

# DETECTO®



**MARINER®**

**Model WPS12**

**Waterproof Digital Portion Scale  
Owner's Manual**

## COPYRIGHT

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## DISCLAIMER

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 by 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. Stock No. 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 this 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.



<b>Serial Number</b> _____
<b>Date of Purchase</b> _____
<b>Purchased Form</b> _____
_____
_____
RETAIN THIS INFORMATION FOR FUTURE USE

<b>PRECAUTIONS</b>	
Before using this instrument, read this manual and pay special attention to all "WARNING" symbols:	
	IMPORTANT
	ELECTRICAL WARNING

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## SPECIFICATIONS

Capacity – Increments:	12 lb x 0.1 oz, 12 lb x 0.005 lb, 12 lb x 1/8 oz, 192 oz x 0.05 oz, 192 oz x 1/8 oz, 5,500 g x 1 g
Scale Dimensions:	7.5 in W x 9.75 in D x 2.25 in H (190.5 mm W x 247.5 mm D x 57 mm H)
Platform Dimensions:	7.5 in W x 6.75 in D (190.5 mm W x 171.45 mm D)
Power Requirements:	100-240V AC 50/60Hz 9V @ 1A AC Adapter (with US plug) Built-in rechargeable Ni-MH battery: 4.8 VDC 1800 mA <i>(Note: A plug adapter is required for international use)</i>
Battery Life:	80 hours of continuous use with a fully recharged battery
Weight Display:	1.2-in (30-mm) high backlit blue LCD, 5 digits, 1-in (25-mm) high
Zero:	Established on power-up routine and maintained by auto-zero circuitry.
Tare:	100% of full scale capacity
Operation Environment:	Temperature Range: 40° to 105°F (5° to 40°C)
Storage Environment:	Temperature Range: 40° to 140°F (5° to 60°C) <i>(Please Note: The Mariner® is not commercial dishwasher safe)</i>
Keys:	ON/OFF, TARE, UNITS/Back Light, SET
Enclosure Rating:	IP67 Submersible
Product Weight:	3.6 lb (1.7 kg)
Shipping Weight:	5 lb (2.3 kg)

# INSTALLATION

## Unpacking

Before beginning the installation of your scale, make certain the instrument has been received in good condition. When removing the scale from its packing, inspect it for signs of damage, such as exterior dents and scratches. 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 loss incurred during transit.

1. Remove the scale from the shipping carton and inspect it for any signs of damage.
2. Plug in the adapter to use the scale and begin charging the battery pack. Refer to the POWER SUPPLY or BATTERY PACK sections of this manual for more instructions.
3. Place the scale on a flat-level surface, such as a table or bench.
4. The scale is now ready for use.

## Battery Pack

The scale uses a 4.8 VDC, 1800 mA built-in rechargeable battery pack. The WPS12 can operate for up to 80 hours of continuous use with a fully charged battery pack.

## Low Battery

When the battery pack is near the point where it needs to be recharged, a low battery indicator on the display will turn on. If the battery voltage drops too low for accurate weighing, the scale will automatically shut off and you will be unable to turn it back on. When the low battery indicator is displayed, the operator should plug the power supply into the scale and then into the proper electrical wall outlet. The scale will begin charging the battery pack.

## Power Supply

To apply power to the scale using the supplied power supply, insert the plug from the power supply cable into the power jack on the side of the scale and then plug the power supply into the proper electrical outlet. The scale is now ready for operation.



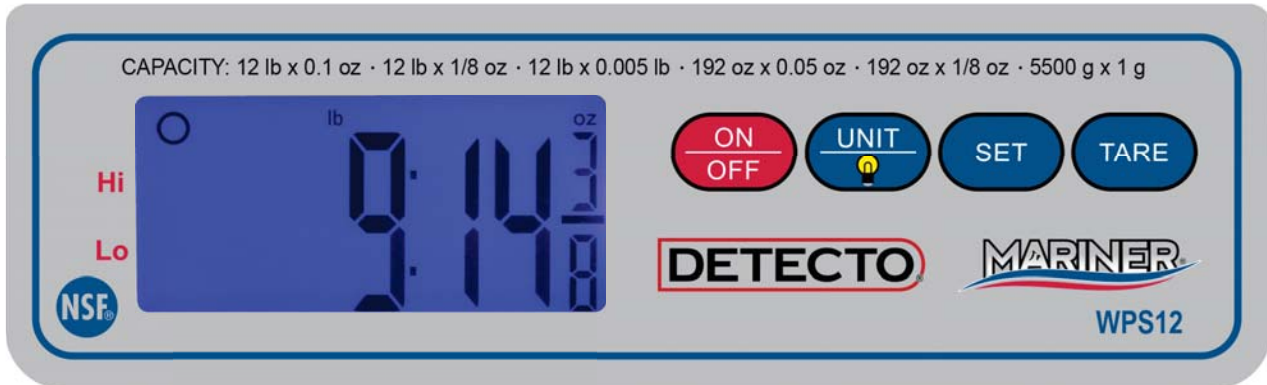
## Battery Charging

To recharge the battery pack, the power supply must be connected to an AC power outlet and plugged into the scale. It will take approximately 5 hours to fully recharge the battery pack in the scale. While the batteries are charging the WPS12 can still be operated.

**NOTE:** Charging the battery pack for more than 12 hours *will not* damage it.

## DISPLAY ANNUNCIATORS

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



<b>O</b>	The O annunciator is turned on when the weight display is stable.
<b>lb</b>	The lb annunciator is turned on to indicate that the displayed weight is in pounds.
<b>oz</b>	The oz annunciator is turned on to indicate that the displayed weight is in ounces.
<b>lb oz</b>	Both the lb and oz annunciators are turned on to indicate that the displayed weight is in pounds and ounces.
<b>g</b>	The g annunciator is turned on to indicate that the displayed weight is in grams.
<b>Low</b>	The low battery annunciator is used with the battery operation. It will turn on to indicate that the batteries will soon need to be recharged.
<b>◀</b>	Low limit setting annunciator
<b>▶</b>	High limit setting annunciator

## KEY FUNCTIONS

### UNITS /

1. Press this key to change the weighing units to the alternate units of measurement (if selected during the configuration of the scale).
2. Press and hold three for (3) seconds to turn the display backlight on or off.

### TARE

1. Press to reset the displayed weight to zero up to 100% of the scale capacity.

### ON/OFF

1. Press and release this key to turn on the scale.
2. Press and release this key to turn the scale off.

# OPERATION



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

## Turn the Scale On

Press the **ON/OFF** key to turn the scale on. The scale will display all display segments and then change to zero weight.

## Select the Weighing Unit

Press the **UNITS** key to alternate between the selected weighing units. **NOTE:** Multiple weighing units must be enabled during configuration for this function to be operational.

## Weigh

Place the item to be weighed on the scale tray. The scale will display the item's weight.

## To Re-Zero the Weight Display

To Zero or Tare the weight display, press the **TARE** key, and continue. The scale will re-ZERO/TARE until the full capacity of the scale is reached.

## Tare

To weigh ingredients in a container you must first **TARE** the weight of the container so that only the net weight of the ingredient is displayed.

1. Place the empty container on the scale platform while the scale is OFF
2. Turn the scale on. The display will show zero weight.
3. Add the ingredients to the container. The scale will display the weight of the ingredient.
4. To weigh additional ingredients, press the **TARE** key before adding each ingredient.
5. To display the total weight of the ingredients, press the **SET** and **TARE** keys at the same time.
6. Note that upon removing the container and ingredients the scale will display a negative weight. Press the **TARE** key to return the scale to zero.

## High/Low Weight Checking

The scale may be set to alert you when either over or under a set limit.

1. Press and hold the **TARE** key for 3 seconds. The scale will beep and display the low weight annunciator
2. Place a weight equal to the low weight limit on the scale and press **SET**. The scale will beep indicating the low limit is set. The scale will then display the high weight annunciator.
3. Add a weight to the scale until the weight is equal to the desired high weight limit and press **SET**. The scale will beep indicating the high limit is set. Remove the weight from the scale.

The scale will beep and the display will indicate if an item placed on the scale is over or under the set limits.

To clear the HIGH/LOW settings, press the **SET** and **TARE** keys at the same time.

# CONFIGURATION

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

## To Begin Configuration

1. Press the **ON/OFF** key to turn on the scale.
2. Press and hold the **SET** key for 3 seconds. When the display shows *SEt*, release the **SET** key to enter the Configuration mode. The display will change to show *Unit*.

## Weighing Units

To select “lb oz” (pounds ounces) weighing units (12 lb x 0.1 oz):

1. With the display showing *Unit*, press the **SET** key. The display will change to show “g” and the status (*On* or *OFF*).
2. Press the **UNIT** key to toggle between:  
Enable (display will change to *On*) or  
Disable (display will change to *OFF*).
3. Press the **SET** key.
4. Repeat the above steps for each weighing unit mode :
  - g = grams (5500g x 1 g)
  - lb oz = pounds ounces (12 lb x 0.1 oz)
  - lb oz 1/8 = pound / 1/8 ounces (12 lb x 1/8 oz)
  - lb = pounds only (12 lb x 0.005 lb)
  - oz = ounces (192 oz x 0.05 oz)
  - oz 1/8 = 1/8 ounces (192 oz x 1/8 oz)
5. The display will return to *Unit*.
6. Press the **UNIT** key to proceed to **Automatic Shutoff**.

## Automatic Shutoff

1. The display will change to *ROFF*.
2. Press the **SET** key to begin the selection of the automatic shut-off time (in seconds).
3. Press the **UNIT** key to toggle through the selections, *120*, *180*, *240*, *300*, or *OFF*.
4. When the desired time or Off is displayed, press the **SET** key.
5. The display will return to *ROFF*.
6. Press the **UNIT** key to proceed to **Gravity Compensation**.

## CONFIGURATION, CONT.

### Gravity Compensation

1. With the display showing  $G_{R U}$ :

To Enable the Gravity Compensation mode, press the **SET** key. The display will change to  $G_n$  (use the factory set value of 9.797).

To Disable the Gravity Compensation mode, press the **UNIT** key. The display will change to  $GFF$  (use the value obtained from the factory Tech Support).

2. Press the **SET** key again. The display will change to show  $G_{R U}$ .
3. Press the **UNIT** key. The display will change to show  $End$ .
4. Press the **SET** key to save the settings and reset the scale.
5. Setup is complete.

## GRAVITY COMPENSATION

The Gravity Compensation for your scale has been pre-configured at the factory and should not require changing in most locations. If the factory settings do not meet the requirements of your location, contact the factory Tech Support for the value for your location.

With  $G_{R U}$  enabled in the function setting of the Configuration mode, the scale will use the factory set value of 9.797 for the Gravity Compensation.

If the  $G_{R U}$  is disabled, the scale will use the value obtained from the factory Tech Support and entered by the operator for the Gravity Compensation.

### To change the Gravity Compensation value:

1. Press and hold the **UNIT** key while pressing the **ON/OFF** key to turn on the scale and enter Gravity Compensation mode, the display will show 9.797 (or the current value).
2. Press the **UNIT** key to increase the value or the **TARE** key to decrease the value to achieve the desired value.
3. Press the **SET** key to confirm the entered gravity and return the scale to the normal operating mode.



## CALIBRATION PROCEDURE

1. While the scale is off, press and hold the **ON/OFF** key.
2. Once all the display segments are on, release the **ON/OFF** key and immediately press the **UNIT** key three (3) times.
3. The scale will show “11111”→”55555”, and finally show the zero counts.
4. Press the **SET** key. The scale will show “0g” and then go back to the counts.
5. Place a 5.5 kg test weight on the scale and then press the **SET** key.
6. The scale will show “5500g”, and change to show “CAL”, and then automatically turn off.
7. Remove the test weight from the scale.
8. Calibration has been completed and the scale is ready for normal operation.

## DISPLAY MESSAGES

DISPLAY	MEANING
<i>Lo</i>	Low battery indication
<i>EE</i>	E <sup>2</sup> prom Error
<i>OL</i>	Overcapacity

## CARE AND MAINTENANCE

The heart of the WPS12 Waterproof Digital 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 the heating or cooling vents.
- **DO** clean the scale with a damp soft cloth and mild non-abrasive detergent.
- **DO** clean the scale by submerging it in a dishpan and using mild non-abrasive detergent.  
**NOTE:** Before submerging the scale in a dishpan, make sure the power jack cover on the side of the scale is completely inserted, the battery pack cover on the bottom of the scale is installed and the water temperature does not exceed 140°F (60°C).
- **DO** remove AC power before cleaning with a damp cloth or submerging the scale in a dishpan.
- **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 PLACE SCALE IN COMMERCIAL DISHWASHER TO CLEAN!**

# STATEMENT OF LIMITED WARRANTY

DETECTO warrants its equipment to be free from defects in material and workmanship as follows: DETECTO warrants to the original purchaser only that it will repair or replace any part of equipment which is defective in material or workmanship for a period of **two (2) years from date of shipment**. Detecto shall be the sole judge of what constitutes a defect.

During the **first ninety (90) days** DETECTO may choose to replace the product at no charge to the buyer upon inspection of the returned item.

**After the first ninety (90) days**, upon inspection of the returned item, DETECTO will repair or replace it with a remanufactured product. The customer is responsible for paying for the freight both ways.

This warranty does not apply to peripheral equipment not manufactured by DETECTO; this equipment will be covered by certain manufacturer's warranty only.

This warranty does not include replacement of expendable or consumable parts. This does not apply to any item which has deteriorated or damaged due to wear, accident, misuse, abuse, improper line voltage, overloading, theft, lightning, fire, water or acts of God, or due to extended storage or exposure while in purchaser's possession. This warranty does not apply to maintenance service. Purchased parts will have a ninety (90) day repair or replacement warranty only.

DETECTO may require the product to be returned to the factory; item(s) must be properly packed and shipping charges prepaid. A return authorization number must be obtained for all returns and marked on the outside of all returned packages. DETECTO accepts no responsibility for items lost or damaged in transit.

## Conditions Which Void Limited Warranty

This warranty shall not apply to equipment which:

- A.) Has been tampered with, defaced, mishandled or has had repairs and modifications not authorized by DETECTO.
- B.) Has had serial number altered, defaced, or removed.
- C.) Has not been properly grounded according to Detecto's recommended procedure.

## Freight Carrier Damage

Claims for equipment damaged in transit must be referred to the freight carrier in accordance with freight carrier regulations.

This warranty sets forth the extent of our liability for breach of any warranty or deficiency in connection with the sale or use of the product. DETECTO 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. Detecto reserves the right to incorporate improvements in material and design without notice and is not obligated to incorporate improvements in equipment previously manufactured.

The foregoing is in lieu of all other warranties, express 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 DETECTO products installed in the forty-eight (48) contiguous continental United States.



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