

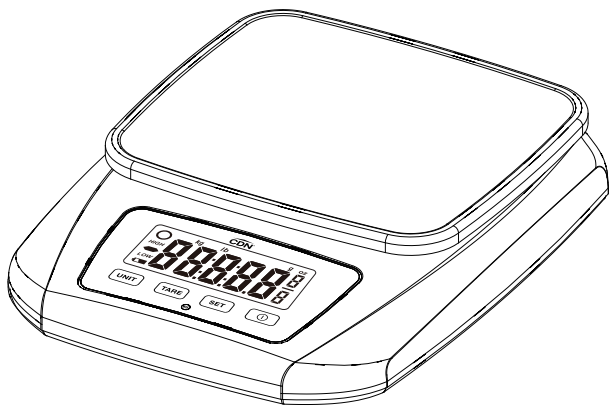
Model SD2220

**CDN**<sup>®</sup>

Measurement Tools

# SUBMERSIBLE SCALE

***22 POUNDS/10 KILOGRAMS/352 OUNCES  
by pounds, pounds:ounces, ounces,  
fractional ounces, kilograms and grams***



certified  
**WBENC**  
WOMEN'S BUSINESS ENTERPRISE

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**Note:** In the following instructions, names of the control buttons are shown in CAPS. Function information that appears on the display is shown in **BOLD CAPS**.

## POWER ADAPTER

Before using the external power adapter, make sure that the printed voltage complies with the local voltage.

**Note:** Use only an original CDN power adapter (AD-AC1110X). The use of other adapter is subject to approval by CDN.

1. Insert the adapter plug into the jack on the side of the scale.
2. To turn the scale on, press the POWER button (ⓘ) as described in *Section A: On/Off*. The scale will remain on until turned off.

**Note:** When the power adapter is plugged in, the auto-off feature is disabled.

## CHARGING THE BATTERY

The **BATTERY** icon (🔋) and **bAtt** appear on the display when battery status is low and needs to be charged. The **BATTERY** icon (🔋) flashes continuously while charging. The battery is built-in and does not need to be replaced.

1. Insert the adapter plug into the jack on the side of the scale. Allow the scale to charge for 5 hours. The scale will then operate continuously for approximately 14 hours.

## OPERATING INSTRUCTIONS

Place the scale gently on a hard and flat surface and make sure it is steady before use to obtain accurate measurements.

### A. On/Off

1. Press the POWER button (ⓘ) to turn on. The display flashes all segments and then returns to zero.
2. The STABILITY icon (⊙) appears in the upper left corner of the display when the weight is stable.

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3. Press the POWER button (ⓘ) to turn off.

## B. Auto Off

The scale automatically turns off after 2 minutes of inactivity.

**Note:** Auto-off is disabled when the AC adapter is used. See *Section L2* to program the auto-off up to 5 minutes or disable completely.

## C. Backlit Display

Press and hold the UNIT button for 3 seconds to turn the backlit display on and off.

## D. Unit Selection

Press the UNIT button to select the desired unit. The display cycles through **oz**, **/oz**, **kg**, **g**, **lb:oz**, **lb:/oz** and **lb**.

**Note:** See *Section L1* to disable undesired units.

## E. Hold Mode

1. When the scale is on, place the item on the platform.
2. Press the UNIT and SET buttons simultaneously to hold the weight value on the display for 15 seconds. The scale beeps and the **STABILITY** icon (○) flashes on the display.
3. The scale beeps and refreshes the current weight value every 15 seconds.
4. Press the SET button to exit Hold Mode and return to Weighing Mode.

**Note:** Turning off the scale (including auto-off) releases the Hold Mode.

## F. Weighing Mode

1. Press the POWER button (ⓘ) to turn on. The display flashes all segments and then returns to zero.
2. When the **STABILITY** icon (○) appears on the display, place an item on the scale platform. The weight of the item appears on the display within 1 second after the item is stable.

**Note:** The minimum measurable weight is 0.18 oz/5 g.

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## G. Tare

The tare function resets the scale display to zero to measure only the weight of an item. It is frequently used to subtract the weight of containers.

1. When the scale is on, place a container on the platform.
2. Press the TARE button to reset the display to zero.
3. Place the item into the container or directly on the scale platform. The weight of only the last item added will appear on the display.
4. Continue to repeat steps 2. and 3. to measure the respective weights of additional items.
5. To clear the tare, remove all items from the platform and press the TARE button. The display is reset to zero.

## H. Low/High Limit Alerts

The scale may be set to alert you when an item's weight is under or over a set limit.

1. Press and hold the TARE button for 3 seconds. The scale beeps as **LOW** and the zero weight appears on the display.
2. Place a weight equal to the low weight limit on the platform and press the SET button. A beep indicates that the low limit is set.
3. **HIGH** appears on the display. Add weight to the platform until the weight is equal to desired high weight limit. Press the SET button. A beep indicates that the high limit is set.
4. Remove all items from the platform.
5. An alert sounds if an item placed on platform is over or under the set limits.
  - a. If the weight is lower than low limit, the scale beeps and the backlight becomes blue. **LOW** appears on the left side of the display.



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- b. If the weight is higher than high limit, the scale beeps and the backlight becomes red. **HIGH** appears on the left side of the display.
  - c. If the weight is within the Low/High limits, the backlight remains green.
6. To clear the Low/High limits, press the SET and TARE buttons simultaneously.

## I. Field Calibration

1. Making sure there is no load on the platform, plug in the power adapter to calibrate the scale.
2. When scale is off, press the POWER button (ⓘ) to turn on.
3. When all segments are on, press the POWER button (ⓘ) 3 times within two seconds. The display shows **11111**, then **55555**, and then the version number (example **U-09**) and checksum (example **9ld**) appear before the calibration number (example **2F205** - the numbers may change).
4. Press the POWER button (ⓘ) again to reset the display to zero to verify the weight of the empty platform. After a few seconds the calibration number is displayed again (example: **2F205**).
5. While the calibration number is displayed, press the POWER button (ⓘ) again. The calibration weight value in grams appears on the display.  
**Note:** When calibrating with a pound weight, press the UNIT button at this time to change the calibration units to ounces. The calibration weight value in ounces appears on the display.
6. Put a 10 kg (or two 5 kg) calibration weight on the platform to start the auto-calibration. More calibration numbers appear on the display while the scale is calibrating.
7. If successful, **End** appears on the display for 3 seconds before automatically turning off. The calibration is complete.

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- If unsuccessful, **Fail** appears on the display for 3 seconds before automatically turning off.  
Return to *Section I2* and try again.

## J. Battery Status

- The **BATTERY** icon () and **bAtt** appear on the display when battery status is low and needs to be charged.
- The **BATTERY** icon () flashes continuously while charging. See *Charging the Battery* on page 2.

## K. Error Messages

**oL** indicates an overload when the item being measured exceeds the capacity of the scale. Immediately remove the overweight item to avoid causing permanent damage to your scale.

## L. Programmable Modes

The scale has been pre-configured at the factory and should not require configuration for use in most applications. In the event that the factory settings do not meet the requirements of your application, the following describes the steps to configure the scale.

### 1. Units

The scale has been pre-configured at the factory for six units of measure. In the event that these do not meet the requirements of your application, the following describes the steps to limit the number of unit choices available. The sequence of units is **g**, **lb:oz**, **lb:/oz**, **lb**, **oz**, **/oz** and **kg**.

- Press the POWER button (Ⓜ) to turn on.
- Press and hold the SET button for 3 seconds. When **SEt** appears on the display, release the SET button to enter the configuration mode. **Unit** appears on the display.
- With **Unit** appearing on the display, press the SET button to select **g** (gram) units. Both the unit and its status appear on the display.

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- d. Press the UNIT button to toggle between **on** (enabled) and **oFF** (disabled).
  - e. Press the SET button to confirm the status and to select the next unit in the sequence.
  - f. Repeat steps *d.* and *e.* for each respective unit. Upon confirming the status for **kg**, **Unit** appears on the display.
  - g. Press the UNIT button twice. **End** appears on the display.
  - h. Press the SET button to save the settings and return to weighing mode.

## 2. Auto Off

The scale has been pre-configured at the factory to automatically turn off after 120 seconds (2 minutes) of inactivity. In the event that your application requires longer shut-off times or none at all, the following describes the steps to configure this feature.

- a. Press the POWER button (ⓘ) to turn on.
- b. Press and hold the SET button for 3 seconds. When **Set** appears on the display, release the SET button to enter the configuration mode. **Unit** appears on the display.
- c. With **Unit** appearing on the display, press the UNIT button. **oFF** appears on the display.
- d. Press the SET button to begin selection of the auto off time (in seconds). **120** appears on the display.
- e. Press the UNIT button to cycle through the selections: **120**, **180**, **240**, **300** or **oFF**.
- f. When the desired time is displayed, press the SET button to confirm the selection. **oFF** appears on the display.
- g. Press the UNIT button. **End** appears on the display.
- h. Press the SET button to save the settings

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and return to weighing mode.

**Note:** Clean the scale platform before each use. The stainless steel removable platform is dishwasher safe; the scale base is not dishwasher safe.

**Note:** Replacement AC adapter, removable platform and 5 kg calibration weight available.

## USAGE GUIDELINES

- Scales are precision instruments and must be handled with extreme care.
- Battery technology works best at room temperature.  
**Do not leave the scale in cold rooms, refrigerators or freezers for extended periods of time.**
- Place the scale gently on a hard and flat surface and make sure it is steady before use.
- The maximum capacity of the scale is 22 lb/10 kg, which is the capacity before using the tare function.
- Do not place overweight items on the scale.
- Do not place hot items directly on the scale platform. They can distort the display. Rather, tare a baking sheet at room temperature and then place the hot item on it.
- Store the scale in a position that keeps it free from any load bearing weight. Storing the scale with pressure on the load cells can distort the weight measurements over time.
- Hold the scale from the bottom when moving.

## CARE OF YOUR PRODUCT

- **IP68** – protected from water up to 4.9 feet/1.5 meter for up to 60 minutes, completely protected against dust.
- Wipe clean with a damp cloth.
- Store the scale at room temperature between 32 to 104°F/0 to 40°C, ≤85% RH.



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## PRECAUTIONS

- Keep the scale and/or adapter away from children.
- Do not clean the scale with abrasive or corrosive compounds, which may scratch the surface and corrode the electronic circuits.
- Do not subject the scale to excessive force, shock, dust, temperature or humidity, which may result in malfunction, shorter electronic life span, damaged battery and/or distorted parts.
- Do not tamper with the scale's internal components. Doing so will invalidate the warranty and may cause unnecessary battery damage and/or distorted parts.
- Do not subject the scale to excessive exposure to direct sunlight.
- **IP68** – protected from water up to 4.9 feet/1.5 meter for up to 60 minutes, completely protected against dust.
- To avoid deformation, do not place the unit in extreme temperatures.
- Always read the user manual thoroughly before operating.

## SPECIFICATIONS

<b>Measurement Range</b>	22 lb/352 oz/10 kg capacity
<b>Unit of Measure</b>	oz/frac oz/kg/g/lb:oz/lb
<b>Resolution</b>	0.05 oz, 1/8 oz, 0.001 kg, 1 g, 0 lb:0.1 oz, 0.002 lb
<b>Operating Range</b>	59 to 104°F/15 to 40°C, 30-85% RH
<b>Storage Range</b>	32 to 104°F/0 to 40°C, ≤85% RH
<b>Water Resilience</b>	<b>IP68</b> – protected from water up to 4.9 feet/ 1.5 meter for up to 60 minutes, completely protected against dust.
<b>Accuracy</b>	5 kg ±15 g; 10 kg ±30 g
<b>Power Supply</b>	4.8V 1800mAh built-in rechargeable battery (WERCSmart); AC Adapter: 100-240VAC 50/60Hz input, 9V DC (1000mAh) output
<b>Platform Dimensions</b>	6.4 W x 7 L (in)/16.2 W x 18.2 L (cm), removable
<b>Product Dimensions</b>	8.0 W x 2.0 H x 10.0 D (in)/ 20.3 W x 5.0H x 25.1 D (cm)
<b>Weight</b>	46.31 oz / 1313 g (including battery)
<b>Accessories</b>	5 kg Calibration Weight (WT05), Power Adapter (AD-AC1110X)

**Note:** This device could be sensitive to electrostatic discharge. If electrostatic discharge or malfunctioning occurs, please re-install the battery to reset this unit.

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**1-Year Limited Warranty:**

Any instrument that proves to be defective in material or workmanship (excluding batteries) within one year of original purchase will be repaired or replaced without charge upon receipt of the unit prepaid at: CDN, PO Box 10947, Portland, OR 97296-0947. This warranty does not cover damage in shipment or failure caused by failure to adhere to the accompanying instructions, inadequate maintenance, normal wear and tear, tampering, accident, misuse, unauthorized modification, obvious carelessness or abuse. CDN shall not be liable for any consequential or incidental damages whatsoever.

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For more detailed information on our products, please visit [CDNmeasurement.com](http://CDNmeasurement.com) or call 800-338-5594.

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