acaia

Acaia Lunar
User Manual

FW 2.6.005

Contents

3 In the Box

3 Introduction

3 Scale overview

4 Getting Started

4 Placement

4 Power on/off

4 Tare weight

4 Switch mode

5 Product Care Information

5 Battery charge

5 Calibration

6 Mode Introduction

6 Mode 1 - Weighing Mode

6 Mode 2 - Dual Display Mode

7 Mode 3 - Timer Starts with Flow Mode (●)

8 Mode 4 - Auto-Tare Timer Starts with Flow Mode (● ■)

9 Mode 5 - Auto-Tare Auto-Start Timer Mode (▲ ■)

10 Mode 6 - Auto-Tare Mode (■)

12 Configuration

16 Appendix

15 Buttons

17 LED indicators

18 Error codes

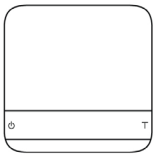
18 Other

19 Specifications

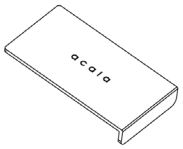
In the Box

Introduction

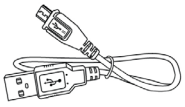
Thank you for choosing our scale. The Acaia Lunar is designed and manufactured to the most rigorous standard to give you the best coffee brewing experience. Start by checking that your Acaia Lunar box contains all the parts listed below:



Acaia Lunar



Heat Resistant Pad



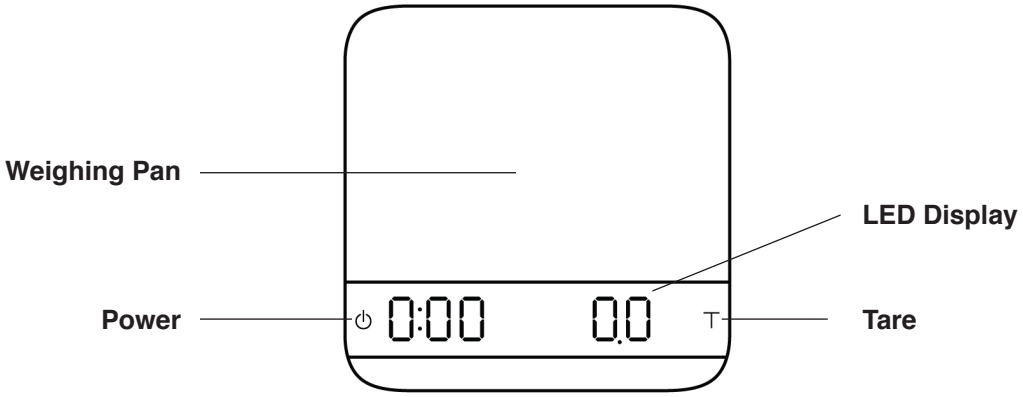
Micro USB Cable

Acaia Calibration Weight 100 g

Next, follow the instructions in Getting Started to begin using your scale. To take full advantage of the Lunar's many features, carefully read through the manual, which contains step-by-step procedures, examples, and other information.

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

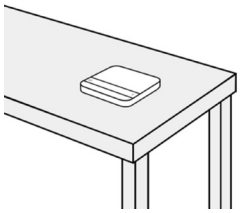
Scale overview



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

Getting Started

Placement

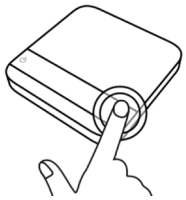


Select a work place that is stable, vibration-free and, if possible, a horizontal location for the weighing platform.

Power on/off

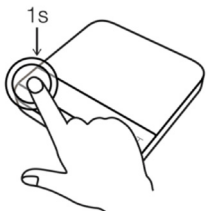
[Press] ⏻ to turn on the scale.
[Double tap] ⏻ to turn off the scale.

Tare weight



[Press] ⊤ to tare/zero the weight.

Switch mode



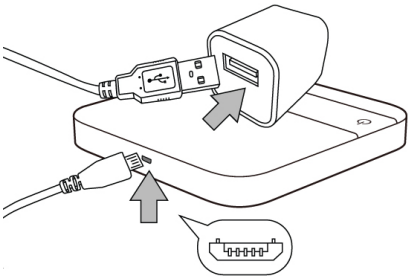
[Press and hold] ⏻ to switch modes.

* Please see the “Mode Introduction” section for more details.

Product Care Information

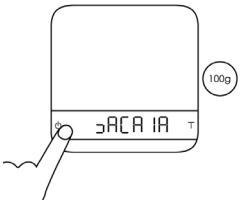
Battery charge

- 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 1-2 hours to fully charge the battery from empty. Try not to let the battery completely run out before charging. Charge the battery as needed, but it is best not to charge more than once a week.
- Battery percentage can be viewed via the Acaia apps.



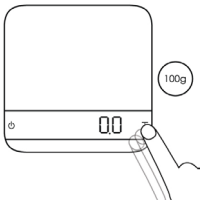
*** Note: Using a "fast-charging" charging block or charging hub (a charging block/hub delivering over 5v at 1A) could damage your Acaia scale's circuit board.**

Calibration



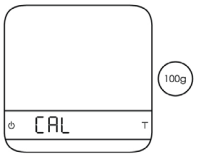
Turn on scale

Turn on the Acaia scale.



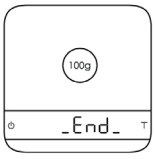
Tap T button

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.

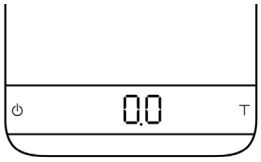


Place a weight

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



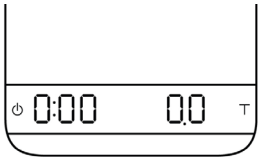
In the Weighing Mode, the scale will only display weight, in either grams or ounces.

- There are two different weighing units in Weighing Mode: gram and ounce. A 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 or 0.002 oz. For high resolution mode, the readability is 0.01 g or 0.0005 oz.

Action	Operation
Tare Weight	Tap Tare button
Switch Mode	Press and hold Power button

Note
To change the weighing unit to either gram or ounce, please see Default Unit Setting in the Configuration section (p.12).

Mode 2 - Dual Display Mode

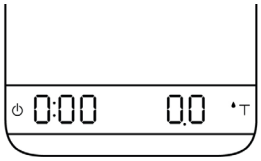


In the Dual Display Mode, the scale displays [0:00 0.0] with a timer (left) and weight (right).

- There are two different weighing units in Dual Display Mode: gram and ounce.
- When the scale is measuring in grams, the LED display shows [0:00 0.0].
- When the scale is measuring in ounces, the LED display shows [0:00 0.00].
- If the weight exceeds 2000.00 grams, the scale will display [_ _ _ _].
- The maximum time that can be displayed is 9 minutes and 59 seconds.

Action	Operation
Start/Stop/Reset Timer	Tap Power button
Tare Weight	Tap Tare button
Switch Mode	Press and hold Power button

Mode 3 - Timer Starts with Flow Mode ( ) - Droplet



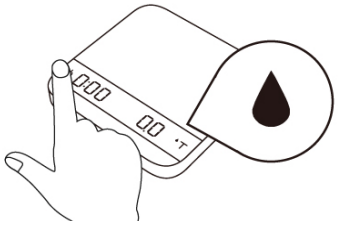
When the scale detects the flow of espresso, the timer starts. The timer will stop when the flow stops.
*Please note: The flow detection mode is designed to detect the slow trickle of a shot of espresso. The timer may not trigger when attempting to pour from a kettle.

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.
- The timer displays from [0:00] to [9:59] and then stops.

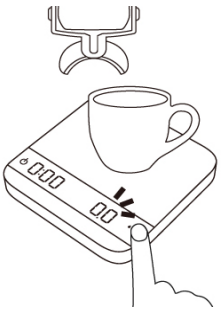
Mode Description

- The timer starts when the flow of espresso is detected.
- When the espresso flow stops, the timer stops.



1 The droplet icon indicates that you are in Timer Starts With Flow Mode.

2 Placing a container on the scale will display its weight.

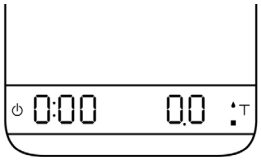


3 Tare the weight manually.

4 The timer starts when the flow of espresso is detected.

Action	Operation
Start/Stop/Reset Timer	The timer will start when flow is detected
Tare Weight	Tap Tare button
Reset Mode	Double tap Tare button
Stop Timer	The timer will stop when flow is no longer detected
Switch Mode	Press and hold Power button

Mode 4 - Auto Tare Timer Starts with Flow Mode (◆ ■) - Droplet and Square



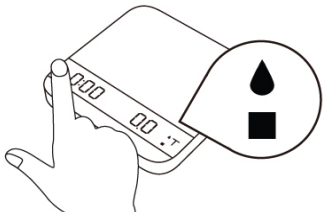
This mode is designed for baristas who would like to measure the time of the shot starting from the first few drops of espresso. When a stable weight is detected, the scale will perform the auto-tare operation. After the scale detects the espresso flow, the timer starts. The timer will stop when the espresso flow stops.

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.
- The timer displays from [0:00] to [9:59] and then stops.

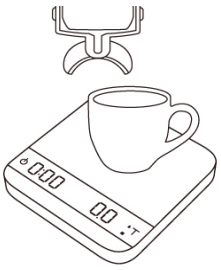
Mode Description

- The auto-tare function operates when a stable weight is placed on the scale.
- The timer will start automatically when the flow of espresso is detected.



1 This mode is designed to measure the time of the shot starting from the first few drops of espresso.

2 Place a stable weight on the scale.

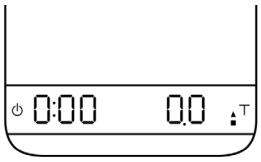


3 The scale will perform the auto-tare function.

4 When the scale detects the espresso flow, the timer will start.

Action	Operation
Start/Stop/Reset Timer	The timer will start when flow is detected
Tare Weight	Tare function operates when the weight exceeds 2 grams
Reset Mode	Double tap Tare button
Stop Timer	The timer will stop when flow is no longer detected
Switch Mode	Press and hold Power button

Mode 5 - Auto-Tare Auto-Start Timer Mode (▲■) - Triangle and Square



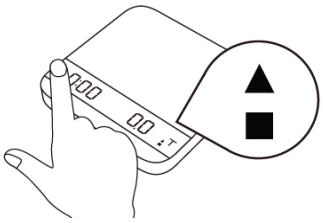
This mode is for baristas to measure the total time of a shot including the pre-infusion time. After a stable weight such as a cup is placed on the weighing pan, the scale performs auto-tare and starts the timer.

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.
- The timer displays from [0:00] to [9:59] and then stops.

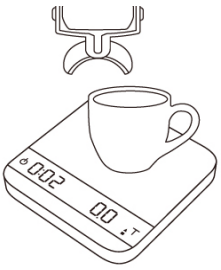
Mode Description

- The scale performs auto-tare once a stable weight is detected, then the timer starts.
- The timer stops when the espresso flow stops.



1 This mode is for baristas who would like to measure the total time of a shot, including pre-infusion time.

2 After a stable weight such as a cup is placed on the weighing pan, the scale performs auto-tare and starts the timer.

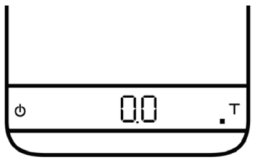


3 Measure the total time of a shot including the pre-infusion time.

4 When the espresso flow stops the timer stops.

Action	Operation
Start/Stop/Reset Timer	The timer will start when a stable weight is placed on the scale
Tare Weight	Tare function starts when a stable weight is placed on the scale
Reset Mode	Double tap Tare button
Stop Timer	The timer will stop when flow is no longer detected
Switch Mode	Press and hold Power button

Mode 6 - Auto-Tare Mode (■) - Square



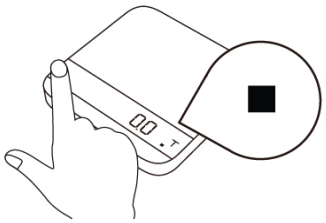
In this mode, the scale will only perform auto-tare without automatically starting the timer. Put the cup on the scale and auto-tare will be performed. Pull the shot of espresso as usual. When the cup is removed from the scale, the display flashes the final beverage weight and also shows the tare weight of the cup. The weight resets after 30 seconds (to change this reset time, see the Configuration section to edit the [Auto_rES] setting).

Display

- The LED display shows [0.0] with the weight in grams.
- The LED display shows [0.000] with the weight in ounces.

Mode Description

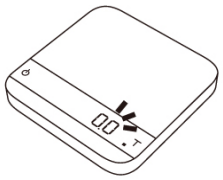
- The scale performs auto-tare once a stable weight is detected.
- The weight resets after 30 seconds



1 In this mode the scale will only perform auto-tare without automatically starting the timer.

2 Place a stable weight on the scale.

3 Put the cup on the scale and auto-tare will be performed.



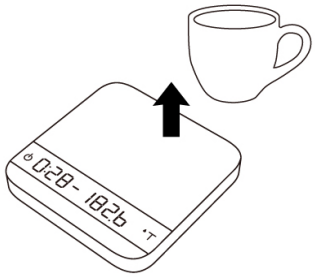
4 The weight resets after 30 seconds.

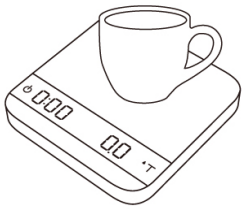
Action	Operation
Tare Weight	Tare function is performed when a stable weight is placed on the scale
Reset Mode	Double tap Tare button

Note:

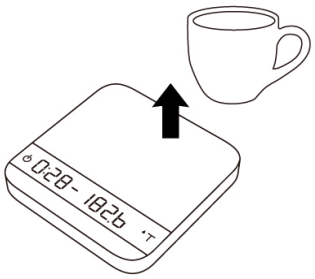
1. In all three Auto Start Modes (Timer Starts With Flow Mode, Auto-Tare Timer Starts With Flow Mode and Auto-Tare Auto-Start Timer Mode), the timer will stop when the espresso flow stops.

2. In all Auto Start Modes, if you do not operate the scale for 30 seconds, it will reset timer and perform tare operation.

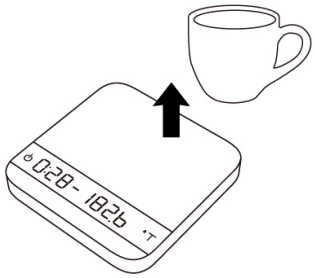


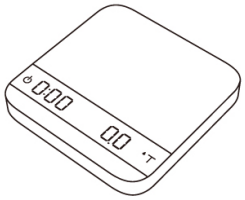


3. In all Auto Start Modes, the timer will stop when a negative weight (i.e., removal of cup) is detected.



4. The scale will also display a previous stable weight that captures the coffee weight of the shot when you unload the cup.





Configuration

Enter settings

1. Press and hold Power button while the LED display shows [:ACAIA] and then changes to [SEt].
2. Tap T button to enter Settings. The first setting is [SLEEP].
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
Exit Settings and Return to Modes	Tap Power button

Settings Menu

Setting	Display	Sub-Menu Options	Default
Sleep Timer	SLEEP	5, 10, 20, 30, 60, Off	5
Zero Tracking	trAcE	0.5 d, 1 d, 2 d, 3 d, Off	1 d
Key Sound	bEEP	On, Off	On
Zero Range	O.rAnGE	2, 100	100
Weighing Filter	Filt.	2, 4, 6, 8, 16, 32, 64, 128	16
Default Weighing Unit	Unit	Gram, Ounce	Gram
Weighing Mode	NodE_1	On, Off	On
Dual Display Mode	NodE_2	On, Off	On
Timer Starts with Flow Mode 💧	NodE_3	On, Off	On
Auto-Tare Timer Starts with Flow Mode 💧■	NodE_4	On, Off	On
Auto-Tare Auto-Start Timer Mode ▲■	NodE_5	On, Off	On
Auto-Tare Mode ■	NodE_6	On, Off	On
Bluetooth On/Off	bt_SEt	On, Off	On
Battery Saving	bAttSvE	30, 90, 180, Off	90
Pre-infusion Timeout	PrE_inFu	10, 30, 60, 120	60
Auto-Start Sensitivity	SEnSE	0.1 g, 0.2 g, Off	Off
Auto-Reset	Auto_rES	Off, 10, 30	30
Reset to Default	rESEt.d	No, Yes	

Sleep Timer Setting [SLEEP]

1. Sleep Timer settings can also be configured in the Acaia apps.
2. The number indicates the amount of time before the scale automatically powers off. For example, when 10 is selected, the scale powers off after 10 minutes of being idle if the scale is disconnected from all mobile devices.

Zero Tracking Setting [trAcE]

1. Zero Tracking is a function for automatically maintaining the zero indication within certain limits.
2. OFF: It is not recommended to turn off Zero Tracking because the zero indication can drift easily as the room temperature changes.
3. 0.5 d ~ 3 d: For example, for standard resolution 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 gradually.
4. 2 d is recommended in general for the Acaia Lunar.

Key Sound Setting [bEEP]

1. Key Sound settings can also be configured in the Acaia apps.
2. Set the Key Sound function to on/off to enable/disable the beeping sound.

Zero Range Setting [0.rAnGE]

1. The Zero Range setting determines the range for which the 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 Lunar. By pressing the tare button, any weight within ± 40 g is zeroed out by zero operation while any weight that lies 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 Lunar. Therefore, instead of tare operation, zero operation would be executed in this setting whenever tare button is pressed.

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 the weighing result. However, zero operation does not increase the scale capacity.

Weighing Filter Setting [Filt.]

1. The Weighing Filter Setting determines the speed at which the load receptor responds to weight and determines the weighing value. The larger the number, the more stable but slower the weighing result will be. The number shown on the LED display indicates the current filter setting.
2. Press tare button to change the parameter.

Default Unit Setting [Unit]

1. The Default Weighing Unit is set to grams if [9] is selected and ounce if [o2] is selected.

Weighing Resolution Setting [rESoL]

1. The default Weighing Resolution is set to [dEFAUL]: the division is 0.1 g / 0.002 oz.
2. Tap tare button to switch the Weighing Resolution between [dEFAUL] and [hiGh].
3. When the Weighing Resolution is set to high, division will be 0.01 g / 0.0005 oz. The default display will show [0.00] when the scale is set to grams, and [0.0000] for ounces in Weighing Mode.

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.

Weighing Only Mode Setting [NoDE_1]

1. The default Weighing Only Mode Setting is set to ON, which means this mode is enabled.
   - ON: The Weighing Mode is enabled.
   - OFF: The Weighing Mode is disabled.

Dual Display Mode Setting [NodE_2]

1. By default, the Dual Display Mode Setting is set to ON, which means this mode is enabled.
   - ON: The Dual Display Mode is enabled.
   - OFF: The Dual Display Mode is disabled.

Timer Starts with Flow Mode ● Setting [NodE_3]

1. By default, the Timer Starts with Flow Mode with Droplet Setting is set to ON, which means this mode is enabled.
   - ON: The Timer Starts with Flow Mode with Droplet is enabled.
   - OFF: The Timer Starts with Flow Mode with Droplet is disabled.

Auto-Tare Timer Starts with Flow Mode ●■ Setting [NodE_4]

1. The default Auto-Tare Timer Starts with Flow Mode with Droplet and Square Setting is set to ON, which means this mode is enabled.
   - ON: The Auto-Tare Timer Starts with Flow Mode with Droplet and Square is enabled.
   - OFF: The Auto-Tare Timer Starts with Flow Mode with Droplet and Square is disabled.

Auto-Tare Auto-Start Timer Mode ▲■ Setting [NodE_5]

1. The default Auto-Tare Auto-Start Timer Mode with Triangle and Square Setting is set to ON, which means this mode is enabled.
   - ON: The Auto-Tare Auto-Start Timer Mode with Triangle and Square is enabled.
   - OFF: The Auto-Tare Auto-Start Timer Mode with Triangle and Square is disabled.

Auto-Tare Mode ■ Setting [NodE_6]

1. The default Auto-Tare Mode with Square is set to ON, which means this mode is enabled.
   - ON: The Auto-Tare Mode with Square is enabled.
   - OFF: The Auto-Tare Mode with Square is disabled.

Bluetooth Setup Setting [bt_SEt]

1. OFF: Bluetooth is disabled. The scale does not allow any Bluetooth connection.
2. ON: Bluetooth is enabled. The scale allows Bluetooth connection. The user may connect the scale with Acaia apps.

Battery Saving [bAttSAvE]

1. Save up to 20% of your battery by dimming the display after some time. It will return to its original brightness when the scale detects objects on it.
2. The number indicates the amount of time before the scale enters battery saving mode.
3. Tap the tare button to toggle through the options.

Pre-Infusion Time Out [PrE_inFu]

1. Determines when the scale times out in all three of the Auto-Start modes. This is most useful for long pre-infusion times and resolves the timeout that sometimes happens for slow pre-infusion times.
2. The number indicates the time in seconds it will take for the scale to reset if no espresso flow or weight is detected.

Auto-Start Sensitivity [SEnSE]

1. Minimum weight is decreased for more sensitivity. This is ideal for slower espresso shots in the droplet icon modes. Stability depends on environmental noise. The previous firmware started the timer at ~ 0.6 g into an espresso shot.
2. The number indicates the sensitivity of flow detection in the droplet icon modes. Smaller value indicates higher sensitivity, but is recommended only for stable working environments.

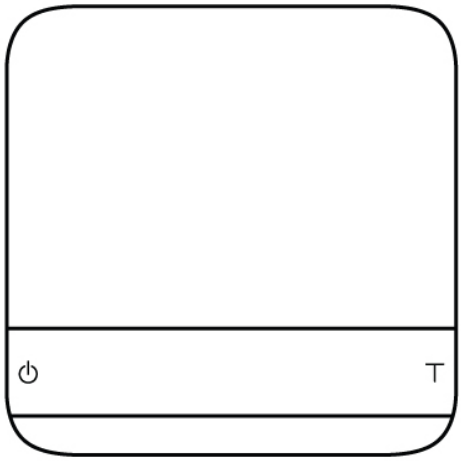
Auto-Reset [Auto_rES]

1. After a cup is removed, the timer will automatically reset. This gives you options on how long to wait for the reset. This setting enables the user to pull successive shots of espresso quickly in the three Auto-Start modes.
2. The number indicates the timeout value of timer reset after a cup is removed.

Reset To Default Setting [rESEt.d]

1. Select [YES] to reset all settings to default value.
2. Press and hold tare button for 1 second until [SLEEP] is shown on the LED to reset all settings to default.

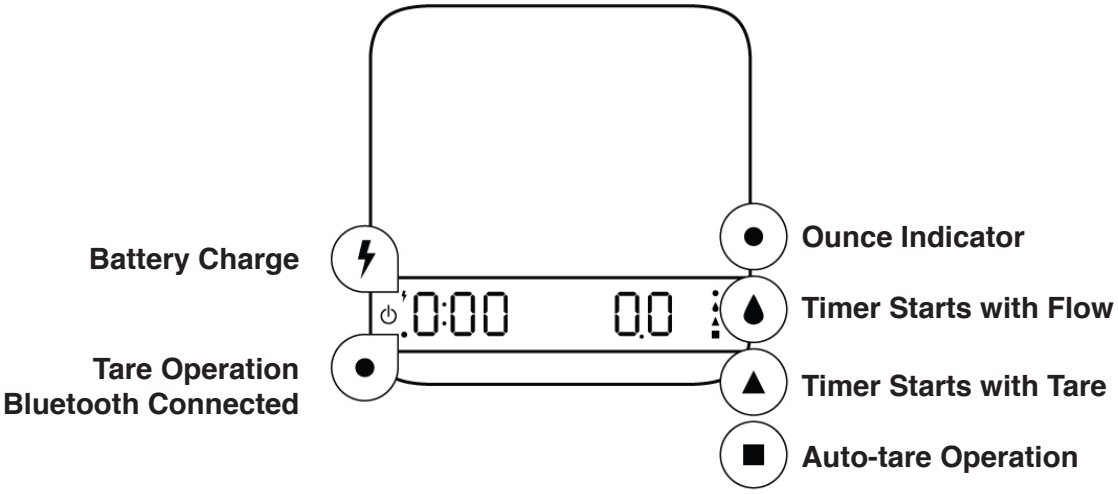
Appendix



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, tap to go back to Modes.
Tare Button ⊤	Tare	Tap to perform tare operation.
	Tare and reset timer	While in Auto Start Modes, double tap to zero weight and reset timer.
	Switch option	While in Settings, tap to advance through sub-menus. While in sub-menus, tap to toggle options.
	Confirm	While in Settings, press and hold for two seconds to confirm the option selected in a sub menu.
	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 malfunctions.

Tare Operation / Bluetooth Connected
The orange indicator on the lower left turns on when the Tare button is pressed.

Ounce Indicator
The orange indicator on the upper right turns on when the weighing unit is in ounces.

Timer Starts with Flow Droplet
When the scale detects the flow of espresso, the timer starts. The timer will stop when the flow stops.
*Please note: The flow detection mode is designed to detect the flow of espresso. The timer may not trigger when attempting to pour from a kettle.

Timer Starts with Tare Triangle
The scale performs auto-tare and simultaneously starts the timer when a stable weight is placed on the weighing pan.

Auto-tare Operation Square
The scale performs auto-tare when a stable weight is placed on the weighing pan.

Error Codes

Error Code	Description
100	Access Code Error, unrecognized access code.
101	EEPROM error, unable to access memory. Please contact Acaia support.
102	AD error, unable to access weighing signal. Please contact Acaia support.
303	Unable to find acceptable starting Zero point, most likely due to loadcell damage caused by excessive force or drop. Please contact Acaia support.
⌐¯¯¬	Over load: the weight is over the maximum capacity.
L__J	Under load: the weight is under the minimum capacity.
304	Calibration error. Calibration cannot proceed when environmental noises are too strong. Please calibrate in a stable environment free of wind, vibration, etc.
904	Password error (the default password is 0000)
_H2O	Water in the power button
H2O_	Water in the tare button
_H2O_	Water in the power button and tare button

Other

Display Code	Description
UPdAtE	The scale is in update mode. **Note: If you want to leave update mode, please connect the scale's USB to a power source.**

Specifications

Model	AL001 / AL006
Product Weight	265 g ± 5 g
Product Dimensions	W: 105 mm L: 105 mm H: 15 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)
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 27 hours
Display	LED
Material	Aluminum, Acrylic
Connectivity	Bluetooth 4.0
Warranty	2 Years
Inside the Package	Acaia Lunar Coffee Scale (Black / Silver) x 1 Heat Resistant Pad (Black) x 1 Micro USB Charging Cable x 1 Acaia Calibration Weight 100 g x 1

Copyright

This user manual is protected by copyright. All rights reserved. No part of this manual may be reproduced, processed, duplicated or published in any form by photocopying, microfilming, reprinting or any other method, in particular electronic means, without the written consent of Acaia.

© Acaia, California, 2020.