



Instruction Manual

USS-DBS93(94)
Waterproof Bench Scale



Table of Contents

Introduction.....	1
1.1 <i>Safety Precautions</i>	1
Design and Function.....	3
2.1 <i>Components</i>	3
2.2 <i>Keyboard</i>	4
2.3 <i>Display Panel</i>	5
Unpacking.....	6
Before Using.....	7
4.1 <i>Leveling the scale</i>	7
4.2 <i>Calibration</i>	9
Operation.....	10
5.1 <i>Basic Weighing</i>	10
5.2 <i>Checkweighing</i>	11
Setting.....	13
6.1 <i>Unit Switching</i>	13
Maintenance.....	15
7.1 <i>Cleaning</i>	15
7.2 <i>Disposal</i>	15
Troubleshooting.....	16
Technical Data.....	17

Introduction

Thank you for choosing the U.S. Solid USS-DBS93(94) Series Waterproof Bench Scale.

The USS-DBS93(94) Waterproof Bench Scale features a protection grade of IP68, which means its waterproof performance can even make it immersed in water without damaging the scale. Therefore, the USS-DBS93(94) Waterproof Bench Scale can be of help for weighing seafood, shellfish, meat, kimchi and any other samples with water. U.S. Solid's dedicated customer service staff are available to answer any inquiries regarding applications and accessories.

Please read the manual completely and follow the usage instructions before installation and operation as this will help you to make full use of the functions and performance of the USS-DBS93(94) Waterproof Bench Scale.

1.1 Safety Precautions

The U.S. Solid USS-DBS93(94) Waterproof Bench Scale qualifies as state-of-the-art technology and complies with all recognized safety rules. Improper use or handling, however, can result in damage and/or injury.

Please follow the precautions below to ensure safe and trouble-free operation of your scale.



- The scale has a 3-pin power socket equipped with a ground terminal. To prevent electric shock and to maintain stability in operation of the scale, be sure to ground the scale.



- Use a power source (voltage, frequency, outlet type) adapted to the specification of the scale. If excessive voltage is used, the scale may overheat and be damaged or cause a fire.



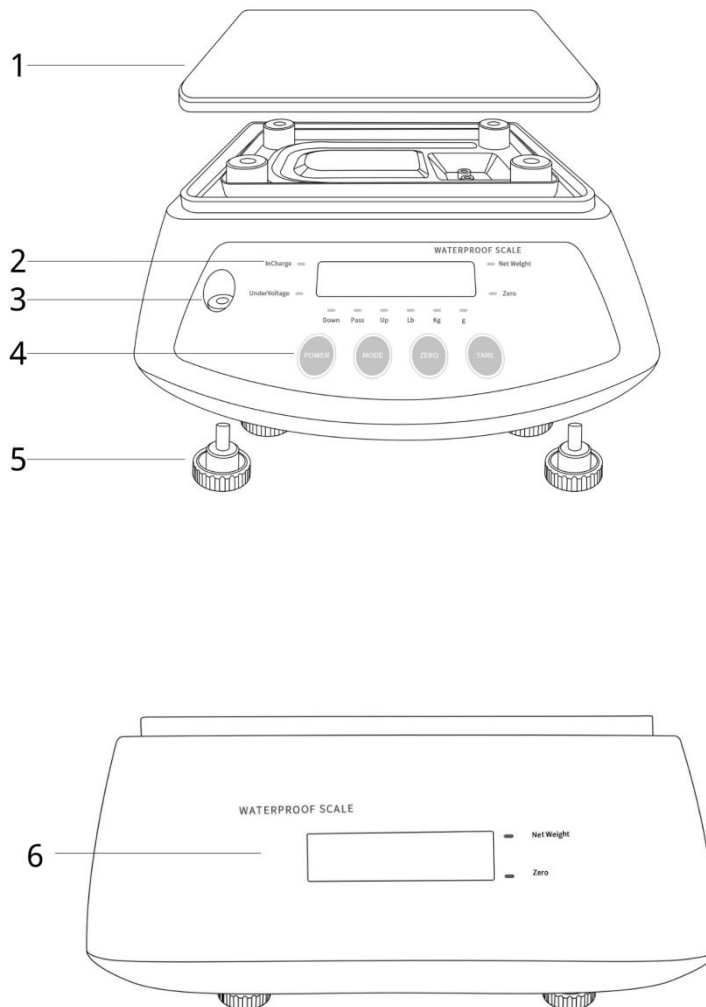
- Operate the scale on a stable, rigid and flat table.
- Handle the scale carefully. It is a precision device, subjecting it to impact may result in a malfunction.

- If the device is not be used for a long period of time, the power should be turned off and disconnect the power cable.
- Do not disassemble, remodel or repair this product or accessories.
- Do not weigh items larger than the scale's range, as this may damage the load cell of the scale.

* Although the USS-DBS93(94) Waterproof Bench Scale has a protection grade of IP68, it is still not recommended to immerse it in water. The pressure of water will cause the scale to be damaged because of long-time immersion in water, and the accurate weight value cannot be measured due to the buoyancy of water.

Design and Function

2.1 Components



1: Weighing Pan

2: Display Panel

3: Leveling Indicator





4: Keyboard

5: Leveling Feet

6: Rear Display Panel

2.2 Keyboard



Key	Description
	Switch on/off the scale
	Enter setting while powering on
	Switch the setting item
	Perform calibration procedure with “ZERO”
	Zero the scale
	Perform calibration procedure with “MODE”
	Tare the scale
	Switch option in setting item

2.3 Display Panel



No.	Description
1	The battery is in charging
2	The remaining battery power is insufficient
3	Indicates current displayed value is net weight (has been tared)
4	Indicates the weighing value return to zero
5	Checkweighing mode: the weight of the sample to be checked is lower than the lower limit
6	Checkweighing mode, the weight of the sample to be checked is within the upper and lower limits
7	Checkweighing mode, the weight of the sample to be checked is higher than the upper limit
8	Current weighing unit is "lb"
9	Current weighing unit is "kg"
10	Current weighing unit is "g"
11	Leveling indicator

Unpacking

The USS-DBS93(94) Waterproof Bench Scale is a precision instrument. Unpack the scale carefully and check the delivered items for completeness.

The following accessories are part of the standard equipment for your new USS-DBS93(94) Waterproof Bench Scale:

- 1 Scale Main Body
- 1 Weighing Pan (rectangular)
- 1 Waterproof Power Cable
- 1 Instruction Manual
- 1 Quality Certification

Check the instrument for damage in transit. Immediately inform the U.S. Solid customer service if you have any complaints or parts are missing.

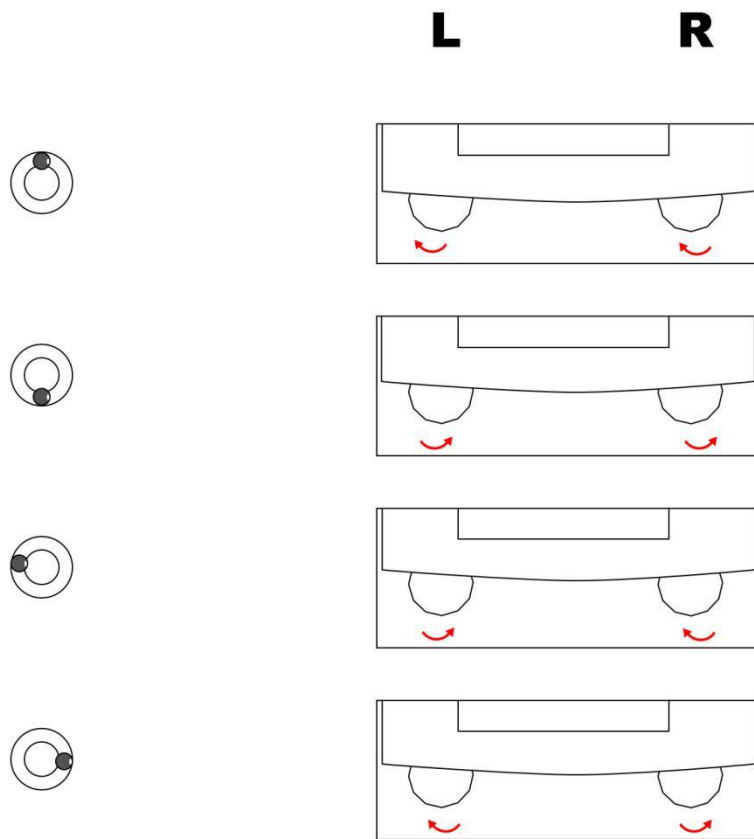
Before Using

- Adjust the leveling feet of the bench scale until the air bubble in the indicator is centered.
- Warm up for 30 minutes after starting up to improve the stability of weighing.

4.1 Leveling the scale

Accurate horizontal positioning is necessary for repeatable measurements and exact results. To compensate for small irregularities or tilts at this location, the instrument needs to be leveled.

Adjust the leveling feet of the bench scale until the air bubble in the indicator is centered. The level indicator is located under the cover towards the rear of the bench scale.



Position of air bubble	Adjustment method
up	Turn both feet clockwise
down	Turn both feet counterclockwise
Left	Turn left foot counterclockwise, right foot clockwise
Right	Turn left foot clockwise, right foot counterclockwise

4.2 Calibration

Calibration is an important step to assure the bench scale will accurately weigh the sample.

Perform calibration operations in the following situations:

- Changes in the location of use (including moving in the same room).
 - Changes in ambient conditions.
1. Press “TARE” to zero the scale in the weighing state;
 2. Place the calibration weight on the weighing pan;
 3. Press “MODE” and “ZERO” simultaneously;
 4. Then “CAL” will be displayed;
 5. After the weight value of the calibration weight is displayed, remove the calibration weight;
 6. The calibration procedure is completed and it will return to the weighing interface.

Operation

5.1 Basic Weighing

1. Press “TARE” to zero the scale in the no-load state.
2. Place the weighing sample on the weighing pan.
3. After the display stabilizes, read the value displayed.

Weighing a sample that needs to be in a container:

1. Place the weighing container on the weighing pan.
2. Wait for the display to stabilize. Then press “TARE” to tare, and the displayed value will return to zero.
3. Place the sample(s) to be weighed in the weighing container.
4. After the display stabilizes, read the value displayed.

*** Overweight Alarm**

When “-----” is displayed in the weighing state, it indicates that the sample weight exceeds the maximum range of the scale. The sample should be removed immediately to avoid damage to the scale.

5.2 Checkweighing

The USS-DBS93(94) Waterproof Bench Scale offers a checkweighing function. Checkweighing means to define a weight range by presetting a upper weight limit and a lower weight limit, and then weighing samples to determine whether the weight of these samples are within the range, above the upper limit or below the lower limit, so as to achieve the purpose of screening.

1. In the power-off state, press “POWER” to switch on the scale, meanwhile long press “MODE”, then “F---1” will be displayed;
2. Press “MODE” eight times continuously until “P-OFF” is displayed;
3. Then press “TARE” to switch to “P-ON”;
4. Press “MODE” two times continuously until “-END-” displays and returns to the weighing interface;
5. Press “POWER” to switch off the scale;
6. After several seconds, press “POWER” to switch on again, meanwhile long press “MODE”, then “F---1” will be displayed;
7. Press “ZERO” several times continuously until “F---6” is displayed;
8. Press “MODE” to perform the setting of lower limit while “L00000” will be displayed;
9. Press “TARE” to select the number of digits and press “ZERO” to

change the number;

10. Then press "MODE" perform the setting of upper limit while "H00000" will be displayed;

11. Press "TARE" to select the number of digits and press "ZERO" to change the number;

12. Press "MODE" and "-END-" will be displayed, the lower limit and upper limit of checkweighing are set;

13. After that the checkweighing operation can be performed:

When the sample weight is greater than the upper limit, the "Up" light is on, when the sample weight is less than the lower limit, the "Down" light is on, and when the sample weight is within the upper and lower limits range, the "Pass" light is on.

Setting

6.1 Unit Switching

The USS-DBS93(94) Waterproof Bench Scale offers four three units of “g”, “kg” and “lb”. The unit selection function can be used to meet the unit requirements in various usage situations.

In the weighing state, press the "UNIT" button to switch weight units.

14. In the power off state, press “POWER” to switch on the scale while long press “MODE” , then “F---1” will be displayed;

15. Then press “MODE” four times, “UN-00” will be displayed;

16. Press “TARE” to switch options among “UN-00” “UN-01” and “UN-02” (00, 01 and 02 stand for “g”, “kg” and “lb” respectively);

17. Press “POWER” to switch off the scale and the setting of weighing unit is completed.

6.2 Screen Brightness

The USS-DBS93(94) Waterproof Bench Scale offers a function of screen brightness setting, you can set your screen brightness according to the ambient brightness.

1. In the power off state, press “POWER” to switch on the scale while long press “MODE” , then “F--1” will be displayed;
2. Then press “MODE” five times, “br-0” will be displayed;
3. Press “TARE” to switch options among “br-0” “br-1” “br-2” and “br-3” (0 means the brightest, 3 means the least bright);
4. Press “POWER” to switch off the scale and the setting of screen brightness is completed.

Maintenance

7.1 Cleaning

- Turn off the power switch and remove power cord during maintenance.
- Do not use any aggressive cleaning agents (solvents, abrasive cleaning agents, etc.) or organic solvents to clean the scale.

Clean the scale using a piece of lint-free cloth which has been wet with a mild detergent (soap) only.

7.2 Disposal

Disposal of equipment and packaging must be carried out by the operator in accordance with relevant laws of the country or region in which the equipment is to be used.

Troubleshooting

Problem: Display remains off after switching on.

Possible causes:

- Power cord is not connected
- Power line fuse blown
- Power transformer damaged
- Instrument faulty

Problem: Weight display is constantly changing or unstable.

Possible causes:

- Test bench vibration
- Electromagnetic field interference
- Power supply instability

Problem: Displayed value and actual weight are not consistent.

Possible causes:

- Not returned to zero before weighing
- Scale not leveled well

Technical Data

Model	USS-DBS93-30	USS-DBS94-15
Capacity	30 kg	15 kg
Readability	5 g	1 g
Repeatability	± 10 g	± 2 g
Linearity Deviation	± 15 g	± 3 g
Stabilization Time	Within 3 seconds	
Pan Size	9 × 7.5 inches (235 × 190 mm)	
Interface	RS232	
Power	110V 60Hz AC	
Dimensions	13.6 × 12.8 × 7.7 inches	
Net Weight	7.72 lbs	
Shipping Weight	8.82 lbs	

Contact

Feel free to visit our website: www.ussolid.com

You can email us at service@ussolid.com

You can call one of our friendly customer service representative at

+1(800) 209-4177