



Adventurer™ Balances Instruction Manual



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1. INTRODUCTION

1.1 Description

The Adventurer balance is a precision weighing instrument that will provide you with years of service if properly cared for. The Ohaus Adventurer balances are available in capacities from 120 grams to 8,200 grams.

1.2 Features

Touch Controls: Quick, graphical access to all control functions, over a dozen applications and many features.



1.3 Definition of Signal Warnings and Symbols

Safety notes are marked with signal words and warning symbols. These show safety issues and warnings. Ignoring the safety notes may lead to personal injury, damage to the instrument, malfunctions and false results.

Signal Words

WARNING	For a hazardous situation with medium risk, possibly resulting in injuries or death if not avoided.
CAUTION	For a hazardous situation with low risk, resulting in damage to the device or the property or in loss of data, or injuries if not avoided.
Attention Note	For important information about the product For useful information about the product

Warning Symbols



General Hazard



Electrical Shock Hazard



Alternating current



Direct current

1.4 Safety Precautions



CAUTION: Read all safety warnings before installing, making connections, or servicing this equipment. Failure to comply with these warnings could result in personal injury and/or property damage. Retain all instructions for future reference.

- Verify that the AC adapter's input voltage range and plug type are compatible with the local AC power to be used.
- Make sure that the power cord does not pose a potential obstacle or tripping hazard.
- The balance is for indoor use only.
- Use the balance only in dry locations.
- Do not drop loads on the pan.
- Use only approved accessories and peripherals.
- Operate the equipment only under ambient conditions specified in these instructions.
- Disconnect the equipment from the power supply when cleaning.
- Do not operate the equipment in hazardous or unstable environments.
- Service should only be performed by authorized personnel.
- Do not position the balance such that it is difficult to reach the power connection.

2. INSTALLATION

2.1 Unpacking

Carefully remove your Adventurer balance and each of its components from the package. The included components vary depending on the balance model (see table below). Save the packaging to ensure safe storage and transport. Please read the manual completely before installing and using the Adventurer balance to avoid incorrect operation.

Included Components

- Balance
- Power Adapter
- Wind Ring (only for 0.1 mg and 1 mg models)
- Warranty Card
- Software Compact Disk

2.2 Selecting the Location

Avoid excessive vibrations, heat sources, air current, or rapid temperature changes. Allow sufficient space.



2.3 Leveling the Equipment

The Adventurer has a level bubble in a small round window beside the display.

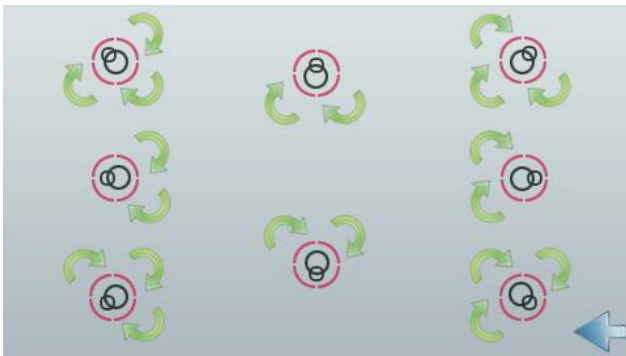
To level the balance, adjust the 4 **Leveling Feet** until the bubble is centered in the circle. See the Level Assist section below on information about how and which feet to turn. Be sure the equipment is level each time its location is changed.



Level Assist

A level assist function is available to help leveling the Adventurer. There are two ways to access the function:

1. **Weighing Application** -> **Item Settings** -> **Level Assist**. See section 4.1.1 for more information.
2. **Main Menu** -> **Balance Setup** -> **User Settings** -> **Level Assist**. See section 5.3.3 for more information.



Rotate the feet according to the image above depending on the location of the level bubble until the bubble is centered.

2.4 Connecting Power

Connect the DC output connector to the power receptacle on the rear of the balance. Then connect the AC power cord to a suitable electrical outlet.



CAUTION: For use with CSA certified (or equivalent approved) power source, which must have a limited current output.

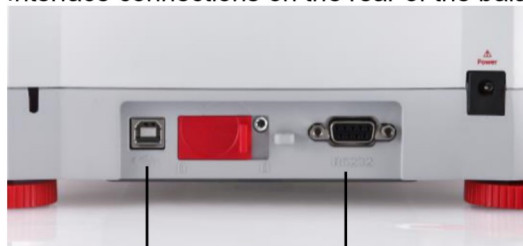


Attention: For optimal weighing performance, allow the balance to warm up for 60 minutes prior to use.

2.5 Connecting the Interface

Use the built-in RS-232 Port to connect either to a computer or a printer with a standard (straight-through) serial cable. Or connect using the scale's USB port.

Interface connections on the rear of the balance:



USB1

RS232

USB connection on the front of the balance:



USB2

USB1: Used to connect to PC only

USB2: Used to connect a USB flash driver only

RS232: Used to connect to PC or Printer

Note: For configuration and interface commands, see the Communication Menu Settings section. For Connecting, Configuring and Testing the Printer/Computer Interface, and for sample Print Output Formats, see the Printing section.

2.6 Initial Calibration

When the Balance is first installed, and when it is moved to another location, it must be calibrated to ensure accurate weighing results. Most Adventurer Balances have built in AutoCal which can calibrate the balance automatically and does not require calibration masses. If preferred, the balance can be manually calibrated with external masses. Have the appropriate calibration masses available before beginning calibration. Refer to the Calibration Section for masses and calibration procedure.

▣ AutoCal™

Fully automatic internal calibration system that assists with routine maintenance by automatically calibrating the balance daily is available on most models.

Automatically calibrates the system when it senses a temperature change sufficient enough to affect weighing accuracy (>1.5°C), or every 11 hours.

▣ External Calibration

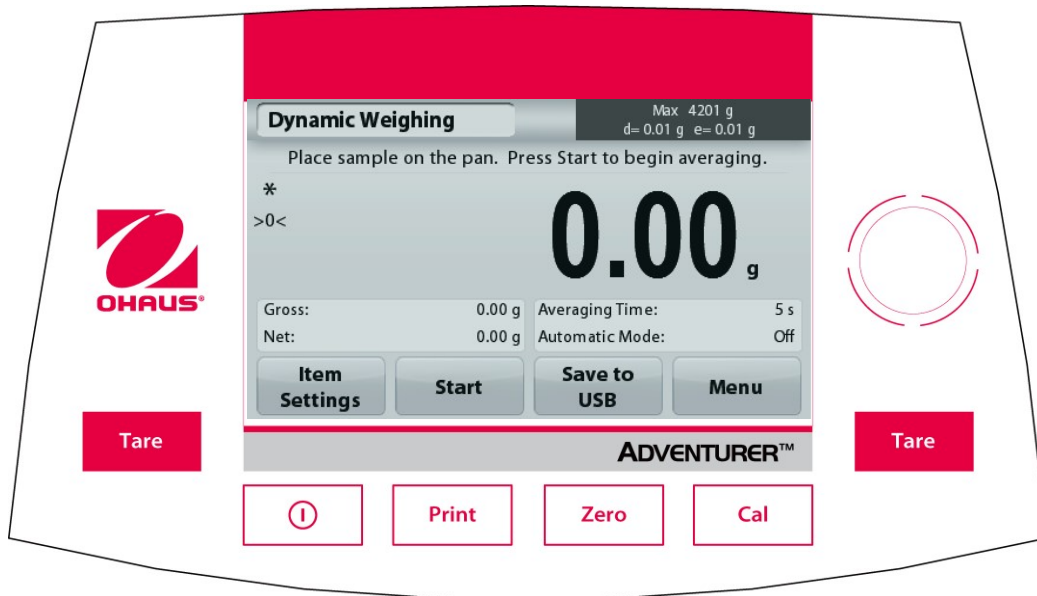
Select precision models feature traditional external calibration in which external weights (user's choice of calibration weight values) are used to calibrate the balance to ensure accuracy.

3. OPERATION

3.1 Overview of Display, Home Screen

This equipment utilizes a touch-sensitive display with *Touch* areas and Buttons to control the equipment's functions.

CONTROLS



Button	Action
	Short Press (if powered Off): Turns on the scale Long Press (if powered On): Turns off the scale Note: The balance will automatically power on when power is connected.
	Short Press: Prints the present data to a printer or a computer.
	Short Press: Perform Zero operation
	Short Press: Perform Calibration operation
	Short Press: Perform Tare operation

Main Application Screen

<p>Application</p>		<p>Capacity and readability</p>
<p>Instructional Messages</p> <p>Stability (*), Net (NET), Gross (G) and/or center of zero (>0<) indicators</p>		<p>Result Field: Information varies by application Touch g to change unit</p>
<p>Reference Fields</p>		<p>Application Buttons: Functions vary by application</p>

3.2 Principal Functions and Main Menu

Weighing: Press **Zero** to set the display to zero. Place an item on the pan. Display indicates gross weight.

Taring: With no load on the pan, press **Zero** to set the display to zero. Place an empty container on the pan and press **Tare**. Add material to the container and its net weight is displayed. Remove container and container's weight appears as a negative number. Press **Tare** to clear.

Zero: Press **Zero** to zero the balance

MENU & SCREEN NAVIGATION

Touch **Menu** to open the menu list.



Calibration:

Touch to view calibration options.



Balance Setup:

Touch to view and change balance settings.



Weighing Units:

Touch to view and change weighing units.



Data Maintenance:

Touch to view data maintenance settings.



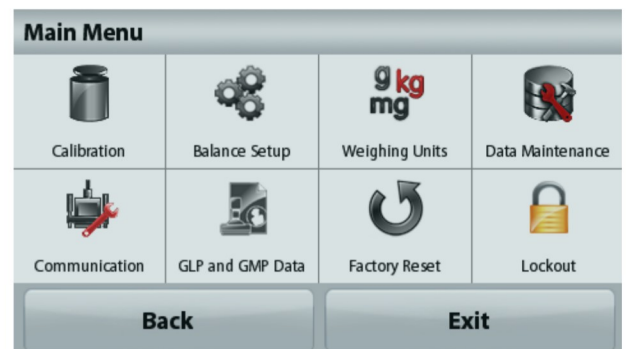
GLP and GMP Data:

Insert user data for traceability.



Communication:

Touch to view COM Device Settings and Print Settings.



Factory Reset:

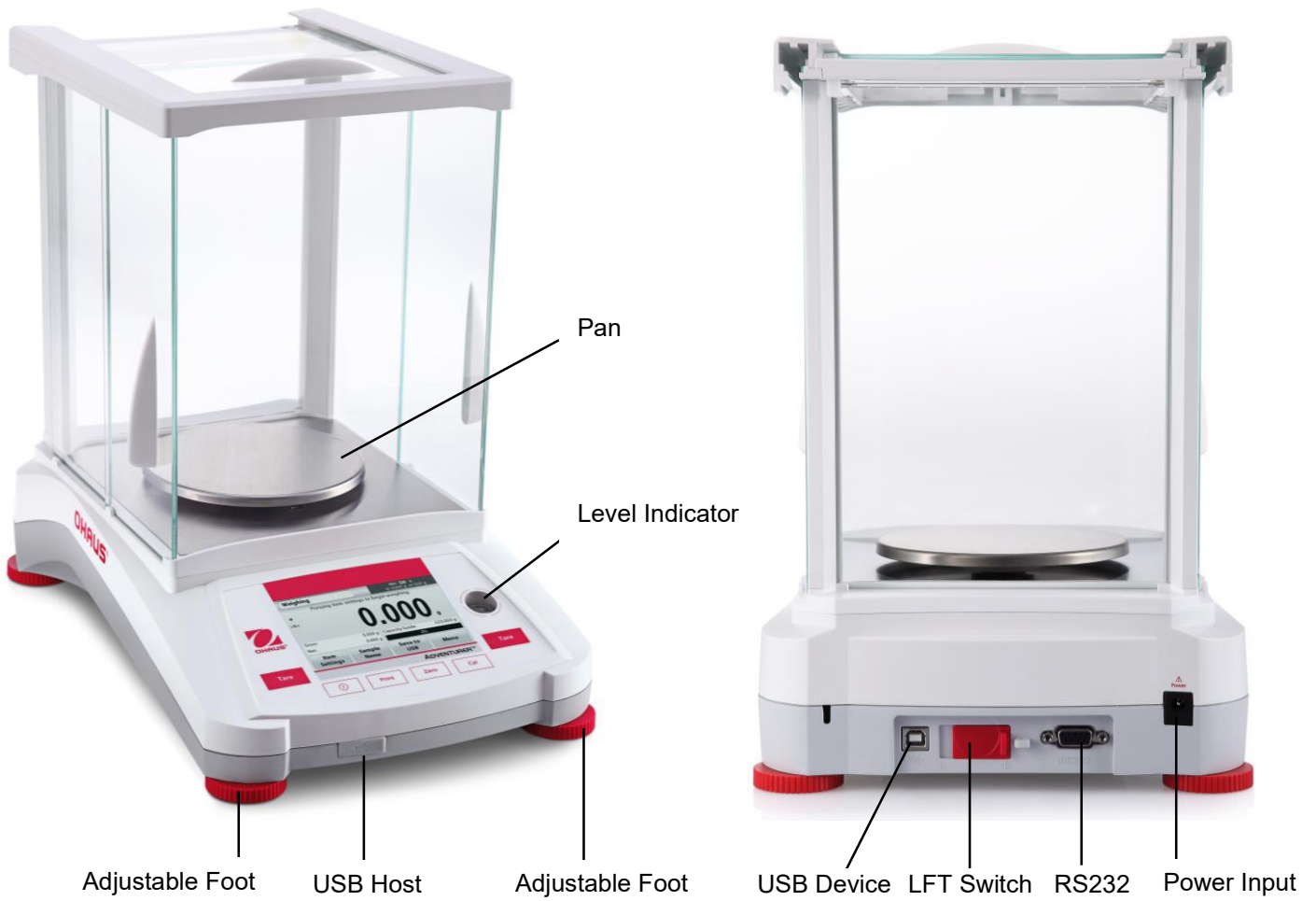
Touch to do a Factory reset of menu settings.



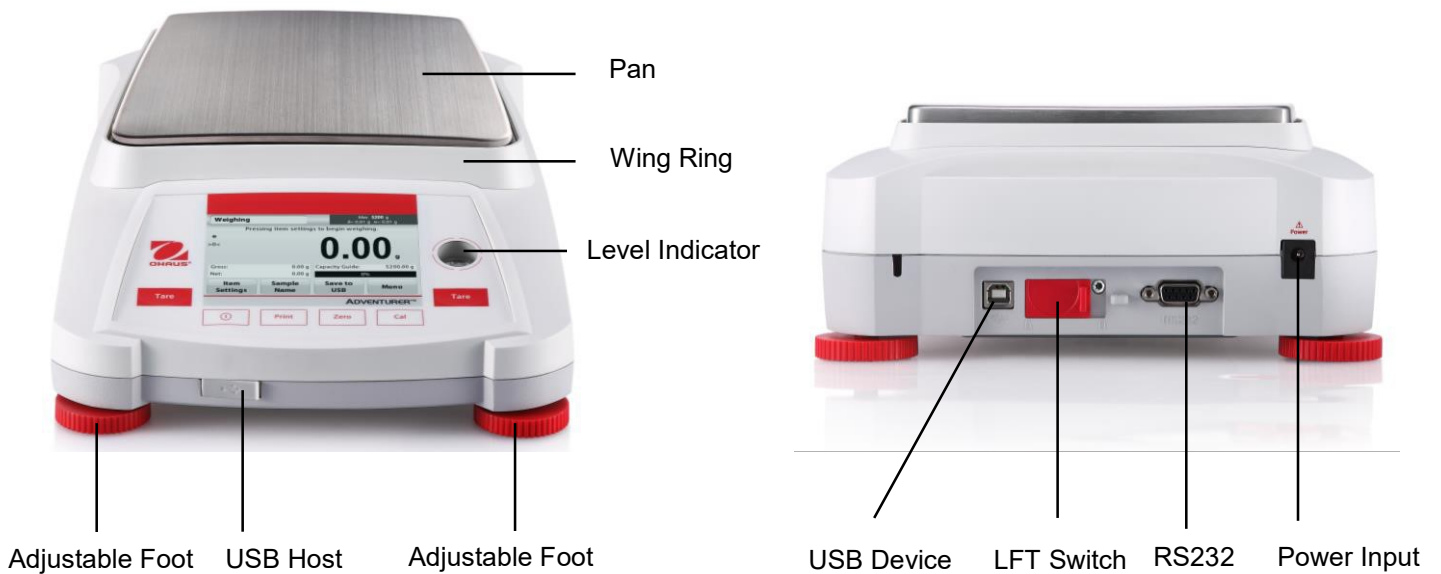
Lockout:

Touch to view lockout options.

3.3 Overview of Parts and Features – Draft Shield Models

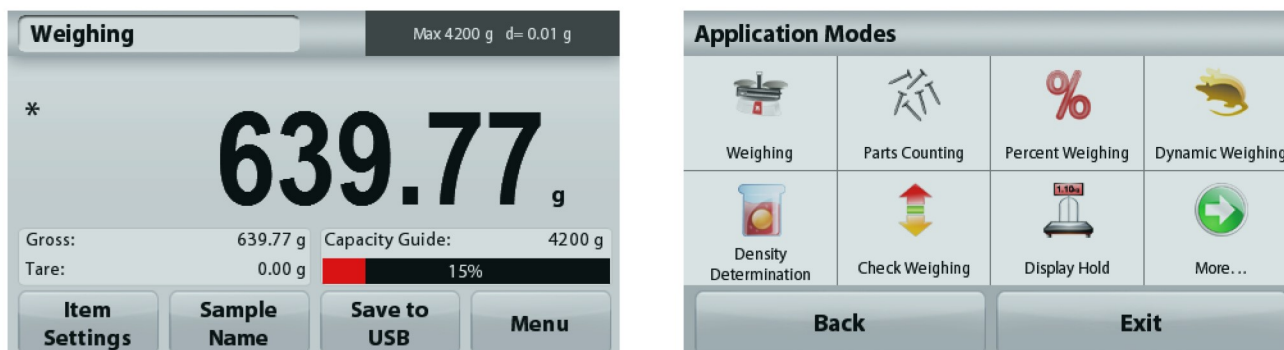


3.4 Overview of Parts and Features – Non Draft Shield Models

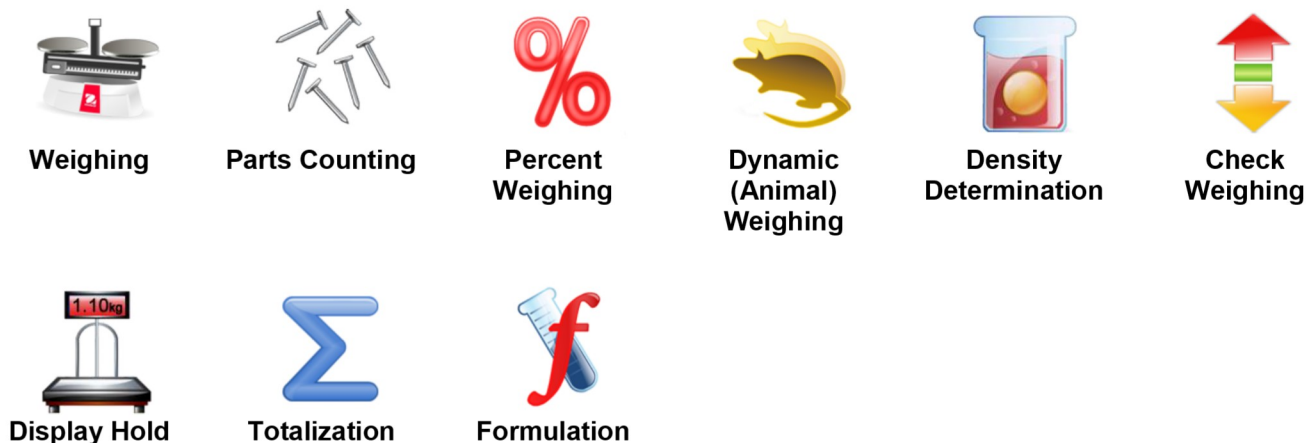


4. APPLICATIONS

The balance can be configured to operate in various Application modes. Touch the top left Application field (weighing in the example below):



The Adventurer Balance has 9 application modes, as follows:



4.1 Weighing

Note: Before using any application, be sure the balance has been leveled and calibrated.

Use this application to determine the weight of items in the selected unit of measure.

Weighing

1. In the upper left portion of the home screen, select Weighing (this application is the default).
2. Press **Tare** or **Zero** if necessary to begin.
3. Place objects on the pan to display the weight. When stable, the * appears.
4. The resulting value is displayed in the main Display Line in the active unit of measure.



The **WEIGHING** Home screen

Main Display Line

Touch **g** to change unit

Reference Fields

Application Buttons



Application Icon

4.1.1 Item Settings

To view or adjust the current settings

Touch the **Item Settings** button. The Settings screen appears.

Minimum Weight: establish a minimum weight value to be used to verify a reading. If an actual weight is below the established Minimum Weight value, it is flagged by a color change: **yellow**.

To adjust the Minimum Weight value, touch the **Minimum Weight** button.

A numeric input window appears.

Use the keys to enter the desired Minimum Weight, then press **Save**.

The display reverts to the previous screen.

To return to the Weighing home screen, touch **Exit** at the bottom of that screen.

Capacity Bar: When set to ON, a capacity bar is displayed in the reference field. The capacity guide will show the current weight as a percentage of balance capacity.

If Capacity Bar is set to OFF, the reference field will show Minimum Weight and Sample Name.

Weighing Units: Change the displayed unit. See section 5.4 for more information

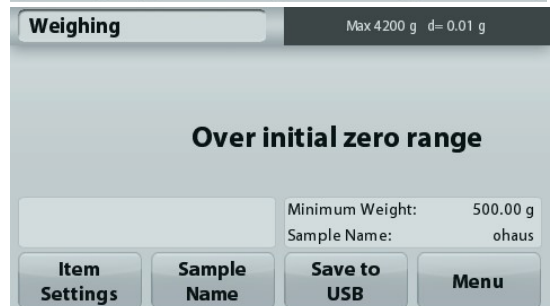
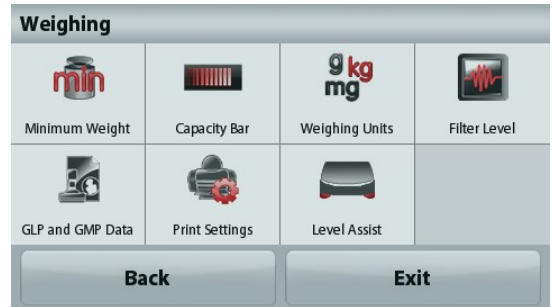
Note: Touching the weighing unit from application home screen will also open the Weighing Units screen.

Filter Level: Change Filtering level. See section 5.3.4 for more information


GLP & GMP Data: See section 5.7 for more information

Print settings: Change printing settings. See section 7 for more information.

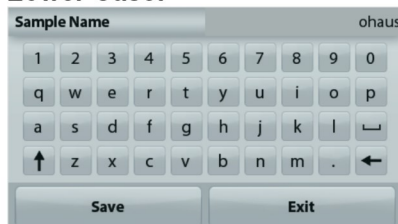
Level Assist: Instructions on how to move the balance feet to level the balance.



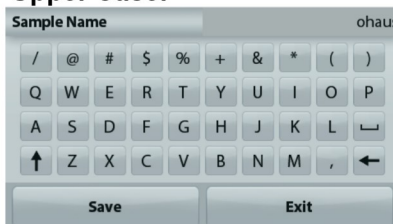
4.1.2 Sample Name

Press this button to add a sample name. An alphanumeric input window appears. Press  to alternate between Lower and Upper case characters.

Lower Case:



Upper Case:



Key in the desired sample name and press Save to save the name and return to weighing home screen.

4.1.3 Save to USB

Insert the USB flash drive into the USB slot located on the front of the balance. Next, press the Save to USB button to save the data to the USB flash drive. Once saved, the button will momentarily change color to orange.



Notes: The first time a USB flash drive is connected to the balance there might be some delay time before the button **Save to USB** works. This is due to that the balance is creating the necessary folders on the USB flash drive where the data will be stored. The Density Determination and Check Weighing applications do not have a Save to USB button.



CAUTION:

The weighing data will be saved to USB every day. However, if different weighing modes are used the data will be separately saved to individual files. Depending on the USB drive used, all data might not be transferred from the balance or the display might freeze. If this happens, unplug the USB flash drive and try another USB flash drive. Ohaus takes no responsibility if data on USB flash drive is erased or if the USB flash drive breaks while it is connected to the balance. To minimize the risk of problems arising, Ohaus suggests using a high quality USB flash drive.

4.2 Parts Counting

Note: Before using any application, be sure the balance has been leveled and calibrated.

Use this application to count samples of uniform weight.

Parts Counting

1. In the upper left portion of the home screen, select Parts Counting
2. Press **Tare** or **Zero** if necessary to begin.
3. Place objects on the pan to display the weight. When stable, the * appears.
4. The resulting value is displayed in the main Display Line in pieces (PCS).



The **Parts Counting** Home screen

Main Display Line

Reference Fields

Application Buttons



Application Icon

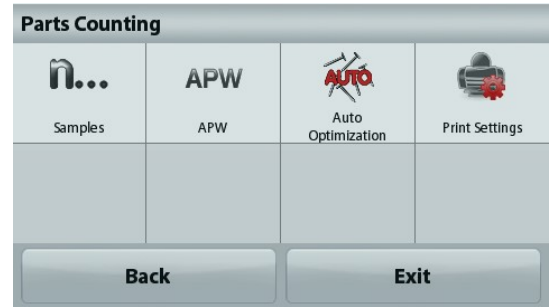
4.2.1 Item Settings

To view or adjust the current settings

Touch the **Item Settings** button. The Settings screen appears.

Samples: The sample size can be 1 to 10 000 pieces. The default sample size is 10. Once a sample size is changed, the balance will immediately open the recalculate APW screen, expecting to establish a new APW.

To adjust the sample size, touch the **Samples** button.



A numeric input window appears.

Use the keys to enter the desired sample size, then press **Save**.



The next screen appears, with the message to place the reference weight on the pan.



Place the reference weight on the pan, then touch **Accept** to capture the value, the screen shows number of pcs.



Establish an Average Piece Weight (APW):

Each time a new type of part is counted, the nominal weight of one piece (Average Piece Weight or APW) must be established using a small quantity of pieces. This APW is stored until replaced by another APW.

There are two methods to establish the APW value:

1. The actual APW is known
2. The APW must be derived by weight. For this case the current sample size will be used

