

**DS4500**

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Infant Lactation Scale

# User Manual

**doran**<sup>®</sup>

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## **Section 1. Unpacking and Care**

Thank you for purchasing a Doran scale. This product has been designed with the highest level of technology. We are dedicated to delivering a superior product that will provide many years of trouble free service.

As an ISO9001 registered company, Doran Scales is dedicated to delivering products built with strict compliance to our high quality standards. If you have any questions regarding your scale, please contact Doran Scales, Inc.

### **Unpacking**

Carefully remove the scale from the shipping carton. If you notice any shipping damage, notify the shipper immediately. Be sure to retain all shipping materials in case the scale must be shipped elsewhere.

### **Cautions and Warnings**

Normal care should be taken when handling and using this product. Improper handling or abuse can damage the scale and result in costly repairs that may not be covered by the warranty. Please observe the following precautions to ensure years of trouble free service from your new scale.

- Do not use sharp objects to press any of the buttons.
- Do not pick up the scale by the indicator or cables.
- Do not use the scale if it is damaged in any way.
- Do not leave patients unattended on the scale.
- Do not exceed the scale capacity.
- Do not drop the scale.
- Do not drop objects on the scale.
- When transporting, do not hit other objects, walls or doorframes with the scale.

### **Care & Cleaning**

With reasonable care, this product will last for many years. Here are some tips to care for your scale. Failure to comply with these guidelines may void the warranty.

- This scale will withstand typical cleaning methods and chemicals that are used in healthcare environments. This includes but not limited to cleaners that contain sodium hypochlorite (bleach), hydrogen peroxide and alcohol.
- Do not get water inside the indicator or platform.
- Do not immerse in water or any liquid.
- Do not use strong solvents or abrasive cleaners as this can damage the touch panel or other plastic parts.

### **Preventive Maintenance**

- Examine the scale periodically for damage and wear and tear before use.
- If the scale is damaged, check calibration of the scale and safety before use.
- Check calibration annually and calibrate if necessary.
- Remove batteries during long periods of non-use.

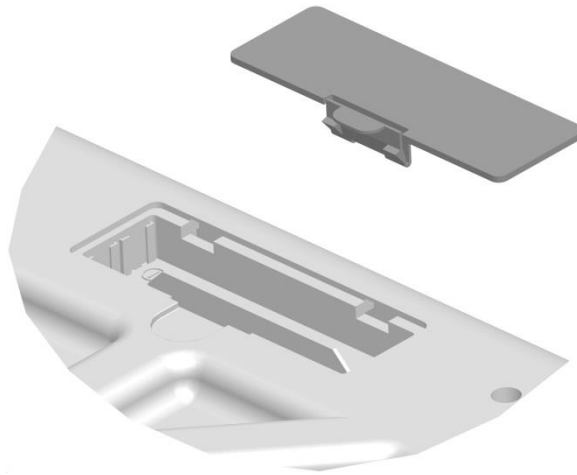
## **Installation**

Place the scale on a stable flat surface. The scale should rest evenly on all four feet.

## **Battery Installation**

The DS4500 comes with the ability to take four AA alkaline batteries. These batteries supply a year's of typical use with the standard Automatic Shutoff Timer settings. The standard Automatic Shutoff Timer setting is 10 seconds.

The batteries can be accessed on the bottom of the scale. To access the battery compartment, turn the scale upside down and open the battery compartment door. When installing the new set of batteries, be sure the batteries are oriented properly.



**Fig. 1 Battery Door**

## Section 2. Scale Operation



**Fig. 2 DS4500 Front Panel**

### Display Pushbuttons

The Model DS4500 controls consist of FEED, UNIT, REWEIGH, POWER and ZERO buttons. The display is used to provide weight indications and operator messages indicating scale operation.

### Power On/Off

Press the Power button to turn on and off the scale. The scale has an adjustable Automatic Shutoff Timer that will power down the scale when not in use.

### Zero

When the zero button is pressed, the scale will be reset to zero weight. This feature can be used to zero out any weight not desired to be part of the patient weight.

### Unit

Press to cycle between lb, lb:oz and kg. The current unit will be displayed to the right of the weight digits.

Note: Each unit can be disabled individually with the units enable / disable parameters.

### Reweigh

To reinitiate the weighing process, press REWEIGH. This will allow a weighing to be reinitiated without the patient having to get off the scale platform.

### Feed

Activates the feed function. See feed function section below.

**Display Annunciators**

The display annunciators will indicate the scale status.

**Center of Zero (▶0◀)**

Indicates that the scale has an accurate zero reading.

**Hold**

Indicates a stable weight has been achieved and held on the display. This indicates an accurate weight has been achieved.

**Low Batt**

Indicates when the batteries require replacement.

**BEFORE FEED**

Indicates the next held weight recorded will be recorded for BEFORE FEED data string.

**AFTER FEED**

Indicates the next held weight recorded will be recorded for AFTER FEED data string.

**AMOUNT FED**

Indicates the amount of food the baby has retained is displayed and transmitted.

### **Weighing a Patient**

1. Press On/Off. The scale will turn on and display a zero weight.
2. Place patient on the scale.
3. When a stable weight is reached the display will lock and the HOLD annunciator will be displayed.
4. The weight will be locked until the scale shuts off.

### **Zero Operation**

1. With the scale off, place item to be zeroed out on the scale platform.
2. Press On/Off. The scale will turn on and display a zero weight. If the item is removed, a negative weight will be displayed.  
*Note: Each time the scale is powered up, the zero point is reset.*
3. Place the patient on the scale and the patient's weight, less the item's weight will be displayed.

**OR**

1. With the scale on, press ZERO.
2. The display will display dashes.
3. When scale becomes stable, the display will read zero.

### **Reweigh Operation**

With the patient on the scale platform, press REWEIGH to reinitiate the weighing process.

## Feed Function

Accurately measuring infant milk intake during breastfeeding is important in the management of infants, as well as in addressing breastfeeding concerns with healthy infants at home

(Amount fed weight = After feed weight – Before feed weight)

When Before Feed annunciator is activated, the automatic shutoff timer is deactivated.

### Instructions for Weighing

1. Turn on scale
2. Press Feed
3. Place infant on the scale
4. BEFORE FEED and HOLD annunciator is activated and scale beeps. Display reads infant weight.
5. Remove the infant from the scale and feed the infant.
6. Place infant on the scale.
7. Press Feed – AFTER FEED annunciator is activated
8. Hold annunciator is activated and scale beeps. Display reads post infant weight
9. Press Feed – Amount fed is displayed, and AMOUNT FED annunciator is activated
10. Operator must press on/off to turn off scale



### Section 3. Specifications

Scale Dimensions	25" L x 13.75" W x 3.75" H
Power	4 AA Alkaline Batteries AC Adapter  One year battery life with 10 second Automatic Shutoff Timer setting.
Displayed Units	lb, lb:oz, kg
Capacity	45 lb x 0.1 oz 45 x 0.005 lb 20 kg x 2 g
Construction	ABS Plastic Housing
Options	Carrying Case AC Adapter

## Section 4. Troubleshooting

### General Problem Resolution

<b>Problem</b>	<b>What to Do or Check</b>
Weight reading will not repeat or scale does not return to zero when weight is removed.	Person or object other than that being weighed is touching the scale.  Verify that there is nothing caught in the feet area or interfering with the feet.
Scale overloads before scale capacity is reached.	Verify scale calibration is correct. If problem persists, recalibrate the scale.
Scale will not come to zero when the ZERO button is pressed.	Make sure that the scale is stabilizing. After pressing the ZERO button, the scale should zero as soon as it becomes stable.
Weight readings are not correct.	Verify the scale calibration with an accurate test weight. If the readings are not correct, recalibrate.  Be sure the platform is on a flat surface and all four feet are touching the surface.
Scale drifts off zero.	Check for air currents and/or vibration around the scale.
Scale shuts itself off or will not turn on.	Press the On/Off button to turn on the indicator.  Check that new batteries are installed properly in the battery tray.

## Error Messages

Error Message	What to Do or Check
Err EP	<p>The setup parameters loaded in nonvolatile memory have become corrupted.</p> <p>If this problem persists, contact Doran Technical Support for assistance.</p>
Err Ad	<p>The A/D communication is not detected. Ensure the wire harness was not pinched during assembly.</p> <p>If this problem persists, contact Doran Technical Support for assistance.</p>
Err 0	<p>The calibration zero is out of range. Error is displayed after a zero calibration attempt.</p> <p>Refer to the Calibration Troubleshooting section for additional information. If this problem persists, contact Doran Technical Support for assistance.</p>
Err SP	<p>The span calibration is out of range. Error is displayed after a span calibration attempt.</p> <p>Refer to the Calibration Troubleshooting section for additional information. If this problem persists, contact Doran Technical Support for assistance.</p>
ou Ld	<p>The scale is in overload. The load on the scale platform exceeds the scale capacity by more than 105%.</p> <p>Remove excess weight from scale platform. If problem persists, recalibrate. If this problem still persists, contact Doran Technical Support for assistance.</p>
95 ol	<p>The scale is in an extreme overload condition. The load on the scale platform exceeds the scale capacity by more than 150%.</p> <p>Immediately remove excess weight from scale platform as damage not covered under the warranty can occur. If problem persists, recalibrate. If this problem still persists, contact Doran Technical Support for assistance.</p>

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