



CARDINAL®



**Model WPB Series
Waterproof
Portion Scale
Owner's Manual**

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While every precaution has been taken in the preparation of this manual, the Seller assumes no responsibility for errors or omissions. Neither is any liability assumed for damages resulting from the use of the information contained herein. All instructions and diagrams have been checked for accuracy and ease of application; however, success and safety in working with tools depend to a great extent upon individual accuracy, skill, and caution. For this reason, the Seller is not able to guarantee the result of any procedure contained herein. Nor can they assume responsibility for any damage to property or injury to persons occasioned from the procedures. Persons engaging in the procedures do so entirely at their own risk.

FCC COMPLIANCE STATEMENT

This equipment generates uses and can radiate radio frequency and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. The operation of this equipment in a residential area may cause interference in which case the user will be responsible for taking whatever measures necessary to correct the interference.

You may find the booklet “How to Identify and Resolve Radio-TV Interference Problems” prepared by the Federal Communications Commission helpful. It is available from the U.S. Government Printing Office, Washington, D.C. 20402. The stock No. is 001-000-00315-4.

PROPER DISPOSAL

When this device reaches the end of its useful life, it must be properly disposed of. It must not be disposed of as unsorted municipal waste. Within the European Union, this device should be returned to the distributor from where it was purchased for proper disposal. This is in accordance with EU Directive 2002/96/EC. Within North America, the device should be disposed of in accordance with the local laws regarding the disposal of waste electrical and electronic equipment.



It is everyone’s responsibility to help maintain the environment and to reduce the effects of hazardous substances contained in electrical and electronic equipment on human health. Please do your part by making certain that the device is properly disposed of. The symbol shown to the right indicates that this device must not be disposed of in unsorted municipal waste programs.



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Serial Number _____ Date of Purchase _____ Purchased Form _____ _____ _____ _____ <small>RETAIN THIS INFORMATION FOR FUTURE USE</small>
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PRECAUTIONS	
Before using this instrument, read this manual and pay special attention to all "WARNING" symbols:	
	
IMPORTANT	ELECTRICAL WARNING

INTRODUCTION

The Detecto Model WPB Series Waterproof Portion Scale has been designed with a high-quality stainless steel platform and base for use in environments where cleanliness is required. With an IP68 rating, cleanup can easily be performed by using wash-down procedures with complete confidence against damage to the scale.

This manual will guide you through the installation and operation of your scale. Please read it thoroughly before attempting to operate this scale and keep it available for future reference.

This manual is for the following Model WPB Series Waterproof Portion Scales:

WPB-12, WPB-30, and WPB-65

SPECIFICATIONS

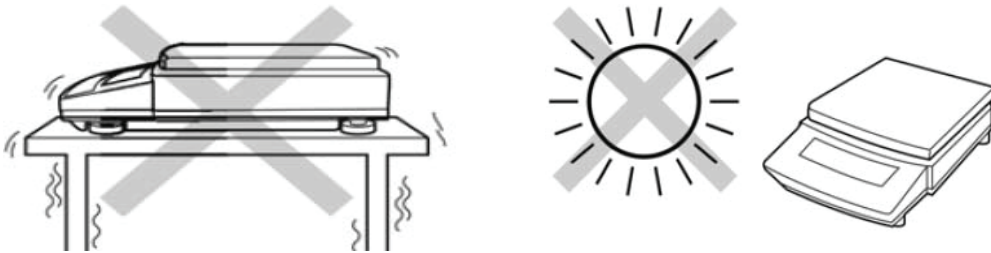
Model: WPB-12 WPB-30 WPB-65	Capacity and Division Value 3 kg x 1 g / 6 kg x 2 g (6 lb x 0.05 oz / 12 lb x 0.1 oz) 6 kg x 2 g / 15 kg x 5 g (12 lb x 0.1 oz / 30 lb x 0.2 oz) 15 kg x 5 g / 30 kg x 10 g (30 lb x 0.2 oz / 65 lb x 0.5 oz)
Weight Display:	Six-digit, seven-segment LED, 0.56 inch (14 mm) high
Functions:	Dual Range Weight, Counting, Check Weighing
Keys:	ON/OFF, TARE, ZERO, CHECK WEIGHING
Power Requirements:	6V DC, 5 AH maintenance-free lead-acid battery or 120V AC 50/60Hz
Tare:	100% of scale capacity
Enclosure Type:	IP68-rated 304 stainless steel platform and base
Shipping Weight:	11.3 lb (5.1 kg)
Dimensions:	8.9 in W x 11.5 in D x 5.0 in H (227 mm W x 292 mm D x 128 mm H)
Platform Size:	8.7 in W x 7.1 in D (220 mm W x 180 mm D)
Temperature Range:	14° F to 104° F (-10° C to 40° C)
Approvals:	NTEP – Certificate of Conformance No. 20-048 OIML – R76/2006-A-DK2-2020.08 EU Type Approval – 0200-NAWI-08685

SITE PREPARATION REQUIREMENTS

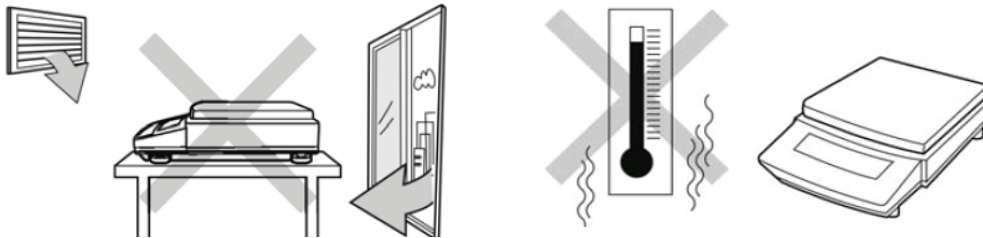
The Model WPB Series Waterproof Portion Scale is a precision weight indicating instrument. As with any precision instrument, it requires an acceptable environment to operate at peak performance and reliability. This section is provided to assist you in obtaining such an environment.

Environmental

Place the scale on a stable, vibration-free level surface away from direct sunlight, and keep the area around the scale clear to provide adequate air circulation.



Do not place the scale in locations with excessive temperatures and humidity. For example, directly in front of a heating or cooling vent, a fan, a window, or any location with a moving air source. Such a location will subject it to sudden temperature changes, which may result in unstable weight readings.



Electrical Power

The Model WPB Series Waterproof Portion Scale has been designed to operate from 120V AC 50/60Hz with a US plug.

- The socket outlet supplying power to the scale should be near the scale and should be easily accessible.
- Ensure that the scale has good, clean AC power and is properly grounded. In areas subject to lightning strikes, additional protection to minimize lightning damage, such as surge suppressors, should be installed.

Electrical Noise Interference

To prevent electrical noise interference, make certain all air conditioning and heating equipment, lighting, or other equipment with heavily inductive loads, are on circuits separate from the system. These sources of disturbances can affect the operation of the scale. Steps must be taken to prevent possible adverse effects on the scale. For example, using simple line filters, isolation transformers, power regulators, or uninterruptible power supplies.

INSTALLATION

Unpacking

Before beginning the installation of your Model WPB Series Waterproof Portion Scale, make certain the scale has been received in good condition. Carefully remove the scale from the shipping carton and inspect it for any evidence of damage (such as exterior dents or scratches) that may have taken place during shipment. Keep the carton and packing material for return shipment if it should become necessary. It is the responsibility of the purchaser to file all claims for any damages or losses incurred during transit.

Placement

Place the scale on a stable, vibration-free table, stand, or cart. Make certain the AC power cord is routed out of the way of normal traffic.



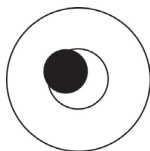
DO NOT place the scale on an unstable table, stand, or cart. The scale may fall causing injury to the operator, and seriously damaging the unit, or proper operation of the scale may be inhibited.

Level Adjustment

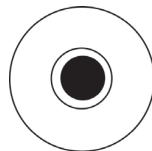
Referring to the image below, observe the bubble level located to the left of the display to make certain the scale is level.



If the scale is not level (the bubble will not be centered), adjust all four (4) feet as required to center the bubble and attain a level scale. See the images below.



Not Level



Level



**Screw foot
in or out to
level scale.**

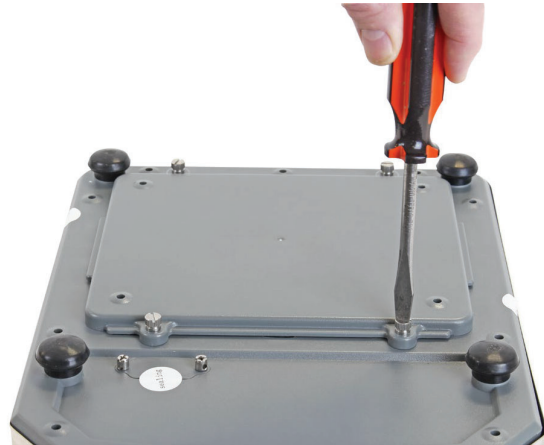
INSTALLATION, CONT.

AC Power Cord

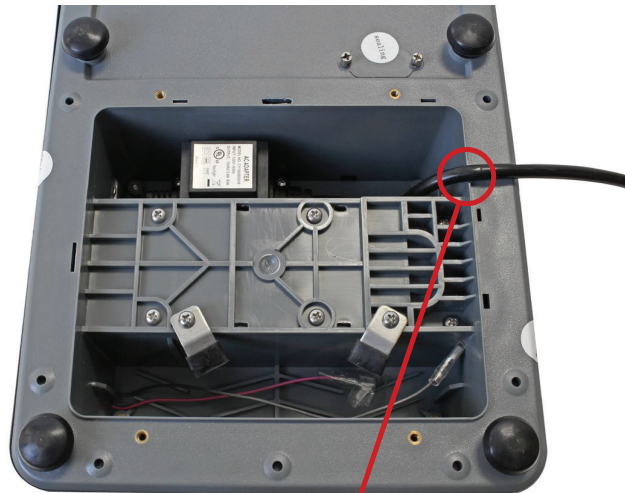
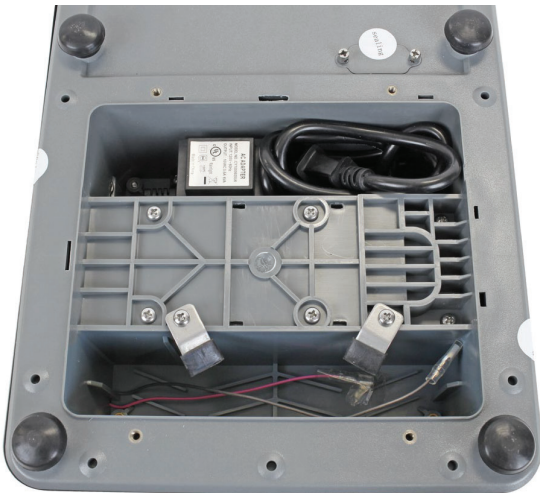
The AC power cord is stored in an opening located in the bottom of the scale.

To gain access to the power cord:

1. Turn the scale over so that the feet are facing up.
2. Locate and remove the four (4) screws securing the cover to the scale.



3. Remove the power cord from the opening and route it out the side of the scale, placing it in the notch of the opening.

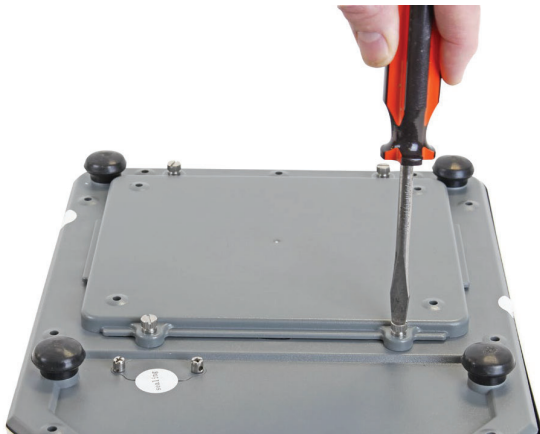


INSTALLATION, CONT.

4. Place the cover on the scale, making sure the notch in the cover is over the power cord.



5. Tighten the screws using a diagonal pattern to secure the cover to the scale.
6. Turn the scale right side up and plug the power cord into the proper electrical outlet.
7. The scale is now ready for operation.



Battery

The Model WPB Series Waterproof Portion Scale uses a 6V DC, 5 AH maintenance-free lead-acid battery, and can operate for up to 20 hours of continuous use with a fully charged battery.

Battery Charging

To recharge the battery, the AC power cord must be connected to an AC power outlet and plugged into the scale. It will take approximately 8 hours to fully recharge the battery in the scale. While the battery is charging the scale can still be operated.

Charging the battery for more than 8 hours *will not* damage it. Note that if the AC power cord is disconnected before the 8 hours, the scale will continue to charge the battery when the AC power cord is plugged back in.



DO NOT perform wash-down procedures while the AC power cord is plugged in to charge the battery.

DISPLAY LEDs

The display LEDs are turned on to indicate that the scale is in the mode corresponding to the LED or that the status indicated by the LED is active.



STABLE

This LED is turned on when the weight display is stable.

NET

This LED is turned on to indicate that the weight shown on the display is net weight and not gross or scale weight. Net weight is determined by subtracting the weight of a container from the gross or scale weight.

ZERO

This LED is turned on to indicate that the weight display is at center-of-zero.

kg

This LED is turned on to indicate that the displayed weight is in kilograms.

lb

This LED is turned on to indicate that the displayed weight is in pounds.

lb. oz

This LED is turned on to indicate that the displayed weight is in pounds and ounces.

R1

This LED is turned on to indicate that the displayed weight is in the first (lighter) weight range of the scale with higher precision graduations.

R2

This LED is turned on to indicate that the displayed weight is in the second (heavier) weight range of the scale with standard precision graduations.

AC

This LED is turned on to indicate the scale is being powered by AC power and not the rechargeable battery.

DISPLAY LEDS, CONT.

LowBat

This LED is turned on when the scale is powered by the rechargeable battery. When the rechargeable battery is near the point where it needs to be recharged, this LED will begin to flicker. If the battery voltage drops too low for accurate weighing, the scale will display an error message `b-E r r`. When the battery error message is displayed, the operator should plug in the AC power cord into a proper electrical outlet to recharge the battery.

NOTE: The following LEDs are only active when Check Weighing has been enabled.

Hi

This LED is turned on to signal that the weight is greater than the Upper Limit weight setting.

Ok

This LED is turned on to signal that the weight is within the acceptable target limits (between the Lower and the Upper Limit settings).

Lo

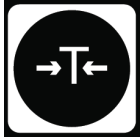
This LED is turned on to signal that the weight is less than the Lower Limit setting.

KEY FUNCTIONS

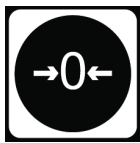


This is the **Power** key. Pressing this key will apply power to the scale and turn it on. The scale will perform a display test and then change to the weight display.

If the scale is already on, press and hold this key until the display shows $\square FF$, and then release it to turn the scale off.



1. This is the **TARE** key. It is used to tare (zero) the weight of a container (e.g., a pan or a box) up to the *full capacity* of the scale.
2. When setting the Check Weighing upper and lower limits, this key is used to change to the next digit or setting value.
3. During Configuration, this key is used to advance to the next prompt.
4. To enter Calibration^{*}, press and hold this key while powering on the scale.



1. This is the **ZERO** key. It is used to zero the weight display if the scale is not at zero. Note that up to a maximum of 2% of the scale capacity can be zeroed.
2. In Weighing Mode, press and hold this key for three (3) to change to an alternate weighing unit. Repeat this until the desired weighing unit is displayed (LED turns on).
3. When setting the Check Weighing upper and lower limits, press this key to begin entering the upper limit SET HI . After entering the upper limit, press this key to advance to the lower limit setting SET LO . Continue this until all limit settings have been entered, and then press this key to save the settings and return to the weighing mode.
4. During Calibration,^{*} this key is used to calibrate the Zero Point weight.



This is the **CHECK WEIGHING** key. It is used to perform several functions.

1. It is used to enable or disable the Check Weighing Function. Press it to enable the check weighing function. If the function is already enabled, pressing it will disable the check weighing function.
2. If the Check Weighing Function is enabled, pressing, and holding this key for three (3) seconds allows setting the Upper and Lower Limits for the check weighing function.
3. When setting the upper and lower limits, this key is used to move to the next digit position of the limit.
4. With the Check Weighing Function disabled, pressing, and holding this key for three (3) seconds enables scale Configuration.
5. During Configuration, this key is used to step through the selections when multiple values are available. For prompts with on and off, or yes and no selections, it is used to toggle between the selections.

^{*} **IMPORTANT!** Calibrating the scale requires certified test weights, breaking the calibration seal, and changing the setting of the calibration dip switch. To maintain the high degree of accuracy, only a qualified technician should calibrate the scale.

OPERATING INSTRUCTIONS



The membrane keypad is not to be operated with pointed objects (pencils, pens, fingernails, etc.). Damage to the keypad resulting from this practice will **NOT** be covered under warranty.

Turning the Scale On and Off

Press the \odot key to turn the scale on. The scale will perform a display test (turn on all segments and symbols, display 9999999 down to 1111111 with the beeper sounding), show the scale capacity, battery voltage, the software version momentarily, and then change to the weight display.

To turn the scale off, press and hold the \odot key until the display shows $\square FF$, and then release the key to turn the scale off.

Basic Weighing Operation

Place the item to be weighed on the tray, wait a moment for the display to stabilize, and then read the weight.

Zero Weight Display

If the scale is not showing zero weight on the display, press the $\rightarrow 0 \leftarrow$ key. The weight display will return to zero with the ZERO and STABLE LEDs turned on to indicate a stable, center-of-zero weight condition.

NOTE: The scale will zero the weight display until 2% of the scale capacity is reached.

Tare Operation

Place the container (e.g., a pan or a box) on the tray, allow the scale to stabilize, and then press the $\rightarrow T \leftarrow$ key. The NET LED will turn on. Note that when removing the container from the tray, the scale will display a negative weight.

Clear Tare Weight

To clear a tare weight, press the $\rightarrow T \leftarrow$ key with the tray empty. This will reset the weight display to zero.



Change the Weighing Units

Press and hold the $\rightarrow 0 \leftarrow$ key for three (3) seconds to change to an alternate weighing unit. Repeat this operation until the desired weighing units are displayed (LED turns on).


For example, if the scale is in kilograms (kg LED is on), pressing and holding the $\rightarrow 0 \leftarrow$ key for three (3) seconds will change the weighing units to pounds (lb LED will turn on). Repeating this operation will change the weighing units to pounds and ounces (lb. oz LED will turn on). Performing the operation again will return the weighing units to kilograms (kg LED will turn on).

CHECK WEIGHING


The Model WPB Series Waterproof Portion Scale has a Check Weighing feature that allows you to set target weights to ensure that the items being weighed are within a specific acceptable weight range. Check Weighing must be enabled before you can set the upper and lower limits and various other functions. Perform the following to enable check weighing:

1. If the scale is not on, press the  key to turn it on. *If the scale is on, skip to step 3.*
2. The scale will perform a display test and then change to the weight display.
3. Press the  key to enable check weighing.
4. The scale display will momentarily show $\overline{LH} - ON$ (CHECKING ON), to indicate the check weighing function has been enabled.


Setting the Upper and Lower Limit Weights

With the scale showing the weight display, press and hold the  key for three (3) seconds. The display will change to $\overline{SET} - H$, (SET HI).

$\overline{SET} - H$, (SET HI) – Set the Upper (Hi) Limit

1. With the display showing $\overline{SET} - H$, (SET HI), press the $\rightarrow 0 \leftarrow$ key.
2. The display will change to show the current Upper limit with the first digit flashing.
3. If the current setting is acceptable, press the $\rightarrow 0 \leftarrow$ key to save it and proceed to the lower limit setting, $\overline{SET} - Lo$ (SET Lo).
4. If the current setting is not acceptable, use the $\rightarrow T \leftarrow$ key to select a new value for the first digit, and then press the  key to proceed to the next digit position.
5. Repeat this operation until all digits for the upper limit have been entered, and then press the $\rightarrow 0 \leftarrow$ key to save it and proceed to the lower limit setting, $\overline{SET} - Lo$ (SET Lo).

$\overline{SET} - Lo$ (SET Lo) – Set the Lower (Lo) Limit

1. With the display showing $\overline{SET} - Lo$ (SET Lo), press the $\rightarrow 0 \leftarrow$ key.
2. The display will change to show the current Lower limit with the first digit flashing.
3. If the current setting is acceptable, press the $\rightarrow 0 \leftarrow$ key to save it and proceed to $\overline{SET} - Li$, (SET Li).
4. If the current setting is not acceptable, use the $\rightarrow T \leftarrow$ key to select a new value for the first digit, and then press the  key to proceed to the next digit position.
5. Repeat this operation until the setting for the lower limit has been entered, and then press the $\rightarrow 0 \leftarrow$ key to save it and proceed to $\overline{SET} - Li$, (SET Li).

CHECK WEIGHING, CONT.

5E6-L, (SET Li) – Set the Check Weighing Functions

1. With the display showing 5E6-L, (SET Li), press the →0← key.
2. The display will change to show L 00-H, (LiM-Hi).
3. If the current setting is acceptable, press the →0← key to save it and proceed to L 00-CK (LiM-Ck).
4. If the current setting is not acceptable, press the →T← key repeatedly to step through selections and select a new setting, and then press the →0← key to save it and proceed to L 00-CK (LiM-Ck).

Allowable settings for the check weighing functions are:

L 00-H, (LiM-Hi)	If the weight on the scale is greater than the upper limit setting, the Hi LED will turn on and the beeper will sound.
L 00-Lo (LiM-Lo)	If the weight on the scale is lower than the lower limit setting, the Lo LED will turn on and the beeper will sound.
L 00-in (LiM-in)	If the weight on the scale is greater than the lower limit setting and less than the upper limit, the Ok LED will turn on and the beeper will sound.
L 00-Un (LiM-Un)	If the weight on the scale is lower than the lower limit setting, the Lo LED will turn on and the beeper will sound. Or If the weight on the scale is greater than the upper limit setting, the Hi LED will turn on and the beeper will sound.

L 00-CK (LiM-Ck) – Enable or Disable stable weight requirement for Check Weighing

1. With the display showing L 00-CK (LiM-Ck), press the →0← key.
2. The display will change to show L 00-5 (LiM-St).
3. If the current setting is acceptable, press the →0← key to save it and proceed to L 00-BZ (LiM-BZ).
4. If the current setting is not acceptable, press the →T← key to toggle the selection, and then press the →0← key to save it and proceed to L 00-BZ (LiM-BZ).

Allowable settings for check weighing stable weight requirements are:

L 00-5 (LiM-St)	Check Weighing requires stable weight.
L 00-6 (LiM-US)	Check Weighing does not require stable weight.

CHECK WEIGHING, CONT.

LiM-BZ (LiM-BZ) – Enable or Disable Check Weighing Beeper

1. With the display showing LiM-BZ, press the $\rightarrow 0 \leftarrow$ key.
2. The display will change to show the current setting.
3. If the current setting is acceptable, press the $\rightarrow 0 \leftarrow$ key to save it and return to the weight display.
4. If the current setting is not acceptable, press the $\rightarrow T \leftarrow$ key to toggle the selection and then press the $\rightarrow 0 \leftarrow$ key to save it and return to the weight display.

Allowable settings for the check weighing beeper are:

LiM-BZ (LiM-BZ)	The beeper is enabled.
LiM-MU (LiM-MU)	The beeper is disabled (muted).

CHECK WEIGHING OPERATION

Check Weighing must be enabled before operations can begin. Perform the following to enable check weighing:

1. If the scale is not on, press the ϕ key to turn it on. *If the scale is on, skip to step 3.*
2. The scale will perform a display test and then change to the weight display.
3. Press the ☞ key to enable check weighing.
4. The scale display will momentarily show CHECKING ON, to indicate the check weighing function has been enabled.



NOTE: The functions of the LEDs and beeper are selected when setting the Upper and Lower limits. Refer to the SET Li (SET Li) – Set the Check Weighing Functions setting.

Items that are outside the weight range, (over or under) are identified by turning on an LED, **Hi** (for over) or **Lo** (for under) and if enabled, sounding the beeper. Items that are within the weight range (between the lower limit and upper limit settings) are identified by turning on the **Ok** (for acceptable) LED and if enabled, sounding the beeper.

Weight is Greater than Upper (Hi) Limit Setting

If LiM-Hi is selected, the **Hi** LED is turned on, and the scale will beep (until the weight is removed), to signal that the weight is greater than the Upper Limit weight setting.

Weight is Less than Lower (Lo) Limit Setting

If LiM-Lo is selected, the **Lo** LED is turned on, and the scale will beep (until the weight is removed), to signal that the weight is less than the Lower Limit weight setting.

Weight is Acceptable (Ok) Limits (between lower limit and upper limit settings)

If LiM-in was selected, the **Ok** LED will turn on, and the scale will beep (until the weight is removed), to signal that the weight is within the acceptable limits (greater than the lower limit setting and less than the upper limit setting).

CONFIGURATION

Enable Configuration

1. Press the ϕ key to turn the scale on.
2. The scale will perform a display test and then change to the weight display.
3. Repeatedly press the ☞ key until the scale display momentarily shows C H - o F F (CHECKING OFF), to indicate the check weighing function has been disabled.
4. With check weighing disabled and the scale showing the weight display, press and hold the ☞ key for three (3) seconds.

The display will change to show the weighing display speed, S P E D - X (SPED-X) setting, where "X" is the current setting. Note that the factory default is S P E D - F (SPED F = fast).

S P E D - (Weighing Display Speed)

1. With the display showing S P E D - and the current setting, press the $\rightarrow\text{T}\leftarrow$ key if the setting is acceptable, and then proceed to the next prompt.
2. Otherwise, press the ☞ key to step through the selections, and then press the $\rightarrow\text{T}\leftarrow$ key to save the new setting and proceed to the next prompt.

Allowable settings for the weighing display speed are:

S P E D - S (SPED-S = slow)

S P E D - M (SPED-M = medium)

S P E D - F (SPED F = fast)

A J - (Anti-Shaking Function)

1. With the display showing A J - and the current setting, press the $\rightarrow\text{T}\leftarrow$ key if the setting is acceptable, and then proceed to the next prompt.
2. Otherwise, press the ☞ key to step through the settings, and then press the $\rightarrow\text{T}\leftarrow$ key to save the new setting and proceed to the next prompt.

Allowable settings for the anti-shaking function are 0 through 9 divisions.

A P F - (Automatic Power Off)

1. With the display showing A P F - and the current setting, press the $\rightarrow\text{T}\leftarrow$ key if the setting is acceptable, and then proceed to the next prompt.
2. Otherwise, press the ☞ key to step through the selections, and then press the $\rightarrow\text{T}\leftarrow$ key to save the new setting and proceed to the next prompt.

Allowable settings for the automatic power off are:

0 = no power off

10 = 10 min. power off


20 = 20 min. power off

30 = 30 min. power off

60 = 60 min. power off


CONFIGURATION, CONT.

P_S - (Power Saving Mode)

1. With the display showing P_S - and the current setting, press the →T← key if the setting is acceptable, and then proceed to the next prompt.
2. Otherwise, press the  key to toggle the setting, and then press the →T← key to save it and proceed to the next prompt.

Allowable settings for the power saving mode are *oN* (ON) or *oFF* (OFF).

S_{AVE} - (Save Configuration Settings)

1. With the display showing S_{AVE} - and the current setting, press the →T← key if the setting is acceptable to save all the settings and return to the weight display.
2. Otherwise, press the  key to toggle the selection, and press the →T← key to save all the settings and return to the weight display.

Allowable settings for saving configuration settings are *n* (NO) or *Y* (Yes).

SCALE CALIBRATION

Your Model WPB Series Waterproof Portion Scale was calibrated at the factory and should not require adjustment. If the scale requires re-calibration, the following describes the calibration procedure. To maintain the high degree of accuracy of the scale, a qualified technician should perform this function.



IMPORTANT! Kilogram test weights equal to 1/3, 2/3, or full capacity of the scale are required for calibration of the WPB Series scales.

1. With the scale turned off, turn it over so that the feet are facing up, and locate the 2 screws securing the calibration switch cover between the front feet. Refer to the image below.



2. Remove the screws, and then remove the cover, breaking the calibration seal and exposing the calibration switch.
3. Move the calibration switch to the right as shown in the right image below.



4. Return the scale to the upright position.
5. Press and hold the $\rightarrow T \leftarrow$ key, and then press the ϕ key to turn the scale on.
6. The scale will perform a display test, and then change to show CRL on the display with all the LEDs turned on.
7. With the scale tray empty, press the $\rightarrow 0 \leftarrow$ key. This will set the zero weight of the scale.
8. The display will change to show [-PER] momentarily, and then change to show SPRN .
9. Place a **kilogram** test weight equal to 1/3, 2/3, or full capacity on the scale tray.
10. The display will change to show on 1 (if the test weight used is 1/3 capacity), on 2 (if the test weight used is 2/3 capacity), or on 3 (if the test weight used is full capacity), change to show PRSS momentarily, and then count backward until the weight display is showing.
11. The calibration is complete. Remove the test weight from the tray, turn the scale over, and replace the calibration switch cover securing it with the two (2) screws removed earlier.
12. Return the scale to the upright position and press the ϕ key to turn the scale on. The scale is ready for normal operation.

ERROR AND OPERATION DISPLAYS

The Model WPB Series Waterproof Portion Scale is equipped with diagnostic software that tests various portions of the scale's circuitry and verifies proper operation. Should a problem be detected, an error or status message will be displayed. The following lists these messages and their meaning.

Display	Possible Cause	Solution
<i>0-LoAd</i>	The load on the scale exceeds the capacity of the scale.	Remove the excess load on the scale tray.
<i>0-PErO</i>	The load on the scale exceeds the power-on capability.	Make sure nothing is on or touching the scale tray, then power the scale off and back on.
<i>b-Err</i>	The battery voltage has dropped too low for accurate weighing.	Plug the AC power cord into a proper electrical outlet to recharge the battery.

BEFORE YOU CALL FOR SERVICE

The Model WPB Series Waterproof Portion Scale has been designed to provide you with years of trouble-free operation. However, should you experience a problem, please refer to the troubleshooting guide below before you call for service. The following describes several types of problems along with suggested solutions.

Problem	Possible Solution
The scale does not turn on	<p>AC Operation</p> <ul style="list-style-type: none"> • Is the AC power cord fully inserted into the wall receptacle? • Check the wall receptacle for proper AC power. Try another electrical appliance in the same receptacle. Does it work? • Check the circuit breaker. • Has there been a power failure? <p>Battery Operation</p> <ul style="list-style-type: none"> • The battery is discharged. Plug in the AC power cord to charge the battery. Scale can be used while the battery is charging.
Incorrect weight is displayed	<ul style="list-style-type: none"> • Make sure nothing is touching the scale tray or if using a container, it is not touching an adjacent object. • Has the scale been placed on an unstable table, stand, or cart? • Make sure the scale is not near a cooling or heating vent, a fan, a window, or a location with a moving air source. • Have the proper operation procedures been followed? • Has the scale been calibrated?
Cannot calibrate the scale	<ul style="list-style-type: none"> • Make sure the scale is on a stable, vibration-free table, stand, or cart. • Make sure the scale is not near a cooling or heating vent, a fan, a window, or a location with a moving air source. • Have the proper calibration procedures been followed?

CARE AND MAINTENANCE

The heart of the Model WPB Series Waterproof Portion Scale is a precision load cell located in the center of the scale base. It will provide accurate operation indefinitely if protected against the overload of scale capacity, dropping items on the scale, or other extreme shocks.

- **DO NOT** use acetone, thinner, or other volatile solvents for cleaning.
- **DO NOT** expose the scale to direct sunlight or temperature extremes.
- **DO NOT** place the scale in front of heating/cooling vents.
- **DO NOT** clean the scale by submerging it in a dishpan or placing it in a dishwasher.
- **DO** clean the scale with a damp soft cloth and mild non-abrasive detergent.
- **DO** make sure the cover on the bottom of the scale is installed before performing wash-down procedures.
- **DO** remove the AC power before cleaning with a damp cloth or performing wash-down procedures.
- **DO** provide clean AC power and adequate protection against lightning damage.
- **DO** keep the surroundings clear to provide clean and adequate air circulation.



DO NOT perform wash-down procedures while the AC power cord is plugged in to charge the battery.

STATEMENT OF LIMITED WARRANTY

WARRANTY TERMS

Cardinal Scale Manufacturing Company warrants the equipment we manufacture against defects in material and workmanship. The length and terms and conditions of these warranties vary with the type of product and are summarized below:

PRODUCT TYPE	TERM	MATERIAL AND WORKMANSHIP	LIGHTNING DAMAGE See note 9	WATER DAMAGE See note 7	CORROSION See note 4	ON-SITE LABOR	LIMITATIONS AND REQUIREMENTS
WEIGHT INDICATORS	90 DAY REPLACEMENT ----- 1 YEAR PARTS	YES	YES	YES	YES	NO	1, 2, 3, 5, 6 A, B, C, D
LOAD CELLS (Excluding Hydraulic)	1 YEAR	YES	YES	YES	YES	NO	1, 2, 3, 5, 6 A, B, C, D
HYDRAULIC LOAD CELLS (When purchased with Guardian Vehicle Scale)	LIFETIME	YES	YES	YES	YES	90 DAYS	1, 5, 6, 8 A, B, C, D
HYDRAULIC LOAD CELLS (When purchased separately)	10 YEARS	YES	YES	YES	YES	NO	1, 5, 6, 8, 9 A, B, C, D
VEHICLE SCALE (Deck and Below Excl. PSC Series)	5 YEARS	YES	YES	YES	YES	90 DAYS	1, 2, 3, 5, 6 A, B, C, D, E
LSC SCALE (Deck and Below)	3 YEARS	YES	YES	YES	YES	90 DAYS	1, 2, 3, 5, 6, 11 A, B, C, D
GUARDIAN FLOOR SCALES	10 YEARS	YES	YES	YES	YES	NO	1, 2, 3, 5, 6, 9, 10 A, B, C, D
ALL OTHER CARDINAL PRODUCTS	1 YEAR	YES	YES	YES	YES	NO	1, 2, 5, 6 A, B, C, D, E
REPLACEMENT PARTS	90 DAYS	YES	YES	YES	YES	NO	1, 2, 4, 5, 6 A, B, C, D
SWIM AND 760 SERIES VEHICLE SCALES	1 YEAR	YES	YES	YES	YES	90 DAYS	1, 2, 5, 6 A, B, C, D
SOFTWARE	90 DAYS	YES	N/A	N/A	N/A	NO	1, 6 B, C, D
CONVEYOR BELT SCALES (including Belt-Way)	1 YEAR	YES	YES	YES	YES	NO	1, 2, 3, 5, 6 A, B, C, D, E, F



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APPLICABLE LIMITATIONS AND REQUIREMENTS

1. This warranty applies only to the original purchaser. The warranty does not apply to equipment that has been tampered with, defaced, damaged, or had repairs or modifications not authorized by Cardinal or has had the serial number altered, defaced or removed.
2. This warranty is not applicable to equipment that has not been grounded in accordance with Cardinal's recommendations.
3. This equipment must be installed and continuously maintained by an authorized Cardinal / Belt-Way dealer.
4. Applies only to components constructed from stainless steel.
5. This warranty does not apply to equipment damaged in transit. Claims for such damage must be made with the responsible freight carrier in accordance with freight carrier regulations.
6. Warranty term begins with date of shipment from Cardinal.
7. Only if device is rated NEMA 4 or better or IP equivalent.
8. Lifetime warranty applies to damages resulting from water, lightning, and voltage transients and applies only to the hydraulic load cell structure itself (does not include pressure transducers, rubber seals, o-rings, and associated wiring).
9. 10-Year prorated warranty on hydraulic load cells.
10. 1-Year warranty for scale structure.
11. PSC models' warranty coverage applies only to agricultural installations on farms up to 3,000 acres (LSC models not limited in this manner).
12. Load cell kits MUST be installed in accordance with Cardinal Scale instructions. Failure to follow these instructions will void the warranty.

EXCLUSIONS

- A.) This warranty does not include replacement of consumable or expendable parts. The warranty does not apply to any item that has been damaged due to unusual wear, abuse, improper line voltage, overloading, theft, fire, water, prolonged storage or exposure while in purchaser's possession or acts of God unless otherwise stated herein.
- B.) This warranty does not apply to peripheral equipment not manufactured by Cardinal. This equipment will normally be covered by the equipment manufacturer's warranty.
- C.) This warranty sets forth the extent of our liability for breach of any warranty or deficiency in connection with the sale or use of our product. Cardinal will not be liable for consequential damages of any nature, including but not limited to loss of profit, delays or expenses, whether based on tort or contract. Cardinal reserves the right to incorporate improvements in material and design without notice and is not obligated to incorporate said improvements in equipment previously manufactured.
- D.) This warranty is in lieu of all other warranties expressed or implied including any warranty that extends beyond the description of the product including any warranty of merchantability or fitness for a particular purpose. This warranty covers only those Cardinal products installed in the forty-eight contiguous United States and Canada.
- E.) This warranty does not cover paint coatings due to the variety of environmental conditions.
- F.) Do not cut load cell cables on load cells returned for credit or warranty replacement. Cutting the cable will void the warranty.
- G.) Software is warranted only for performance of the functions listed in the software manual and/or the Cardinal proposal.
- H.) The software warranty does not cover hardware. Warranties on hardware are provided from the hardware vendor only.
- I.) The software warranty does not cover interfacing issues to non-Cardinal supplied hardware.
- J.) The software warranty does not include automatic software upgrades unless purchased separately.



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