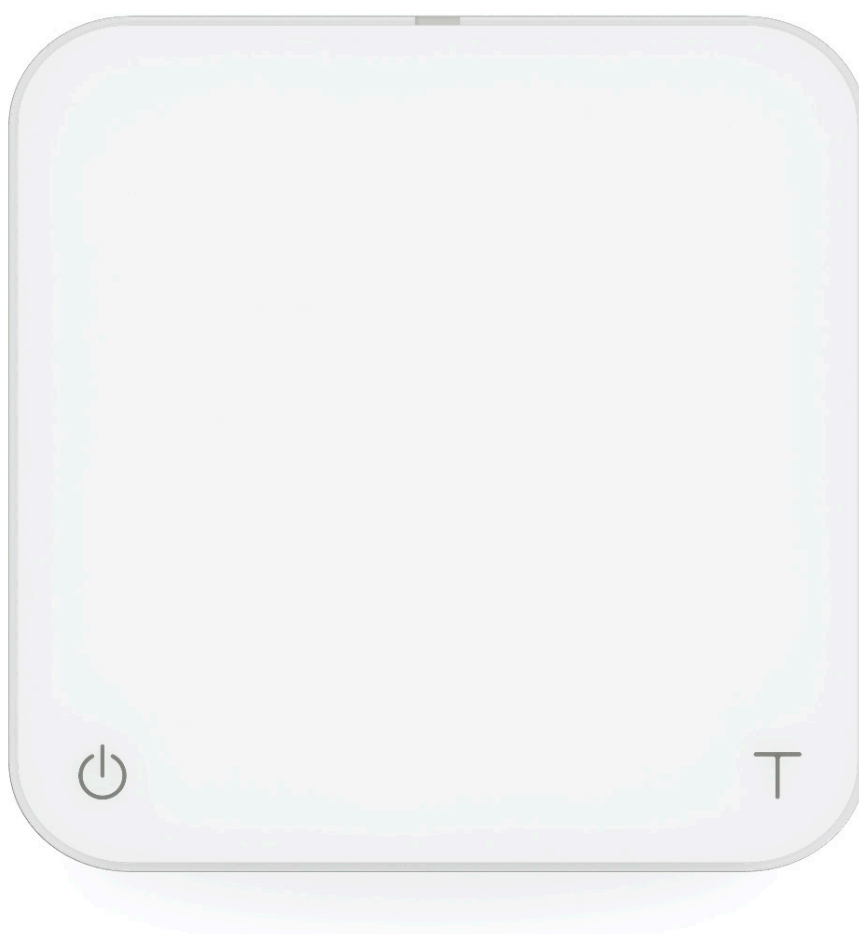# acaia

Acaia Pearl

User Manual

FW 2.0.009

Disclaimer

Calibrate your scale using a calibration weight of the appropriate tolerance (class F_1 or F_2). A scale can be no more accurate than the standard masses to which it has been compared. For more details, please read the Calibration Mode section in the operation manual.

CAUTION:

1. **Do not place any hot objects directly on the weighing pan. Please use a heat resistant pad under hot objects.**
2. **Any modification made without the consent of the manufacturer may result in damage to scale.**

Contents

Chapter 1: Scale at a Glance

Introduction

Thank you for choosing one of our scales. The Acaia Coffee Scale 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 Coffee Scale   ● Heat Resistant Pad   ● Micro USB Charging cable

Next, follow the instructions in "Preparation and Installation" in this manual to get started.
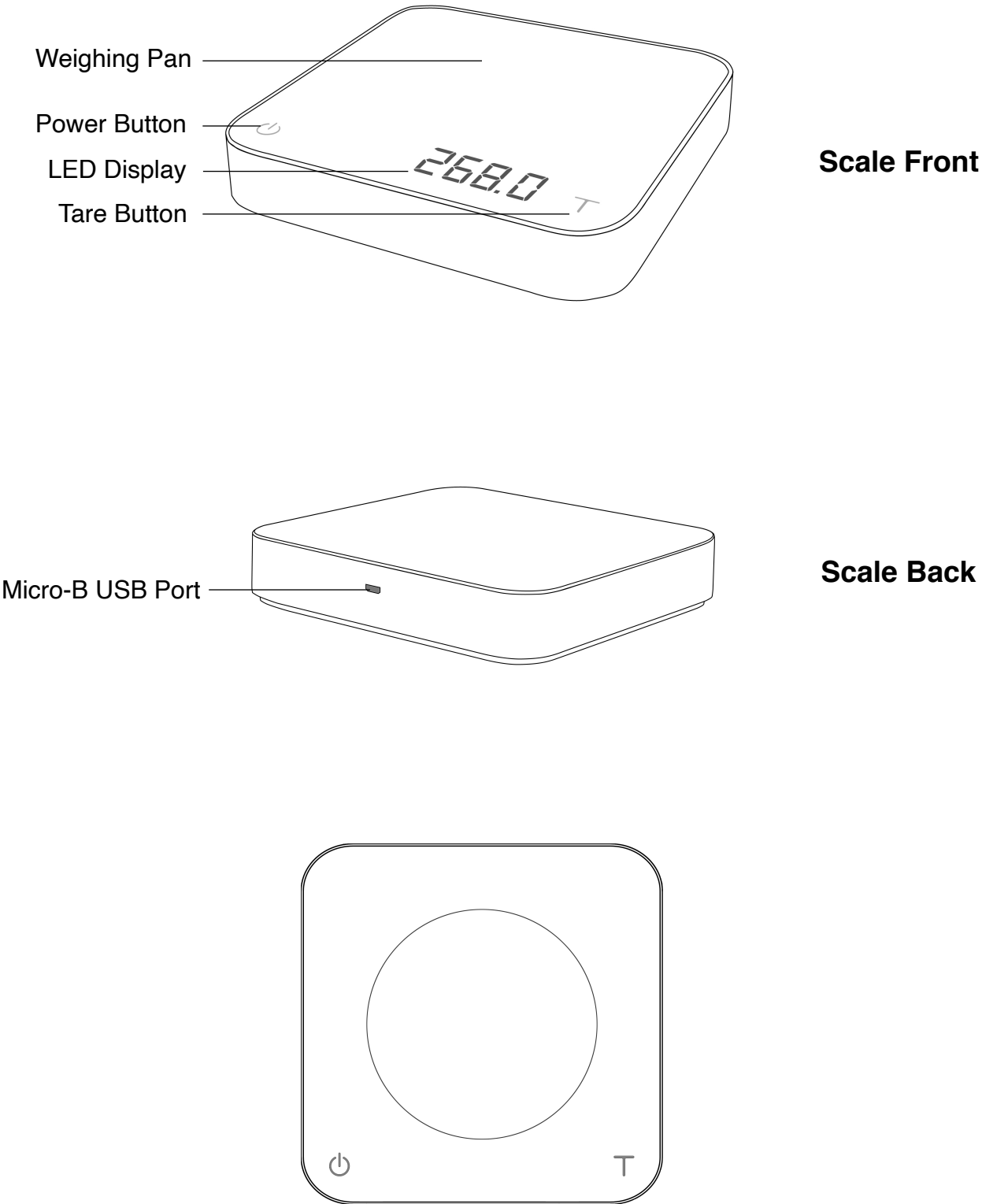
To take advantage of the Pearl's many features, carefully read through this operation manual containing step-by-step procedures, examples, and other information.

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

Specifications

Model	AP001AT / AP004AT
Product Weight	500 g ± 5 g
Product Dimensions	W: 160 mm L: 160 mm H: 32 mm
Maximum Capacity	2000 g / 70.55 oz
Minimum Weight	0.1 g
Measuring Units	g / oz
Readability	0.1 g
Repeatability	0.1 g
Linearity	1 d (d = 0.1 g / 0.5 g)
Indication Limit	2060 g / 72.66 oz
Power Supply	5 V / 500 mA
Battery	Lithium-ion rechargeable 3.7 V 1100 mAh
Battery Life	Up to 25 hours
Display	LED
Material	PC
Connectivity	Bluetooth 4.0
Warranty	1 Year
Inside the Package	Acaia Pearl Coffee Scale (White / Black) x 1 Heat Resistant Pad (Black / Gray) x 1 Micro USB Charging Cable x 1

Scale Overview

Weighing Pan ————————————

Power Button ————————

LED Display ——————— *268.0*

Tare Button ———————

Scale Front

Micro-B USB Port ———————

Scale Back

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

Accessories
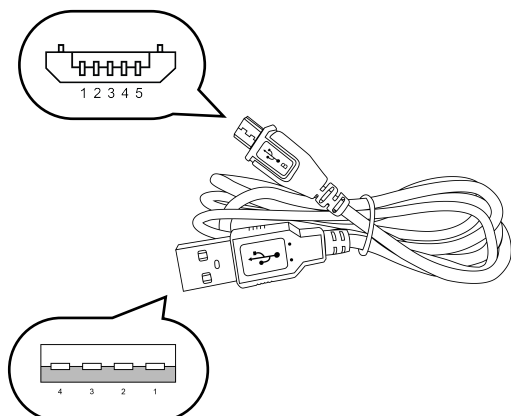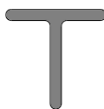
**Micro USB
Charging Cable**

Heat Resistant Pad

Buttons

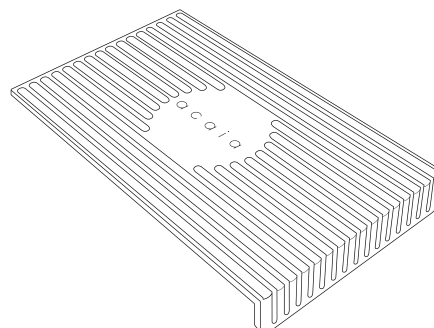|	Function	Example
Power Button	Turn on	Long press to turn on the scale.
	Turn off	Double tap the power button to turn off the scale.
	Switch mode (Default)	While the scale is turned on, press and hold for 2 seconds to switch modes.
	Start/Stop/Reset Timer	While in Timer Mode, tap to start/stop/reset timer.
	Back	While in Settings Menu, tap to go back to Weighing Only Mode from Settings Menu.
Tare Button	Tare	While in Weighing Mode, tap to perform tare operation.
	Toggle units	Long press to changing between Gram and Ounce in Weighing Only Mode.
	Toggle settings option	While editing a setting, tap to scroll through its options.
	Reset mode	Double tap to reset a mode. This zeros the weight and sets the timer to 0:00.
	Confirm	While editing a setting, press and hold for 2 seconds to confirm the option selected.
	Enter calibration modes	While in Weighing Only Mode, continuously press multiple times to enter Calibration Mode.

* Please find **Chapter 3: Basics** for more details.

LED Indicators

Battery Charge / Charge Error ——— Ounce Indication
Mode Indicator ——— Tare Operation

180.0
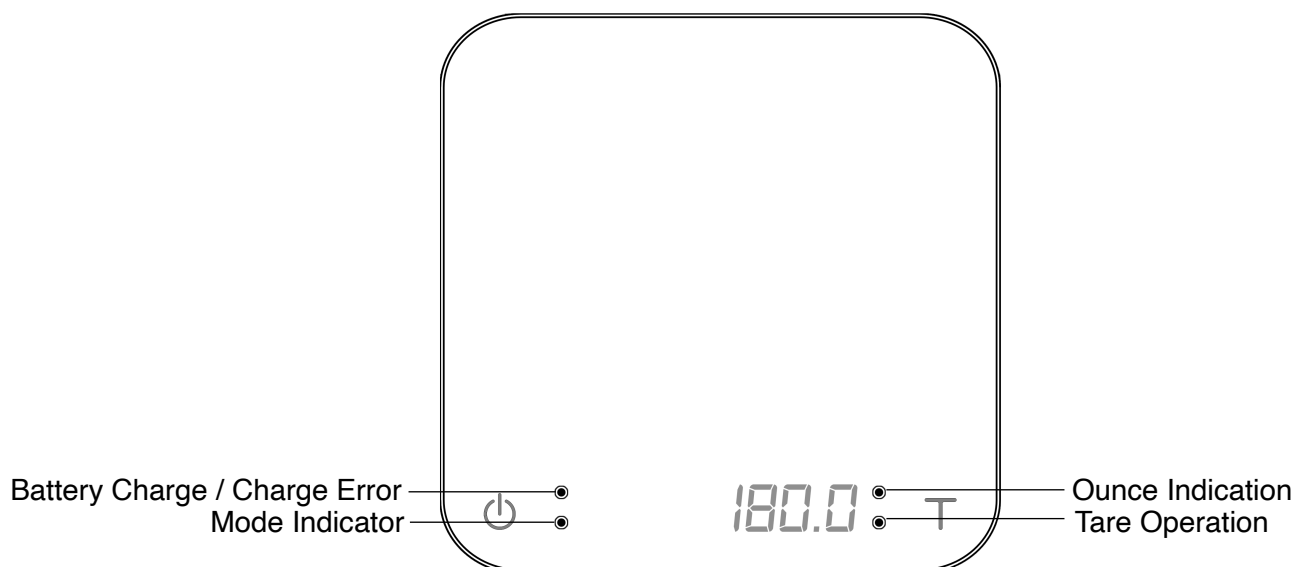
Battery Charge / Charge Error

The orange LED 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.

Mode Indicator

When in espresso mode, the timer displays from 0 to 59 seconds and will reset when reaching 60 seconds. The orange LED indicator on the lower left turns on when the timer resets.

Tare Operation

The green tare indicator on the lower right turns on when the tare button is pressed.

Ounce Indication

The green ounce indicator on the upper right turns on when the weighing unit is in ounces.

Battery Charge

- You can charge the battery by plugging the USB cable to any power supply 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 1-2 hours to fully charge the battery from empty. Try not to let the battery completely run out, but be sure to only charge the scale around once a week, as needed.

- A fully charged battery can continuously last for about 25 hours.

- Battery percentage can be viewed via the Acaia Apps.

    *Please 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.

Chapter 2: Getting Started

Preparation
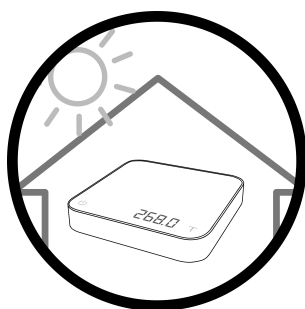
- This scale is intended for indoor use.
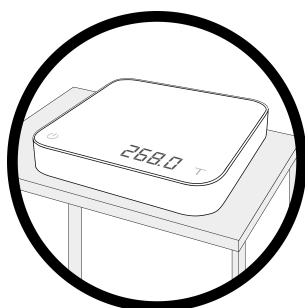
- Select a work place that is stable, vibration-free and, if possible, a horizontal location for the weighing platform.

- Do not locate the scale near any equipment/instrument which contains magnets.
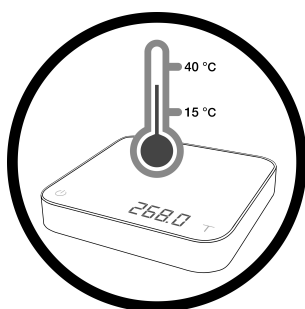
- Avoid places where room temperatures are unstable. Room temperature above 40°C or below 15°C may result in weighing inaccuracy.

Installation
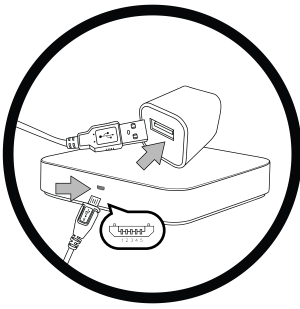
- To charge the scale plug the USB cable into the Micro-B USB port located on the back panel of the scale.

- Long press power button to turn on the scale.

- Please make sure to use a heat resistant pad under hot objects.

Chapter 3: Basics

Basic Operations

Action	Operation
Turn On Scale	Press and hold power button
Turn Off Scale	Double tap power button
Switch Mode	Press and hold power button while scale is on
Tare Weight	Tap tare button
Reset Mode	Double tap tare button

Modes *To Enable/Disable Modes Please go to Chapter 5: Configuration on Page 16.*

Mode 0 - Weighing Only Mode

Mode 1 - Espresso Mode

Mode 2 - Dual Display Mode

Mode 3 - Timer Starts with Flow Mode

Mode 4 - Beverage Mode

Mode 5 - Auto-Tare Mode

Mode 0 - Weighing Only Mode

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

Display

- There are two different weighing units in Weighing Only Mode: grams and ounces. A dot will appear in the upper right of the LED display and the scale will read 0.000 when weighing in ounces.

- The readability is 0.1 g for grams and 0.005 oz for ounces.

- The LED display shows [0.0] when the weighing unit is in gram.

Action	Operation
Tare Weight	Tap tare button
Toggle Units g/oz	Long press tare button
Reset Mode	Double tap tare button
Switch Mode	Long press power button

Mode 1 - Espresso Mode

Timer and weighing settings tailored for espresso use.

Display

- This mode displays the LED Timer on the left, and the weighing measurement on the right.

- The timer displays 0 to 59 seconds and will reset to 0 when 60 seconds has been reached. When it resets, the mode Indicator flashes.

- 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 in maximum 1999 g. If the weight exceeds 1999 grams, the scale will display [_ _ _ _].

Action	Operation
Start/Stop/Reset Timer	Tap power button
Tare Weight	Tap tare button
Reset Mode	Double tap tare button
Switch Mode	Long press power button

Mode 2 - Dual Display Mode

In Dual Display Mode, the scale displays [*0.00.   0*] with a timer (left) and weight (right).

Display

- There are two different weighing units in Dual Display Mode: gram and ounce.

- In gram units, the LED display shows [*0.00.   0*].

- In ounce units, the LED display shows [*0.00. 0.00*].

- The maximum display time will be 9 minutes and 59 seconds. The weight display on the right side of the display measures from 0 to 999. When the value is over 1000, it will restart from 0 with mode Indicator flashing.

Action	Operation
Start/Stop/Reset Timer	Tap power button
Tare Weight	Tap tare button
Reset Mode	Double tap tare button
Switch Mode	Long press power button

Mode 3 -Timer Starts with Flow Mode

Place an item on the scale. Tap the power button to automatically tare and prepare the timer to detect the flow of water. The timer will flash, indicating that it is ready. Begin pouring and the timer will start with flow detection from the pour. The timer stops when the brewing equipment is removed.

Display

- The LED display shows [_0.00._   _0_] with the timer on the left and the weight on the right in gram units.

- The LED display shows [_0.00._ _0.00_] with the timer on the left and the weight on the right in ounce units.

- The timer displays from [_0.00_] to [_9.59_] and then the timer will stop.

Action	Operation
Initiate Auto Start	Tap power button
Tare	Tap tare button
Stop Timer	While timer is running. Tap power button
Reset Mode	Double tap tare button
Switch Mode	Long press power button

Mode 4 - Beverage Mode

Designed for pour overs and extraction measurements, follow instructions on the display to place the carafe/cup, filter, and coffee (tap tare in between steps). The timer will start when the first flow of water is detected. Timer stops when power button is tapped or items are removed (dripper). The flashing number is the beverage weight with all items subtracted.

Display

- There are two different weighing units in Beverage Mode: gram and ounce.

- As soon as weight is stabilized or the tare button is pressed, the next step will show in display.

- AFTER the process is finished and the filter is removed, the display will blink and flash between the water weight and beverage weight (marked with "b").

Display	Action/Description
CUP	Put the carafe/cup on the scale
FLt	Put the filter in your pour over dripper and place on the carafe/cup
COF	Put the coffee in the filter
Timer Flashes	Ready to brew
-FLt-	Remove the filter
bxxxx.x xxx.x	Beverage Weight Total Weight

Action	Operation
Next Step	Tap tare button
Previous Step	Tap power button
Stop Timer	Tap power button
Reset Mode	Double tap tare button
Switch Mode	Long press power button

Mode 5 - Auto-Tare Mode (after version 2.0.008)

Displays weight only. The scale will automatically tare when an item is placed on and taken off the scale.

Display

- The LED display shows [Atr 0] with Atr on the left and the weight on the right in gram units.

- The LED display shows [Atr 0.00] with Atr on the left and the weight on the right in ounce units.

Action	Operation
Tare Weight	Tap tare button
Reset Mode	Double tap tare button
Switch Mode	Long press power button

Chapter 4: Configuration

Accessing the Pearl's Settings

Steps to enter the Settings Menu

1. With the Pearl powered off, press and hold power button.

2. When the display shows [*∍ACAl A*] and then [*SEt*] ,continue to hold the power button and tap the tare button.

3. Release both power button and tare button when displays [*F.0000*].

4. Press and hold tare button to move the flashing digit to the right. Repeat this step for 4 times to enter Settings. It will show the first setting [*SLEEP*].

Key Operations in the Settings Menu

1. Tap the tare button to scroll through the Settings Menu.

2. Press and hold the tare button to enter each setting's sub-menu.

3. Tap the tare button to scroll through options in the individual settings sub-menu.

4. Press and hold the tare button to save selection and exit the sub-menu.

5. Tap the power button to exit the settings and return to the Pearl's Weighing Only Mode.

Diagram of the Settings Menu

Setting	Display	Options	Default
Sleep Timer	*SLEEP*	5, 10, 20, 30, 60, Off	5
Auto Zero	*0.AUto*	On, Off	Off
Zero Tracking	*trAcE*	2d, 3d, Off	2d
Key Sound	*bEEP*	On, Off	On
Zero Range	*0.rAnGE*	2, 100	100
Weighing Filter	*Fi lt.*	2, 4, 6, 8, 16, 32, 64, 128	16
Default Weighing Unit	*Unit*	Gram, Ounce	Gram
Weighing Resolution	*rESol*	Default, High	Default
Espresso Mode	*ModE_1*	On, Off	Off
Dual Display Mode	*ModE_2*	On, Off	On
Timer Starts with Flow Mode	*ModE_3*	On, Off	Off
Beverage Mode	*ModE_4*	On, Off	Off
Auto-Tare Mode	*ModE_5*	On, Off	On
Bluetooth Setup	*bt_SEt*	On, Off	On

Sleep Timer Setting [*SLEEP*]

1. Sleep Timer Settings can also be configured in the Acaia Apps.

2. 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.

3. Tap the tare button to toggle through the options.

4. To save your selection and exit the the settings sub-menu, press and hold the tare button for 1 second until the next setting, [*0.AUto*], is shown on the LED to confirm the selected option.

Auto Zero [*0.AUto*]

1. When the Auto Zero is off or disabled, the initial weight on the weighing pan must be less than 50% of capacity, i.e., less than 1 kg before the scale is turned on; otherwise, an error [*Er.303*] occurs. When the error occurs, the scale will not work until the initial weight on the weighing pan is cleared.

2. When Auto Zero setting is on or enabled, the scale displays the initial weight directly even if the weight is over 50% of capacity.

3. To save your selection and exit the the settings sub-menu, press and hold the tare button for 1 second until the next setting, [*trAcE*], is shown on the LED to confirm the selected option.

Zero Tracking Setting [*trAcE*]

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 is allowed to compensate the fluctuation up to 2d by the industrial weighing guidelines.

2. OFF: It is not recommended to turn off the Zero Tracking as the zero indication would drift easily as room temperature changes.

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 would be zeroed out.

4. 2 d is recommended in general for Acaia coffee scale.

5. To save your selection and exit the the settings sub-menu, press and hold tare button for 1 second until the next setting, [*bEEP*], is shown on the LED to confirm the selected option.

Key Sound Setting [*bEEP*]

1. Key Sound Settings can also be configured in the Acaia Apps.

2. Set the Key Sound function off to turn off the beeping sound or on to turn on the beeping sound.

3. To save your selection and exit the the settings sub-menu, press and hold tare button for 1 second until the next setting, [*0.rAnGE*], is shown on the LED to confirm the selected option.

Zero Range Setting [*0.rAnGE*]

1. Zero Range Setting determines the range for which tare button executes zero operation instead of tare operation.

2. When Zero Range is set to 2, the range for zero setting will be 2% of the capacity, i.e., +/- 40 g for Acaia coffee scale. By pressing tare button, any weight +/- 40 g is zeroed out by zero operation while any weight lays outside the range is tared out by tare operation.

3. If Zero Range is set to 100, the range for zero-setting will be 100% of the capacity, i.e., +/- 2 kg for Acaia coffee scale. Therefore, instead of tare operation, zero operation would be executed in this setting whenever tare button is pressed.

4. Notice: The difference between zero operation and tare operation is that zero operation would simply ignore the weight and display as 0 while tare operation would deduct the weight from weighing result. However, zero operation does not increase the scale capacity.

5. To save your selection and exit the the settings sub-menu, press and hold tare button for 1 second until the next setting, [*Fi lt.*], is shown on the LED to confirm the selected option.

Weighing Filter Setting [*Fi lt.*]

1. The number shown on LCD display indicates the current filter parameter which determines the speed for load receptor to response to weight and to determine the weighing value. The larger the number, the more stable but slower the weighing result will be.

2. Press tare button to change the parameter.

3. To save your selection and exit the the settings sub-menu, press and hold tare button for 1 second until the next setting, [*Uni t*] is shown on the LED to confirm the selected parameter.

Default Weighing Unit [$Unit$]

1. The Default Weighing Unit is set to grams if [g] is selected and ounce if [oz] is selected.

2. Tap the tare button to switch the Default Weighing Unit between grams and ounces.

3. To save your selection and exit the the settings sub-menu, press and hold tare button for 1 second until [$rESoL$] is shown on the LED to confirm the selected option.

Weighing Resolution [$rESoL$]

1. The default Weighing Resolution is set to [$dEFAUt$], the division is 0.1 g under weight of 1000 g and 0.5 g from 1000 g to 2000 g.

2. When the Weighing Resolution is set to high, division will be 0.1 g throughout the entire time from 0 g to 2000 g.

3. Tap tare button to switch the weighing resolution between [$dEFAUL$] and [$hiGh$].

4. To save your selection and exit the the settings sub-menu, press and hold tare button for 1 second until [$nodE_1$] is shown on the LED to confirm the selected option.

5. Note: After setting Weighing Resolution to high, the default display will show [$0:00$ 0.00] with timer in Dual Display Mode and Auto Start Modes.

Espresso Mode Setting [$nodE_1$]

1. The default Espresso Mode Setting is set to OFF, which means this mode is disabled.

2. ON: The Espresso Mode is enabled.

3. OFF: The Espresso Mode is disabled.

4. To save your selection and exit the the settings sub-menu, press and hold tare button for 1 second until [$nodE_2$] is shown on LED to confirm the selected option.

Dual Display Mode Setting [$nodE_2$]

1. By default, the Dual Display Mode Setting is set to ON, which means this mode is enabled.

2. ON: The Dual Display Mode is enabled.

3. OFF: The Dual Display Mode is disabled.

4. To save your selection and exit the the settings sub-menu, press and hold tare button for 1 second until [$nodE_3$] is shown on LED to confirm the selected option.

Timer Starts with Flow Mode Setting [*ПodE_3*]

1. By default, the Timer Starts with Flow Mode Setting is set to OFF, which means this mode is disabled.

2. ON: The Timer Starts with Flow Mode is enabled.

3. OFF: The Timer Starts with Flow Mode is disabled.

4. To save your selection and exit the the settings sub-menu, press and hold tare button for 1 second until [*ПodE_4*] is shown on LED to confirm the selected option.

Beverage Mode Setting [*ПodE_4*]

1. The default Beverage Mode is set to OFF, which means this mode is disabled.

2. ON: The Beverage Mode is enabled.

3. OFF: The Beverage Mode is disabled.

4. To save your selection and exit the the settings sub-menu, press and hold tare button for 1 second until [*ПodE_5*] is shown on LED to confirm the selected option.

Auto-Tare Mode Setting [*ПodE_5*]

1. The default Auto-Tare Mode is set to ON, which means this mode is enabled.

2. ON: The Auto-Tare Mode is enabled.

3. OFF: The Auto-Tare Mode is disabled.

4. To save your selection and exit the the settings sub-menu, press and hold tare button for 1 second until [*bt_SEt*] is shown on LED to confirm the selected option.

Bluetooth Setup Setting [*bt_SEt*]

1. ON: The Bluetooth is enabled. The scale allows Bluetooth connection. User may connect the scale with Acaia Apps.

2. OFF: The Bluetooth is disabled. The scale does not allow any Bluetooth connection.

3. To save your selection and exit the the settings sub-menu, press and hold tare button for 1 second until [*SLEEP*] is shown on the LED to confirm the selected option.

Chapter 5: Calibration

Calibration Mode

1. While the scale is in Weighing Mode and the weighing unit is in grams, press the tare button quickly multiple times until the LED display shows [*CAL*] and then [*500*].

2. Place a 500 g calibration weight on the scale and wait for the scale to execute the calibration procedure.

3. The LED display shows [*_End_*] when the calibration procedure is completed. You may remove the calibration weight when completed.

* Note: Calibration weight of 100 g, 1000 g, 1500 g, or 2000 g can also be used.

Appendix

Error Code

Error Code	Description
100	Code error
101	EEPROM error
102	AD read error
⌐‾‾‾¬	Over load: the weight is over the maximum capacity
∟___⌡	Under load: the weight is under the minimum capacity
303	Unable to make zero point, for the initial weight exceeds the limit (50% of capacity)
304	Please do calibrate in a stable environment without wind or shake etc
802	Unable to tare, for the weight exceeds the tare range
803	Unable to tare, for the weight is unstable
900	Passcode error (the default passcode is 0000)

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