

acaia



Acaia Pearl Model S User Manual

FW 1.0.052

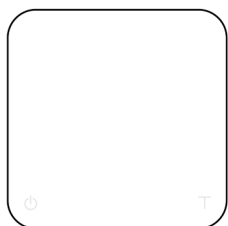
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In the Box

Introduction

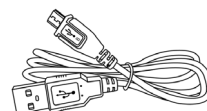
Thank you for choosing one of our scales. The Acaia Pearl Model S is designed and manufactured to the most rigorous standard to give you the best coffee brewing experience. First, check the shipping carton to find the following:



**Acaia Pearl Model S
Coffee Scale**



Heat Resistant Coaster

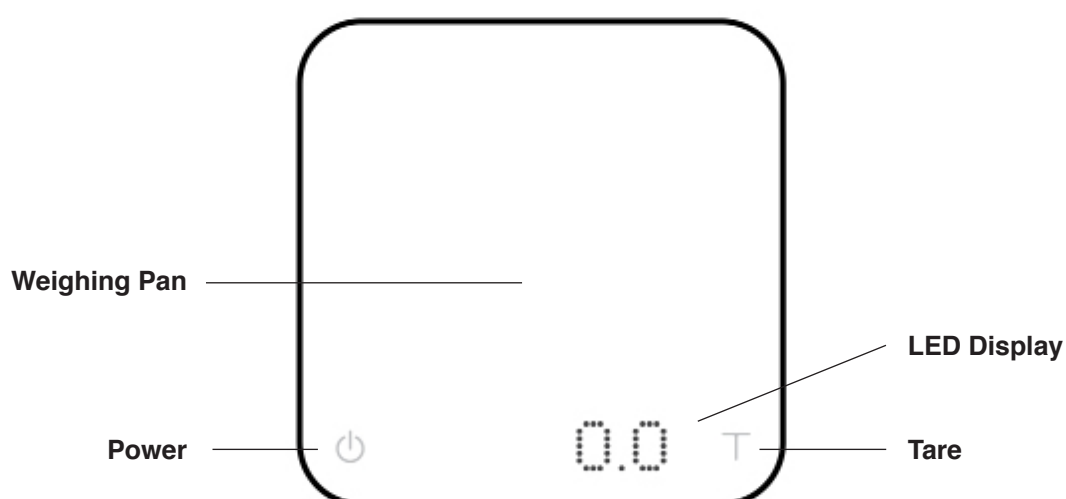


Micro USB Charging Cable

Next, follow the instructions in the “Getting Started” chapter in this manual to start using your scale. To take full advantage of the many features of the Pearl Model S, carefully read through this user manual for step-by-step procedures, examples, and other information.

Warning: Incorrect handling of this product could result in personal injury or physical damage.

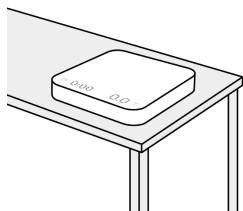
Scale Overview



***Note: For the best performance, place the weight in the center of the weighing pan.**

Getting Started



Placement



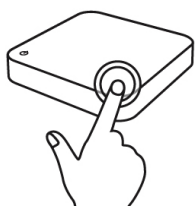
Select a work surface that is stable, vibration-free and level to place the scale.

Power On / Off



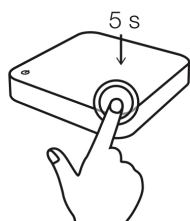
[Press]  to turn on the scale.
[Double tap]  to turn off the scale.

Tare Weight



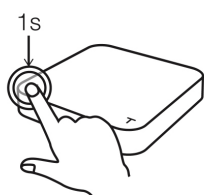
[Press]  to tare/zero the weight.

Toggle Units



[Press and hold]  for five seconds to toggle units.

Switch Modes



[Press and hold]  for one second to switch modes.

* Please see the "Mode Introduction" section for more details.

Using the Acaia Brewguide

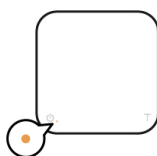
Using Brewguide for the First Time

Brewguide is a step-by-step interactive guide to brewing coffee. Simply scan the Acaia Brewguide QR code on the coffee bean bag, and use the Acaia Brewguide app to download the recipe to your Pearl S. In the Brewguide app, you can also discover guides created by roasters around the world.



Download

Download the Brewguide app



Connect

Activate the Bluetooth on your phone and connect with the Pearl S



Start personalization

Follow the instructions on the Brewguide app

Using Brewguide on Pearl S



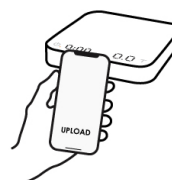
1

Search or scan the QR Code to find the brewguide you need.



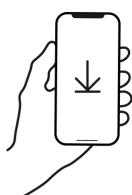
2

Select a brewguide.



3

Choose "Upload to Pearl S" in the app to send it to Pearl S.



4

Wait until the brewguide is sent to the Pearl S; this may take up to one minute.



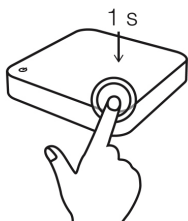
5

Follow the guide and get brewing!



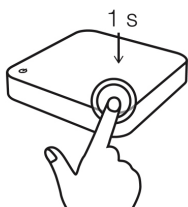
Brewguide Action Buttons

Enter Brewguide mode



In any scale mode, [press and hold] T for one second

Go to the next brewing step



In Brewguide mode, [press and hold] T for one second

Replay the current brewing step



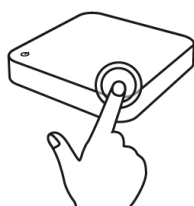
In Brewguide mode, [press] ⏻ to replay

Go back to the previous brewing step



In Brewguide mode, [press and hold] ⏻ for one second

Tare

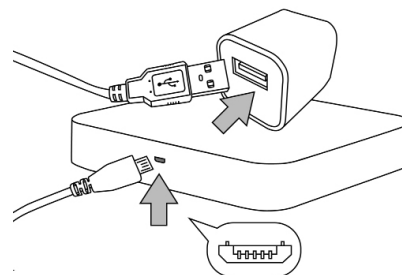


In Brewguide mode, [press] T to tare

Product Care Information

Battery Charging

- You can charge the battery by plugging the USB cable into any of the power supplies listed below:
 - A computer
 - A USB wall-charger with an output of 5 volts and 1 amp
 - A DC car-charger with an output of 5 volts and 1 amp
- It takes about 3-4 hours to fully charge the battery from empty. Try not to let the battery completely run out before charging. Charge the battery as needed.
- A fully charged battery can provide up to 16 hours of working time in normal brightness and up to 40 hours in low brightness mode.
- To check remaining battery level, see “Battery Level Indicator” section.



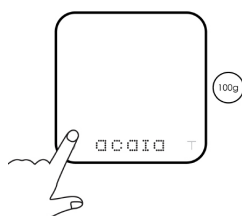
*** Note: Using a “fast-charging” charging block or charging hub (a charging block/hub delivering over 5v at 1A) could damage your Acaia scale’s circuit board.**

Battery Indicator



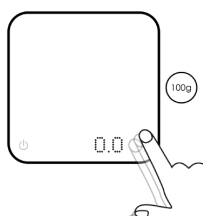
- When the scale is off, the remaining battery level can be viewed by pressing and holding the power button until the battery level indicator is displayed.
- You can also check the battery level by connecting the scale to Acaia Apps.

Calibration



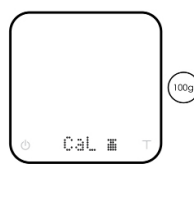
Turn on scale

Turn on the Acaia scale.



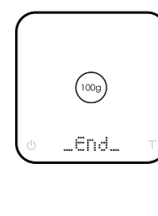
Tap Tare button

Make sure the scale is in weighing mode and the unit is set to 'gram', then tap the 'T' button rapidly.



See CAL display

Keep tapping the 'T' button until 'CAL' is shown on the display.

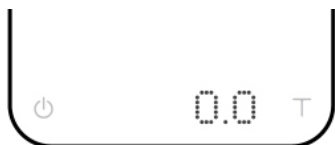


Place a weight

Place a weight (100 g/500 g/1000 g) on the scale and wait until the display shows '_End_'. Calibration is now complete!

Mode Introduction

Mode 1 - Weighing Mode

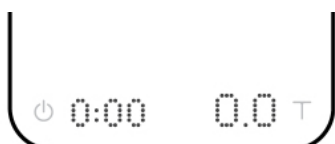


In the Weighing Mode, the scale will only display weight, in either grams or ounces.

- There are two different weighing units in Weighing Mode: gram and ounce. A green dot will appear in the upper right of the LED display and the scale will read 0.000 when weighing in ounces.
- The LED display shows [0.0] when the scale is measuring in grams.
- The LED display shows [0.000] when the scale is measuring in ounces.
- The readability is 0.1 g for grams and 0.005 oz for ounces.

| Action | Operation |
|-------------------|---|
| Tare Weight | Tap Tare button |
| Toggle Units g/oz | Press and hold Tare button for five seconds |
| Reset Mode | Double tap Tare button |
| Switch Mode | Long press Power button |

Mode 2 - Dual Display Mode



In the Dual Display Mode, the scale displays [0:00 0.0] with a timer (left) and weight (right).

- There are two different weighing units in Dual Display Mode: gram and ounce.
- The LED display shows [0:00 0.0] when the scale is measuring in grams.
- The LED display shows [0:00 0.000] when the scale is measuring in ounces.
- When the weight exceeds 999 grams, the LED display only shows the integer part (the decimal point will not be displayed). The LED display shows up to a maximum of 3000 grams. If the weight exceeds 3000 grams, the scale will display [Maximum].

| Action | Operation |
|------------------------|---|
| Start/Stop/Reset Timer | Tap Power button |
| Tare Weight | Tap Tare button |
| Reset Mode | Double tap Tare button |
| Toggle Units g/oz | Press and hold Tare button for five seconds |
| Switch Mode | Press and hold Power button |



Mode 3 - Pour Over Auto Start Mode



The Pour Over Auto Start Mode is designed to aid pour over coffee brewing. The scale will detect the start of the flow from kettle into the vessel and automatically start the timer function; the timer stops when the brewing equipment has been removed

from the scale. When the vessel is removed from the scale, the display flashes the final beverage weight.

Display

- The LED display flashes [ 0.0] and [0:00 0.0] when measuring in grams and the timer is idle.
- The LED display flashes [ 0.000] and [0:00 0.000] when measuring in ounces and the timer is idle.
- Once the timer has started, the LED display shows [0:00 0.0], with the time elapsed on the left and the weight on the right in grams.
- Once the timer has started, the LED display shows [0:00 0.000], with the time elapsed on the left and the weight on the right in ounces.
- When the weight exceeds 999 grams, the LED display only shows the integer part (the decimal point will not be displayed). The LED display shows up to a maximum of 3000 grams. If the weight exceeds 3000 grams, the scale will display [Maximum].

Mode Description

- If the timer has not started yet, the display will flash 0:00 and a water droplet.
- The timer will start automatically when the first flow of water is detected.
- The timer stops when the brewing equipment is removed. The scale will flash between the beverage weight and the tare weight of the items on the scale.

| Action | Operation |
|------------------------|---|
| Start/Stop/Reset Timer | Tap Power button |
| Tare Weight | Tap Tare button |
| Reset Mode | Double tap Tare button |
| Toggle Units g/oz | Long press Tare button for five seconds |
| Switch Mode | Press and hold Power button |

Mode 4 - Portafilter Mode



The Portafilter Mode is designed to simplify the workflow of weighing coffee grounds in a portafilter. The scale automatically detects a portafilter or other vessel and tares the weight of the vessel. Remove the portafilter to add coffee grounds, then place on the scale again to

measure the weight of the coffee grounds. Repeat as needed to adjust the weight. After the portafilter has been removed for 15 seconds, the scale will reset the mode to default for the next workflow.

Display

- When measuring in grams, the display shows [0.0■] before a portafilter is placed on the scale.
- When measuring in ounces, the display shows [0.000■] before a portafilter is placed on the scale.
- The display shows [0.0] after a portafilter has been registered.

Mode Description

- Place an empty portafilter on the scale, and the scale will register the weight of the portafilter.
- Remove the portafilter after [■] disappears.

| Action | Operation |
|-------------------|--|
| Tare Weight | Tare function begins automatically when a stable weight is placed on the scale |
| Reset Mode | Double tap Tare button |
| Toggle Units g/oz | Long press Tare button for five seconds |
| Switch Mode | Press and hold Power button |

Note

1. If the scale is left idle for 15 seconds or you double tap the Tare button, the Pearl Model S will automatically reset the mode to default for the next auto-tare operation.
2. To change the timer reset length in Portafilter Mode, see the “Configuration” section.

Mode 5 - Espresso Mode



The Espresso Mode is designed to aid espresso extraction. The scale automatically detects a cup, shot glass, or other vessel and tares the weight of the vessel. The scale will then detect the start of the flow of espresso into the vessel and automatically

start the timer function; the timer stops when the flow of espresso into the vessel stops. When the vessel is removed from the scale, the display flashes between the beverage weight and vessel weight.

Display

- The LED display shows [0:00 0.0] with the timer on the left and the weight on the right in grams.
- The LED display shows [0:00 0.000] with the timer on the left and the weight on the right in ounces.
- When the weight exceeds 999 grams, the LED display only shows the integer part (the decimal point will not be displayed). The LED display shows up to a maximum of 3000 grams. If the weight exceeds 3000 grams, the scale will display [Maximum].

Mode Description

- When an object (such as a cup) weighing two grams or more is placed on the scale and the weight reading is stable, the scale will perform auto tare.
- After the scale detects the flow of espresso, the timer will start. The timer will stop when the espresso flow stops.
- When the espresso is ready and the cup is removed, the display will flash between the beverage weight and the vessel weight.

| Action | Operation |
|------------------------|---|
| Start/Stop/Reset Timer | Tap Power button |
| Tare Weight | Tap Tare button |
| Reset Mode | Double tap Tare button |
| Toggle Units g/oz | Long press Tare button for five seconds |
| Switch Mode | Press and hold Power button |

Note

1. In Espresso Mode, the timer will stop when the espresso flow stops.
2. The auto-tare function is performed only when the weight exceeds two grams.
3. If you leave the scale idle for ten seconds, it will reset the timer and perform tare operation.
4. In Espresso Mode, the timer will also stop when a negative weight (i.e., removal of a cup) is detected.

Mode 6 - Flowrate Mode



Designed for pour over coffee brewing. The display includes timer, flowrate, and weight.

- The LED display shows [0:00 0.0 0.0] when the scale is measuring in grams.
- The LED display shows [0:00 0.000 0.00] when the scale is measuring in ounces
- When the weight exceeds 999 grams, the LED display only shows the integer part (the decimal point will not be displayed). The LED display shows up to a maximum of 3000 grams. If the weight exceeds 3000 grams, the scale will display [Maximum].
- The flowrate is measured in grams per second (g/s) on the right hand side of the display.

| Action | Operation |
|-------------------------------|---|
| Start/Stop/Reset Timer | Tap Power button |
| Tare Weight | Tap Tare button |
| Reset Mode | Double tap Tare button |
| Toggle Units g/oz | Long press Tare button for five seconds |
| Switch Mode | Long press Power button |

Mode 7 - Flowrate Practice Mode



A real-time flowrate meter mode designed for practicing your infusion stability. The current flowrate is displayed on the left, and the stability of pouring is shown through the indicator bar.

- The flowrate is measured in g/s and oz/s.
- Each dot on the indicator bar represents a 0.5 g/s increment. The bar provides a visualization of flowrate stability.

| Action | Operation |
|--------------------------|---|
| Toggle Units g/oz | Long press Tare button for five seconds |
| Switch Mode | Long press Power button |

Configuration

Enter Settings

1. Press and hold the Power button while the LED display shows [acaia] and then changes to [Settings].
2. Tap the T button to enter Settings. The first setting is [Brightness].
3. Please refer to the following table for key operations

| Action | Operation |
|-----------------------------------|----------------------------|
| Next Setting | Tap Tare button |
| Previous Setting | Tap Power button |
| Enter Setting | Press and hold Tare button |
| Toggle Options | Tap Tare button |
| Save Option | Press and hold Tare button |
| Back to Menu without Saving | Tap Power button |
| Exit Settings and Return to Modes | Double tap Power button |

Settings Menu

| Setting | Display | Options | Default |
|--|--------------------------------|--|---------|
| Brightness Setting | Brightness | Low, Medium, High, Bright | Medium |
| Key Sound Setting | Beep | On, Off | On |
| Default Weighing Unit Setting | Unit | Gram, Ounce | Gram |
| Weighing Mode Setting | Weighing Mode | On, Off | On |
| Dual Display Mode Setting | Dual Display Mode | On, Off | On |
| Pour Over Auto Start Mode Setting | Pour Over Auto Start Mode | On, Off | Off |
| Portafilter Mode Setting | Portafilter Mode | On, Off | Off |
| Espresso Mode Setting | Espresso Mode | On, Off | Off |
| Flowrate Mode Setting | Flowrate Mode | On, Off | Off |
| Flowrate Practice Mode Setting | Flowrate Practice Mode | On, Off | Off |
| Hello Message Setting | Hello Message | On, Off | Off |
| Bluetooth Setting | Bluetooth Setting | On, Off | On |
| Sleep Timer Setting | Sleep Timer | 5 Min, 10 Min, 20 Min, 30 Min, 60 Min, Off | 5 Min |
| Battery Saving Setting | Battery Saving | 90 Sec, 180 Sec, Off | 90 Sec |
| Weighing Filter Setting | Filter | Normal, High, Sensitive | Normal |
| Zero Tracking Setting | Zero Tracking | 1D, 2D, 3D, Off | 1D |
| Weighing Resolution Setting | Resolution | Default, High, Low | Default |
| Timer Auto Stop on Cup Removal Setting | Timer Auto Stop on Cup Removal | 10 Sec, 30 Sec, 60 Sec, Off | 10 Sec |
| Portafilter Auto Reset Setting | Portafilter Auto Reset | 15 Sec, 30 Sec, 60 Sec | 15 Sec |
| Reset Default | Reset Default | No, Yes | No |

Brightness Setting [Brightness]

1. You can adjust the brightness of the LED display.
2. Default brightness is set to Medium. Set to Bright when operating under strong light.

Key Sound Setting [Beep]

1. Use this setting to turn the beeping sound on or off.

Default Weighing Unit Setting [Unit]

1. The default weighing unit is set to be gram if [Gram] is selected and ounce if [Ounce] is selected.
2. Tap the Tare button to switch the default weighing unit between gram and ounce.

Weighing Mode Setting [Weighing Mode]

1. By default, the Weighing Mode is set to On.
 - On: The Weighing Mode is enabled.
 - Off: The Weighing Mode is disabled.

Dual Display Mode Setting [Dual Display Mode]

1. By default, the Dual Display Mode is set to On.
 - On: The Dual Display Mode is enabled.
 - Off: The Dual Display Mode is disabled.

Pour Over Auto Start Mode Setting [Pour Over Auto Start Mode]

1. By default, the Pour Over Auto Start Mode is set to Off.
 - On: The Pour Over Auto Start Mode is enabled.
 - Off: The Pour Over Auto Start Mode is disabled.

Portafilter Mode Setting [Portafilter Mode]

1. By default, the Portafilter Mode is set to Off.
 - On: The Portafilter Mode is enabled.
 - Off: The Portafilter Mode is disabled.

Espresso Mode Setting [Espresso Mode]

1. By default, the Espresso Mode is set to Off.
 - On: The Espresso Mode is enabled.
 - Off: The Espresso Mode is disabled.

Flowrate Mode Setting [Flowrate Mode]

1. By default, the Flowrate Mode is set to Off.
 - On: The Flowrate Mode is enabled.
 - Off: The Flowrate Mode is disabled.

Flowrate Practice Mode Setting [Flowrate Practice Mode]

1. By default, the Flowrate Practice Mode is set to Off.
 - On: The Flowrate Practice Mode is enabled.
 - Off: The Flowrate Practice Mode is disabled.

Hello Message Setting [Hello Message]

1. By default, the Hello Message is set to Off.
 - On: The Hello Message will show when the scale is turned on.
 - Off: The Hello Message will not show when the scale is turned on.

Bluetooth Setting [Bluetooth Setting]

1. By default, the Bluetooth is set to On.
 - On: The Bluetooth is enabled. The scale can be connected with Acaia apps.
 - Off: The Bluetooth is disabled. The scale does not allow any Bluetooth connection.

Sleep Timer Setting [Sleep Timer]

1. The number displayed indicates the amount of time before the scale will automatically power off. For example, when 10 is selected and the scale is disconnected from all mobile devices, the scale will power off after 10 minutes of idling.

Battery Saving Setting [Battery Saving]

1. The default Power Saving Mode is set to 90 seconds.
2. The Acaia Pearl Model S will wait for the selected number of seconds to enter Power Saving Mode. The LED display will dim to save power.

Weighing Filter Setting [Filter]

1. The weighing filter setting determines the speed with which the load receptor responds to and determines the weight. "High" indicates a more stable but slower weighing result; "Sensitive" indicates higher sensitivity and a faster weighing result.

Zero Tracking Setting [Zero Tracking]

1. Zero tracking is a function to help compensate the weight readout fluctuations at zero point to improve the usability of the scale. Acaia Pearl S is allowed to compensate the fluctuation by up to 2 d according to industrial weighing guidelines.
2. Off: It is not recommended to turn off zero tracking as the zero indication can drift easily with changing room temperatures.
3. 0.5 d~3 d: For example, since each division is 0.1 g, 3 d = 0.3 g. When zero tracking is set to be 3 d, any initial weight between +/- 0.3 g on the weighing pan will be zeroed out.
4. 1 d is recommended for Acaia Pearl Model S.

Weighing Resolution Setting [Resolution]

1. The default weighing resolution is set to [Default], the division is 0.1 g for weights under 1500 grams and 0.5 g for weights between 1500 and 3000 grams.
2. When the weighing resolution is set to [High], the division will be 0.1 g throughout the entire time from 0 to 3000 grams.
3. When the weighing resolution is set to [Low], the division will be 1 g throughout the entire time from 0 to 3000 grams.

Timer Auto Stop on Cup Removal Setting [Timer Auto Stop on Cup Removal]

1. After a cup is removed, the timer will automatically pause. This setting gives you options on how long to wait before pausing.
2. The default value for this setting is ten seconds.

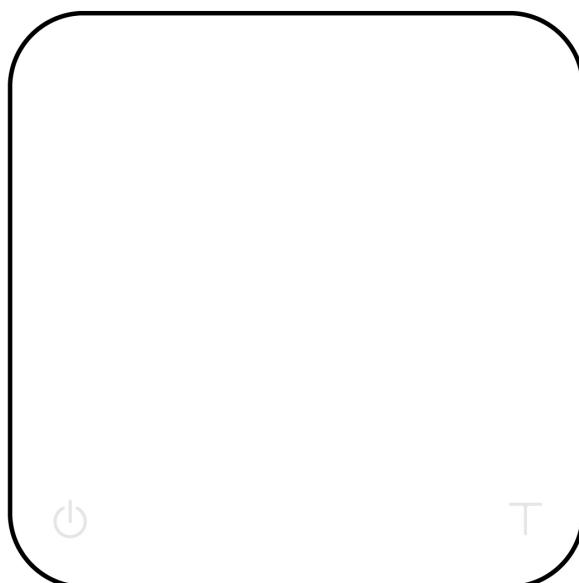
Portafilter Auto Reset [Portafilter Auto Reset]

1. In Portafilter Mode, after a portafilter is removed, the weight will automatically reset. This setting gives you options on how long to wait before resetting.
2. The default value for this setting is fifteen seconds.



Reset Default [Reset Default]

1. To reset the scale to its factory default settings, go to [Reset Default], then choose [Yes]. The scale will clear the Hello Message and reset all settings including Brewguide data to factory default.

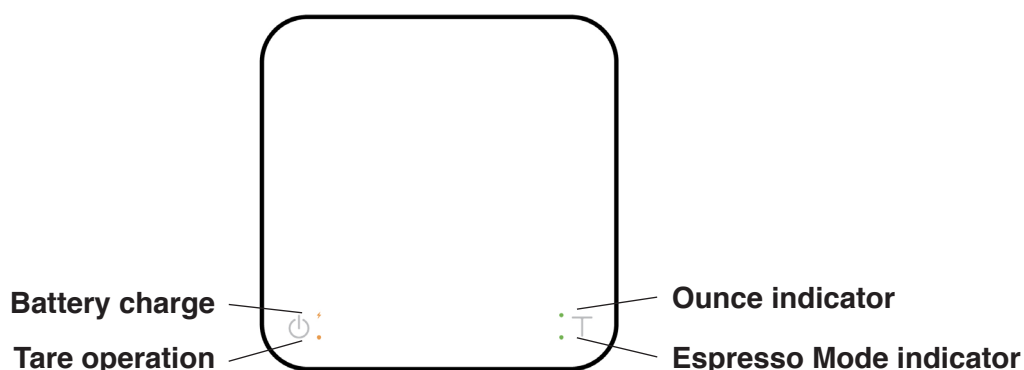
Appendix



Buttons

| | Function | Example |
|--|------------------------|--|
| Power Button  | Turn on | Press and hold for 0.5 seconds to turn on the scale. |
| | Turn off | Double-tap to turn off the scale. |
| | Switch Mode | While the scale is turned on, press and hold for one second to switch modes. |
| | Start/Stop/Reset Timer | Tap to start/stop/reset timer. |
| | Back | While in Settings Menu, double tap to go back to Modes. |
| Tare Button  | Tare | Tap to perform tare operation. |
| | Toggle units | Long press for five seconds to change weighing unit between gram and ounce. |
| | Switch option | While in Settings, tap to advance through settings options. While in settings, tap to toggle options in sub menus. |
| | Reset | Double tap to reset a mode. This zeroes the weight and sets the timer to 0:00. |
| | Confirm | While in Settings, press and hold for two seconds to confirm the option selected in a sub menu. |
| | Enter Brewguide Mode | Press and hold for one second to enter Brewguide Mode. |
| | Enter Calibration Mode | While in Weighing Mode, rapidly tap to enter Calibration Mode. |

LED Indicators



Battery charge/Charge error

The orange indicator on the upper left turns on when the battery is charging and turns off when the battery is fully charged. The indicator starts flashing or does not appear when the USB cable is not working.

Tare operation

The orange indicator on the lower left turns on when the Tare button is pressed.

Ounce indicator

The green indicator on the upper right turns on when the weight is measured in ounces.

Espresso Mode indicator

The green indicator on the lower right turns on when in Espresso Mode.

Error Codes

| Error Code | Description |
|------------------|--|
| Error 100 | Access Code Error, unrecognized access code. |
| Error 101 | EEPROM error, unable to access memory. Please contact Acaia support. |
| Error 102 | AD error, unable to access weighing signal. Please contact Acaia support. |
| Error 303 | Unable to find acceptable starting Zero point, most likely because the loadcell has been damaged by excessive force or drop. Please contact Acaia support. |
| Maximum | Overload: the weight is over the maximum capacity. |
| Underload | Underload: the weight is under the minimum capacity. |
| Error 304 | Calibration error. Calibration cannot proceed when environmental noises are too strong. Please calibrate in a stable environment free of wind, vibration, etc. |
| Error 802 | Unable to tare because the weight exceeds the acceptable tare range. |
| Error 803 | Unable to tare because the weight is unstable. |

Other

| Display Code | Description |
|---------------|--|
| UPDATE | The scale is in update mode. During the update process, the green LED on the lower right will blink until the process is complete. Note: If you want to leave update mode, please connect the scale's USB to a power source. |

Specifications

| | |
|---------------------------|--|
| Model | PS001 / PS002 |
| Product Weight | 620 g \pm 5 g |
| Product Dimensions | W: 160 mm L: 160 mm H: 32 mm |
| Maximum Capacity | 3000 g / 105.82 oz |
| Minimum Weight | 0.1 g |
| Measuring Units | gram, ounce |
| Readability | 0.1 g |
| Repeatability | 0.1 g |
| Linearity | 1 d (d = 0.1 g / 0.5 g) |
| Indication Limit | 3090 g / 108.99 oz |
| Power Supply | 5 V / 500 mA |
| Battery | Lithium-ion rechargeable 3.7 V 2200 mAh |
| Battery Life | Up to 16~40 hours |
| Display | Dot matrix LED |
| Material | PC |
| Connectivity | Bluetooth 4.0 |
| Warranty | 1 Year |
| Inside the Package | Acaia Pearl Model S Coffee Scale (White / Black) x 1 Heat Resistant Coaster (Round) x 1 Micro USB Charging Cable x 1 |

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