

U.S. Solid USS-DBS15-2

U.S. Solid Analytical Balance USS-DBS15-2 User Manual

Model: USS-DBS15-2 | Capacity: 200g x 0.001g

1. INTRODUCTION

This manual provides comprehensive instructions for the proper setup, operation, and maintenance of your U.S. Solid Analytical Balance, Model USS-DBS15-2. This high-precision laboratory scale is designed for accurate weighing with a capacity of 200g and a readability of 0.001g (1mg). Please read this manual thoroughly before using the device to ensure optimal performance and safety.

2. SAFETY INFORMATION

- Always operate the balance on a stable, level, and vibration-free surface.
- Avoid placing the balance near strong electromagnetic fields, heat sources, or direct sunlight.
- Do not overload the balance beyond its maximum capacity of 200g.
- Keep the balance clean and free from dust and corrosive substances.
- Ensure the power supply matches the specifications indicated on the device.
- Disconnect the power before cleaning or moving the balance.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- U.S. Solid Analytical Balance (Model USS-DBS15-2)
- 200g Calibration Weight
- Instruction Manual
- Power Cable

4. PRODUCT OVERVIEW

The U.S. Solid Analytical Balance USS-DBS15-2 features a glass draftshield, an LCD display, and multiple weighing functions for precise measurements.



Overall view of the U.S. Solid Analytical Balance with its protective glass draftshield.



Front view showing the digital display and control panel.



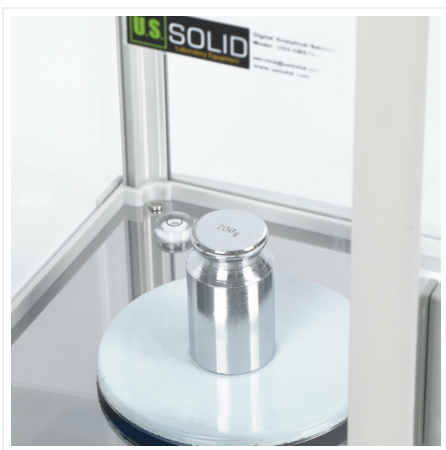
Side profile of the balance, illustrating its compact design.



Rear view displaying the power switch and RS232 interface port.



The glass draftshield opened, providing access to the weighing pan.



Close-up of the weighing pan with the included 200g calibration weight.

Control Panel Layout



Detailed diagram illustrating the functions of each button on the control panel: TARE, ON/OFF, MENU, UNIT Conversion, CALibration, and COU (Count).

5. SETUP

1. **Unpacking and Placement:** Carefully remove the balance from its packaging. Place the balance on a firm, level, and stable surface, away from direct sunlight, drafts, vibrations, and rapid temperature changes.
2. **Leveling:** Use the adjustable feet at the base of the balance to level the unit. Adjust the feet until the bubble in the spirit level indicator (usually located near the weighing pan) is perfectly centered. Proper leveling is crucial for accurate measurements.
3. **Power Connection:** Connect the power cable to the balance and then to a suitable power outlet.
4. **Warm-up Time:** After connecting the power, allow the balance to warm up for at least 30 minutes before performing any measurements or calibration. This stabilizes the internal components and ensures accuracy.

	Horizontal Adjustment Adjust leveling feet until the bubble is centered. Proper leveling is essential for accuracy.		Environmental stability Ensure the balance is on a stable, vibration-free surface, away from air currents and temperature changes to maintain accuracy.
	Warm-up time Warm up the balance for 30 minutes after power-on or power loss for accurate measurements. See the manual for specific times.		Calibration Recalibrate after moving the balance or before use. Hold the CAL button if needed. Refer to the manual for instructions.

Visual guide for horizontal adjustment, ensuring environmental stability, understanding warm-up time, and initiating calibration.

6. OPERATION

6.1 Basic Weighing

1. Turn on the balance by pressing the **ON/OFF** button.
2. Wait for the display to show "0.000g". If it does not, press the **TARE** button to zero the display.
3. Carefully place the item to be weighed onto the center of the weighing pan.

4. Read the stable weight displayed on the LCD screen.

6.2 Unit Conversion

The balance supports multiple weighing units. To change the unit:

1. Press the **UNIT** button repeatedly to cycle through the available units: grams (g), pounds (lb), carats (ct), ounces (oz), and troy ounces (ozt).
2. The selected unit will be displayed next to the weight value.

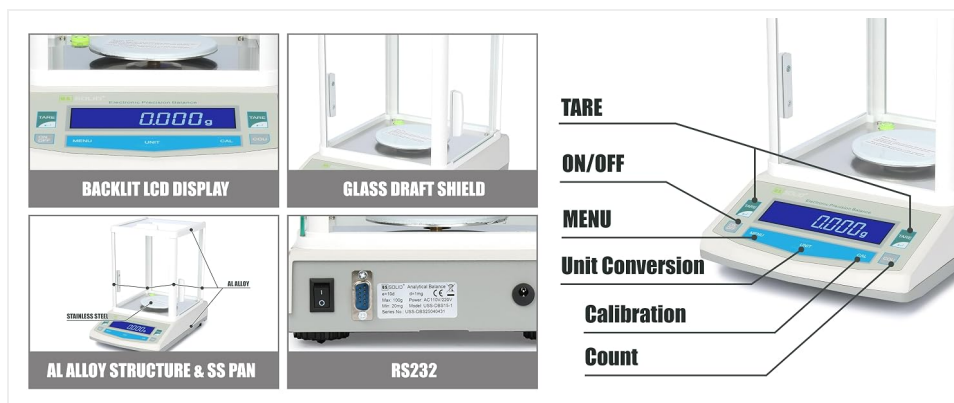


Illustration of the various measuring units available on the balance: grams (g), pounds (lb), carats (ct), ounces (oz), and troy ounces (ozt).

6.3 Piece Counting

The piece counting function allows you to count a large number of small, uniform items.

1. Place a known quantity of items (e.g., 10, 20, 50, or 100 pieces) on the weighing pan.
2. Press the **COU** (Count) button. The display will prompt you to select the sample size.
3. Use the **UNIT** button to select the corresponding sample size (e.g., 20 for 20 pieces).
4. Press **COU** again to confirm. The balance will now display the count of items.
5. You can now add more items, and the balance will display the total count.



Demonstration of the piece counting feature, showing a quantity of small items on the pan and the count displayed.

6.4 Calibration

Calibration ensures the accuracy of your balance. It should be performed after initial setup, if the balance is moved, or if

you suspect inaccurate readings.

1. Ensure the weighing pan is empty and the draftshield is closed.
2. Press and hold the **CAL** button until the display shows "CAL".
3. The display will then show the required calibration weight (e.g., "200g").
4. Carefully place the provided 200g calibration weight onto the center of the weighing pan.
5. The balance will automatically calibrate. Once complete, the display will return to normal weighing mode, showing the weight of the calibration mass or "0.000g" if the weight is removed.
6. Remove the calibration weight.

7. RS232 INTERFACE

The U.S. Solid Analytical Balance is equipped with an RS232 interface, located at the rear of the unit. This port allows for serial data exchange between the balance and a computer or other compatible device. This feature is useful for data logging, remote control, or integration into laboratory information management systems (LIMS). Refer to the specific software or device documentation for connection and communication protocols.

8. MAINTENANCE

- **Cleaning:** Use a soft, damp cloth with a mild detergent to clean the exterior of the balance. Do not use abrasive cleaners or solvents. Ensure no liquid enters the internal components.
- **Weighing Pan:** The stainless steel weighing pan can be removed for cleaning. Handle with care to avoid bending or damaging it.
- **Draftshield:** Keep the glass draftshield clean to ensure clear visibility and proper operation.
- **Storage:** When not in use for extended periods, store the balance in a dry, dust-free environment.

9. TROUBLESHOOTING

Problem	Possible Cause	Solution
Display shows "Err" or unstable readings	Unstable surface, drafts, vibrations, or magnetic interference.	Relocate the balance to a stable, level, and vibration-free area. Close the draftshield. Ensure no strong magnetic fields are nearby.
Balance does not power on	Power cable not connected, power outlet issue, or internal fault.	Check power cable connection. Test the outlet with another device. If the problem persists, contact customer support.
Inaccurate measurements	Not calibrated, not leveled, or insufficient warm-up time.	Perform calibration as described in Section 6.4. Ensure the balance is level. Allow adequate warm-up time (30 minutes).
Piece counting error	Incorrect sample size selected or non-uniform items.	Ensure the sample size matches the number of items placed. Use only uniform items for counting.

10. SPECIFICATIONS

Feature	Specification
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Feature	Specification
Model Number	USS-DBS15-2
Brand	U.S. Solid
Capacity	200g
Readability	0.001g (1mg)
Repeatability	+/-2mg
Linearity	+/-2mg
Display Type	LCD with Backlight
Weighing Units	g, lb, ct, oz, ozt
Special Feature	Strain Gauge Load Cell, Piece Counting, RS232 Interface, Glass Draftshield
Product Dimensions	14.17 x 10.63 x 14.17 inches
Item Weight	9 Pounds
Manufacturer	U.S. Solid

11. WARRANTY AND SUPPORT

For warranty information or technical support, please refer to the contact details provided with your purchase documentation or visit the official U.S. Solid website. Keep your purchase receipt as proof of purchase for any warranty claims.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

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