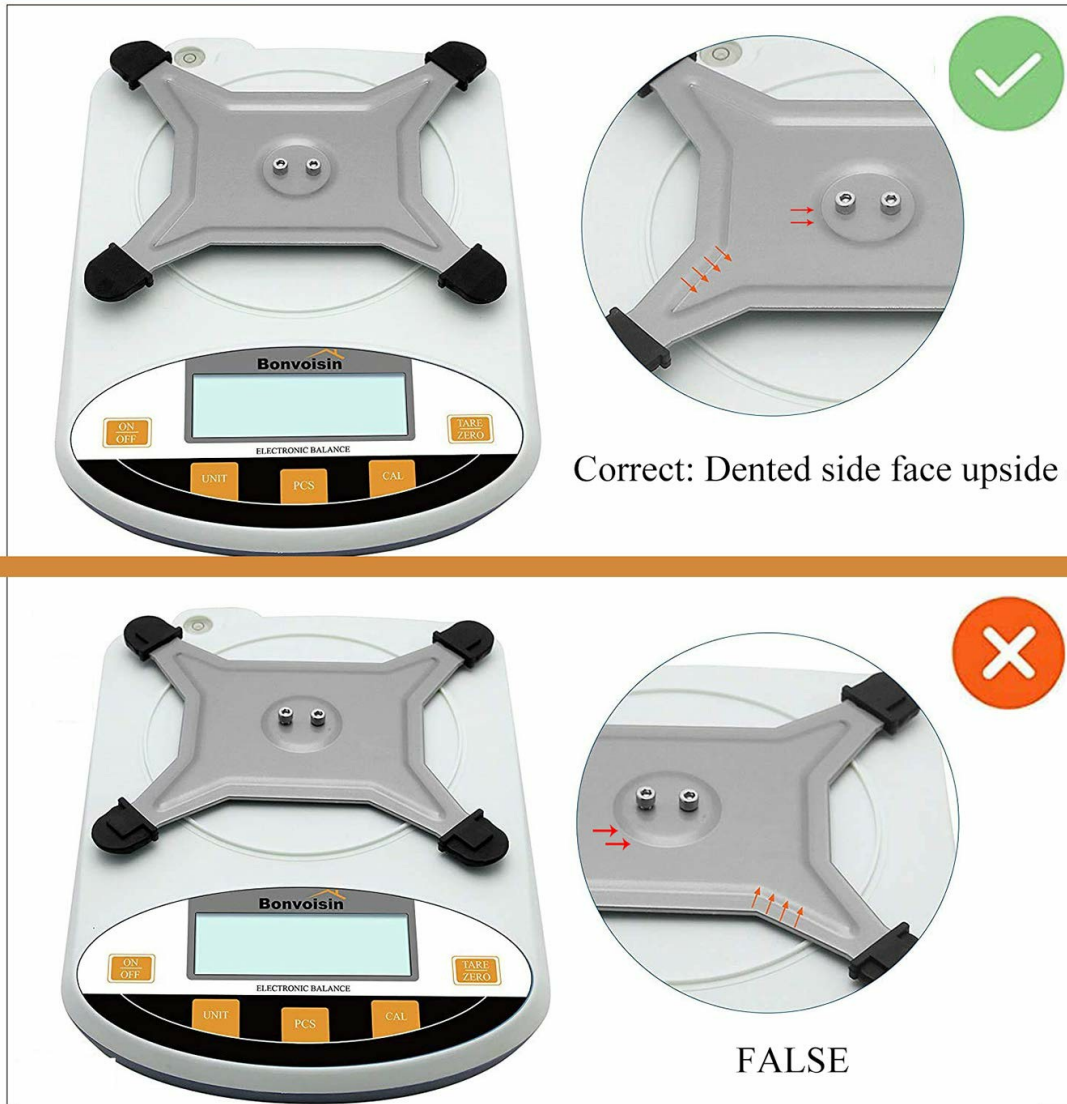


Figure 3: Correct installation of the weighing pan base plate.

## 4. OPERATION

### 4.1 Basic Weighing

1. Press the **ON/OFF** button to turn on the scale. Wait for the display to show "0.00g".
2. Place the item to be weighed on the center of the stainless steel weighing platter.
3. Read the stable weight displayed on the LCD screen.
4. To turn off, press the **ON/OFF** button again.



Figure 4: Basic weighing operation.

## 4.2 Tare Function

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

1. Place an empty container on the weighing platter.
2. Press the **TARE/ZERO** button. 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.



Figure 5: Steps for using the Tare function.

### 4.3 Unit Conversion

The balance supports multiple units of measurement. To change the unit:

1. With the scale on, press the **UNIT** button repeatedly.
2. The display will cycle through available units: g, ct, oz, ozt, lb, N, dwt, gn(0.0gn), tIT, T, T/AR, %.
3. Stop pressing when your desired unit is displayed.

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**Video 1:** Demonstration of unit conversion on the Bonvoisin Analytical Balance. This video shows how to cycle through various measurement units like grams, ounces, and pounds.

### 4.4 Counting Function (PCS)

Use the PCS function to count multiple small items of uniform weight.

1. Place a sample quantity (e.g., 10, 20, 50, 100 pieces) of the items on the platter.
2. Press the **PCS** button. The display will flash the sample quantity (e.g., "10").
3. Press **PCS** again to confirm the sample quantity.
4. Remove the sample.
5. Place the bulk quantity of items on the platter. The display will show the total count.

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**Video 2:** Instructions for using the counting (PCS) function on the Bonvoisin Analytical Balance. This video demonstrates how to set a sample and count multiple items.

### 4.5 Calibration

Regular calibration ensures the accuracy of your analytical balance. The balance supports both single-point and multi-point calibration.

## Single Point and Multi-point Calibration

All Bonvoisin scales are multi-point calibrated before shipping. For 500-3000g capacity, calibration weight is included in the package. For 5000g scale, calibration weight is NOT included.



Figure 6: Calibration process with a weight on the balance.

### 4.5.1 Single-Point Calibration

This method uses a single calibration weight to adjust the scale's accuracy.

1. Ensure the scale is on and stable, displaying "0.00g".
2. Press and hold the **CAL** button until "CAL-" flashes, then release.
3. The display will then show the required calibration weight (e.g., "500.00g").
4. Carefully place the specified calibration weight onto the center of the weighing platter.
5. Wait for the digits to stop flashing and the display to show "PASS" or return to "0.00g". Calibration is complete.
6. Remove the calibration weight.

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**Video 3:** Single-point calibration instruction for the Bonvoisin Analytical Balance. This video guides you through calibrating the scale with a single weight.

### 4.5.2 Multi-Point Calibration

For enhanced accuracy, especially across the full weighing range, multi-point calibration can be performed.

1. Ensure the scale is on and stable, displaying "0.00g".
2. Press and hold the **CAL** button, then immediately press and hold the **PCS** button. Release both when the display flashes a weight value.
3. The display will prompt for the first calibration weight. Place it on the platter.
4. Once stable, the display will prompt for the next calibration weight. Continue placing weights as prompted, one by one.
5. After the final weight is placed and recognized, the scale will complete the multi-point calibration.

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**Video 4:** Multi-point calibration instruction for the Bonvoisin Analytical Balance. This video demonstrates the process of calibrating the scale using multiple weights sequentially.

## 5. MAINTENANCE

### 5.1 Cleaning

To maintain accuracy and prolong the life of your balance, keep it clean.

- The stainless steel weighing platter is removable for easy cleaning.
- Wipe the platter and the scale body with a soft, damp cloth. Do not use abrasive cleaners or immerse the scale in water.
- A protective film covers the display and buttons to guard against liquid spills. Wipe off any spills immediately to prevent liquid from seeping into the scale.

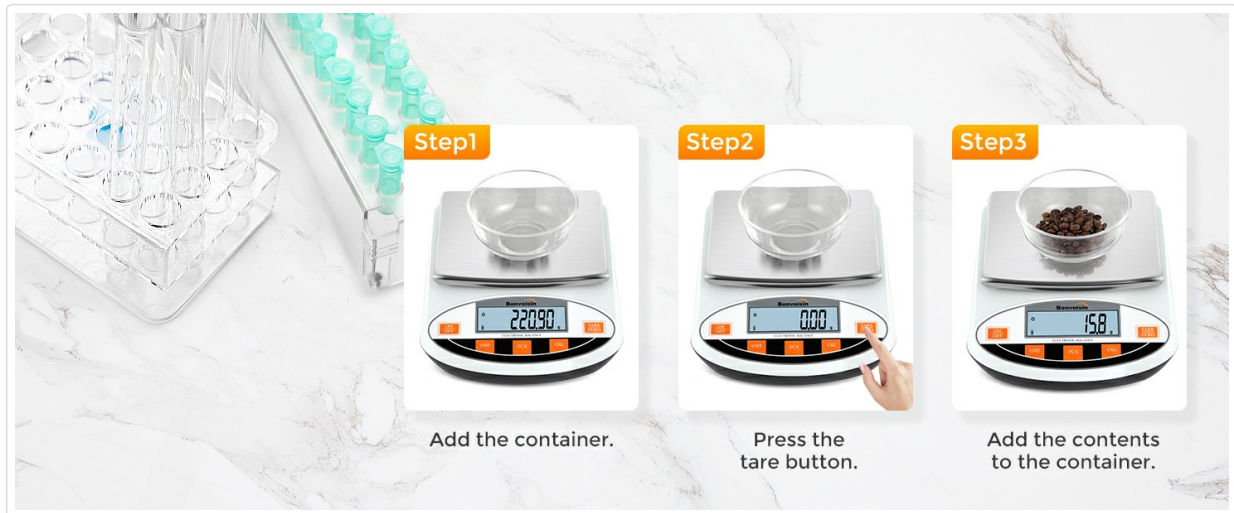


Figure 7: Removable weighing tray for easy cleaning.



Figure 8: Protective film over display and buttons.

## 5.2 Storage

When not in use, store the balance in a dry, stable environment, away from extreme temperatures, humidity, and direct sunlight.

## 6. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
Inaccurate readings	Scale not level, needs calibration, unstable surface, drafts.	Ensure scale is level using adjustable feet and level bubble. Perform calibration. Place scale on a stable surface away from drafts.
Display shows "EEEE" or "O-Ld"	Overload.	Remove excess weight immediately. Do not exceed the maximum capacity.
Display shows "Lo"	Low battery.	Replace the 9V battery or use the AC power adapter.
Scale does not turn on	No power, faulty adapter/battery.	Check power connection. Ensure battery is correctly inserted and charged, or replace it. Test with AC adapter if using battery, or vice versa.

If the problem persists after attempting these solutions, please contact Bonvoisin customer support for assistance.

## 7. SPECIFICATIONS

Feature	Detail
Model Number	XXX-12
Capacity	500g
Resolution	0.01g (10mg)
Weighing Platter Dimensions	180 x 140mm
Product Dimensions	26 x 20 x 5 cm
Item Weight	2.58 kg
Material	Plastic (body), Stainless Steel (platter)
Display Type	LCD (Large Display)
Power Source	AC Adapter or 9V Battery (not included)
Recommended Uses	Laboratory work, jewelry making, kitchen use

## 8. WARRANTY AND SUPPORT

### 8.1 Quality Guarantee

Bonvoisin provides a one-year quality guarantee. In case of a defect within one year of purchase, please contact us for a replacement.

**Note:**

- Scales with capacities between 200g and 3000g include calibration weights in the package.
- The 5000g scale does not include a calibration weight as it is too heavy and could damage the scale

during shipment.

## **8.2 Customer Support**

For any questions, technical assistance, or warranty claims, please contact Bonvoisin customer service through the retailer where the product was purchased or visit the official Bonvoisin website for contact information.