



# SYNCFO 4 in 1

## Universal Coffee Analyzer

### User Manual



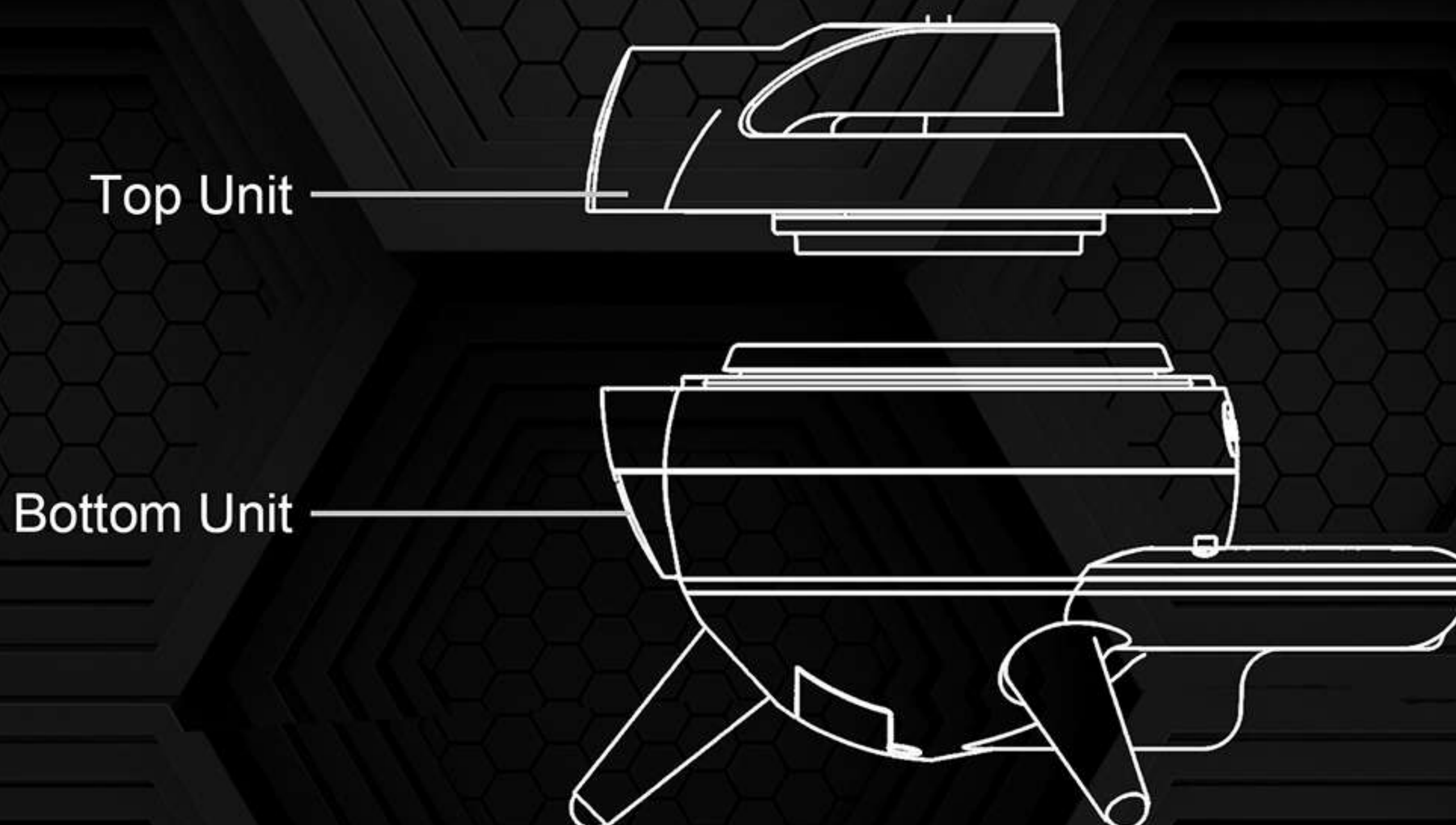


# SYNCFO Activation Instruction



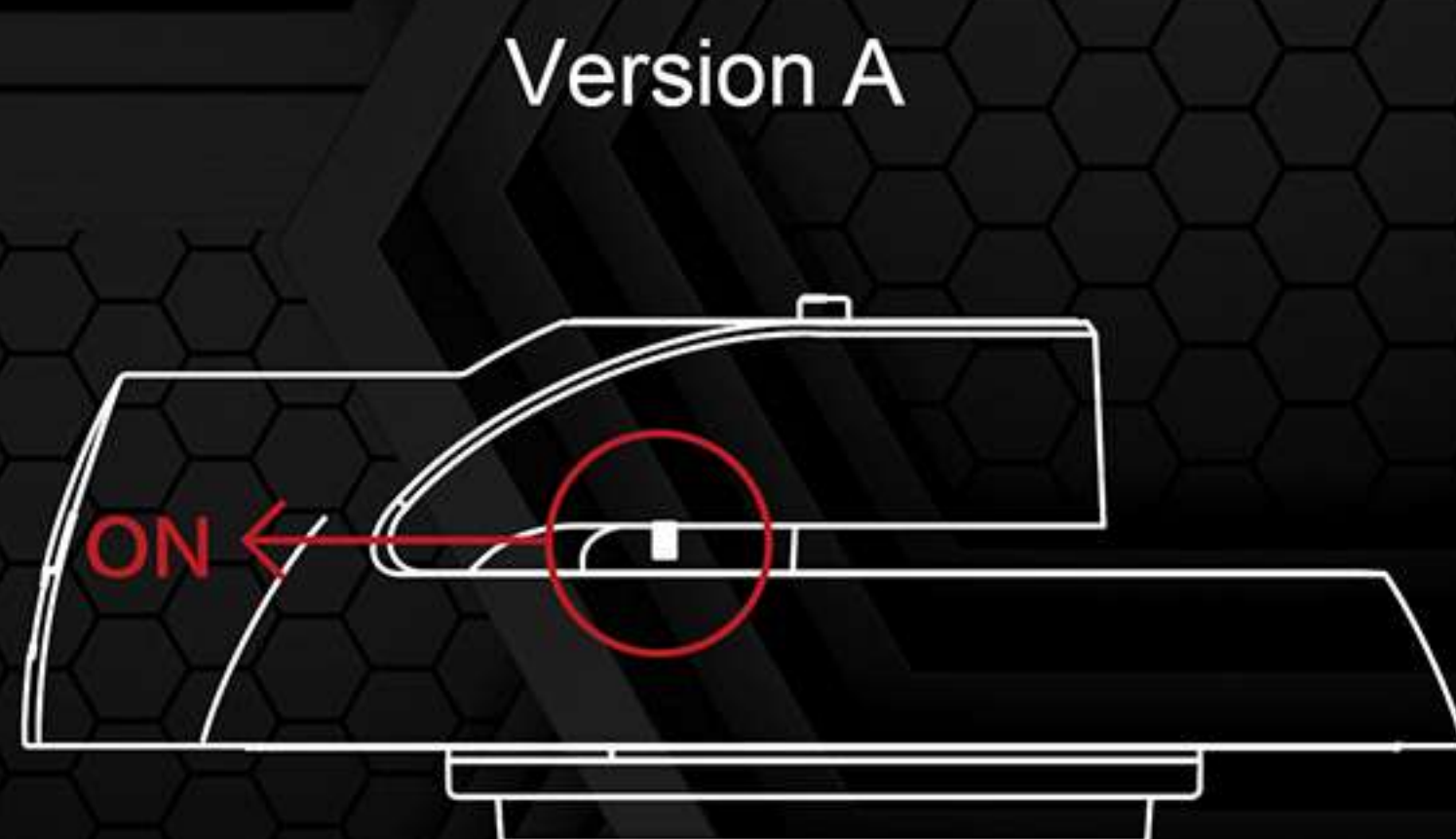
Dear client, thank you for purchasing SYNCFO UCA-01 Universal Coffee Analyzer. When you receive your analyzer at the first time, please read and follow the following instruction carefully to active your analyzer in the proper way.

1. Please remove the top unit and the bottom unit from the suitcase.



## 2. To active the top unit

First, please check your analyzer's version. (A or B) There is a power safety protection switch hidden between the gap(A) or behind the top unit(B). If your analyzer's version is A, please use a thin tool to push the power safety protection switch backward of the top unit toward the power connect. If your analyzer's version is B, please push the switch to "on" position.





### 3.To active bottom unit:

First, please check the bottom of the unit. You can see a black switch (power safety protection switch) on the left corner. Switch it to the "on" position.



### 4.To active top unit and bottom unit:

Please put the top unit on the bottom unit into a sphere like. Use the dual headed magnetic MICRO USB electricity charger that Syncfo has provided and plug it to electric outlet first then connected to the charger to both units. (Picture 4). Right after the electricity is connected, both units' screens should light up automatically. The screens should show that batteries are in charging mode. Then you have completed your activation. The charging time depends how much energy that batteries have. Normally it will take 4~6 hours to be full charge of the whole unit.

**\*If during the normal operation, user turn off the power safety protection switch or take off the batteries then turn on the switch again, have to use the duel headed magnetic electric charger to active analyzer again.**





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# I. Product features

Thanks for choosing our product. You made the right choice! SYNCFO UCA-01 is the first product combines 4 + 1 functions: precision in analyzing measurement of moisture, density, temperature, color score and scale in the world. It includes features as following:

- No warm up needed, turn on and start operating.
- It can analyze coffee cherries, parchment(note 1), green coffee beans, roasted coffee beans, grounded coffee powder.
- Can get the precise results of density, moisture, temperature and color score (note 2) in 3 seconds.
- All the analyzers have the extra function of digital scale.

Note 1: Coffee cherries and parchments only provided by SYNCFO Plantation unit.

Note 2: Syncfo's color score number bases on SCAA Roast Color Classification System to design.

## II. Specifications

- Testing object: Dry coffee cherries, (Plantation unit), Parchments, (Plantation unit), Green coffee beans, Roasted coffee beans, Grounded coffee powder.

- Testing range

Green coffee beans: >8.0%

Roasted coffee beans: >1.0%

Grounded coffee powder: >1.0%

Density: 100~1000 g/L

Color Score: 1~150

Electronic scale: 0~1100 grams

- Testing accuracy

Moisture:  $\pm 0.1\%$

Density:  $\pm 1.0$  g/L

Color Score:  $\pm 0.1$

Electronic scale:  $\pm 0.1$  grams

- The testing range between same series accuracy

Moisture:  $\pm 0.3\%$

Density:  $\pm 3$  g/L

Color Score:  $\pm 0.5$

Electronic scale:  $\pm 0.2$  grams



### III. Unit Item lists:

#### A. Main Parts:

1. Top unit
2. Button unit
3. Upper unit base
4. Cyclone cover
5. Bean plate (110ml)
6. Powder plate (65ml/30ml)
7. Measurement cup (200ml)
8. Dual headed magnetic charger
9. Moisture calibration sample
10. Calibration weight
11. Color calibration plate (with gloves)

#### B. Accessories

12. Ruler
13. Brush
14. Spoon
15. Cloth





## IV. Operating Explanation

Please follow the instruction and make sure that bean chamber is completely empty before turn on the analyzer. Put the top unit and cyclone cover on the bottom unit then press enter into main menu.

### 1. Coffee bean physical condition analysis (Moisture & Density)

Before analysis, please pour green beans /roasted beans into measurement cup.

Make sure the beans are fully fill up to the edge in flat surface condition. Then pour coffee beans into the bean chamber in the bottom unit for analyzing. Use the ruler or measurement cup to make the surface flat and as high as the edge of bean chamber. After that the user can start operating the analyzer by touching the panels to choose options. (Main Menu -> Coffee Analyzer -> Green Coffee Bean/Roasted Coffee Bean/Roasted Coffee Powder)



Note: Use the bean plate push the surface of beans slightly to make it smooth and flat. Make sure the surface is as high as the edge of the plate.

### 2. Roasting color score analysis (powder/whole bean)

How to operate:

Before analysis, please pour grounded coffee powder or whole bean into bean plate then use ruler to scrape through the surface to make an evenly flat surface. Then put the bean plate on the upper unit base or top of bean chamber (choose one). Now connect the top unit with cyclone cover (arrow to arrow) then place on top of the bean plate for analyzing.



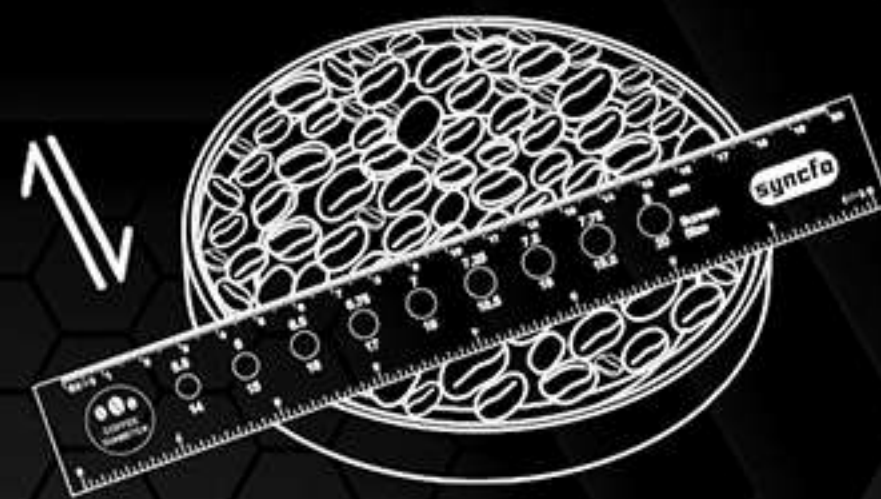
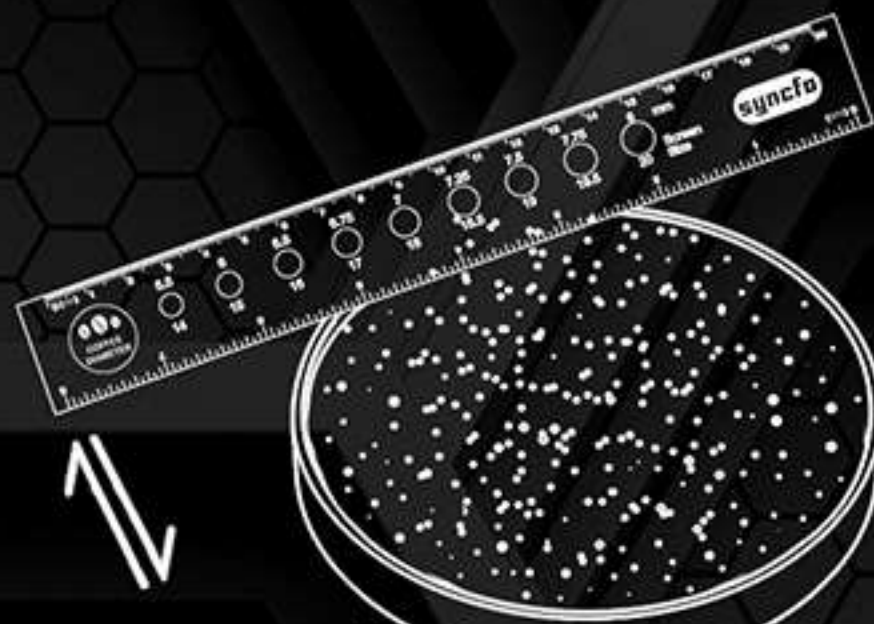


Powder

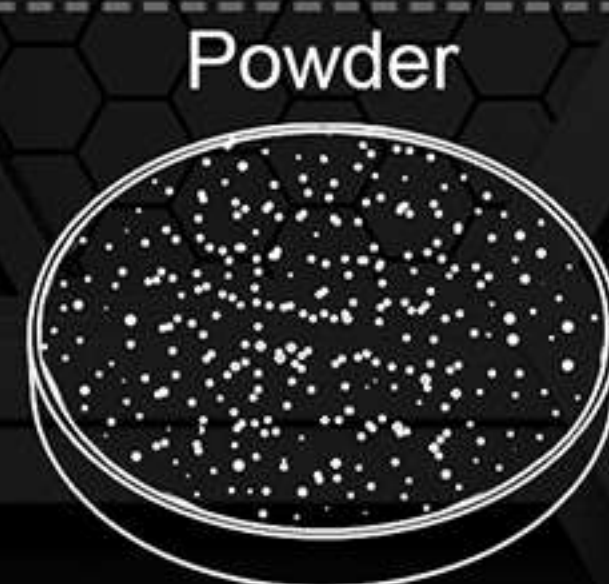
or



Bean



Note: Follow the direction of arrow and use the ruler to make the surface flat and smooth. Make sure the surface is as high as the edge of the plate.



Powder

or



Bean

or



Note: Use the bean plate push the surface of beans slightly to make it smooth and flat. Make sure the surface is as high as the edge of the plate.



or



Note: Put the prepared bean plate on the base unit.



or



### 3. Digital Scale

How to operate:

Please pour the measuring object into the bean chamber or place on the top of bean chamber for weight measurement. When using the unit please make sure the unit is on flat surface due to its sensitive scale it might give your error result if don't do so. When you are calibrating the weight, please make sure place the weight at the center of chamber and follow instructions on the screen.



Measuring



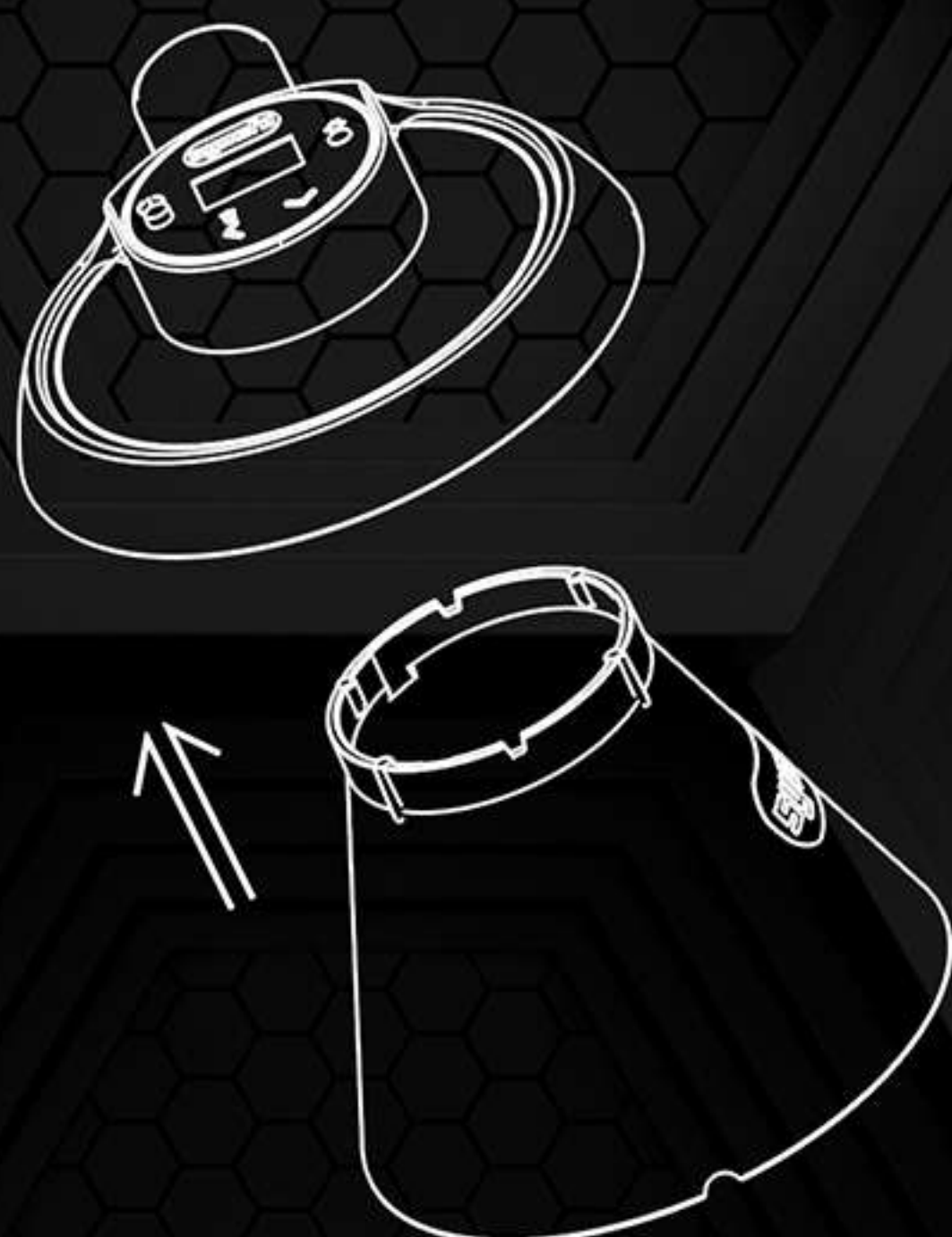
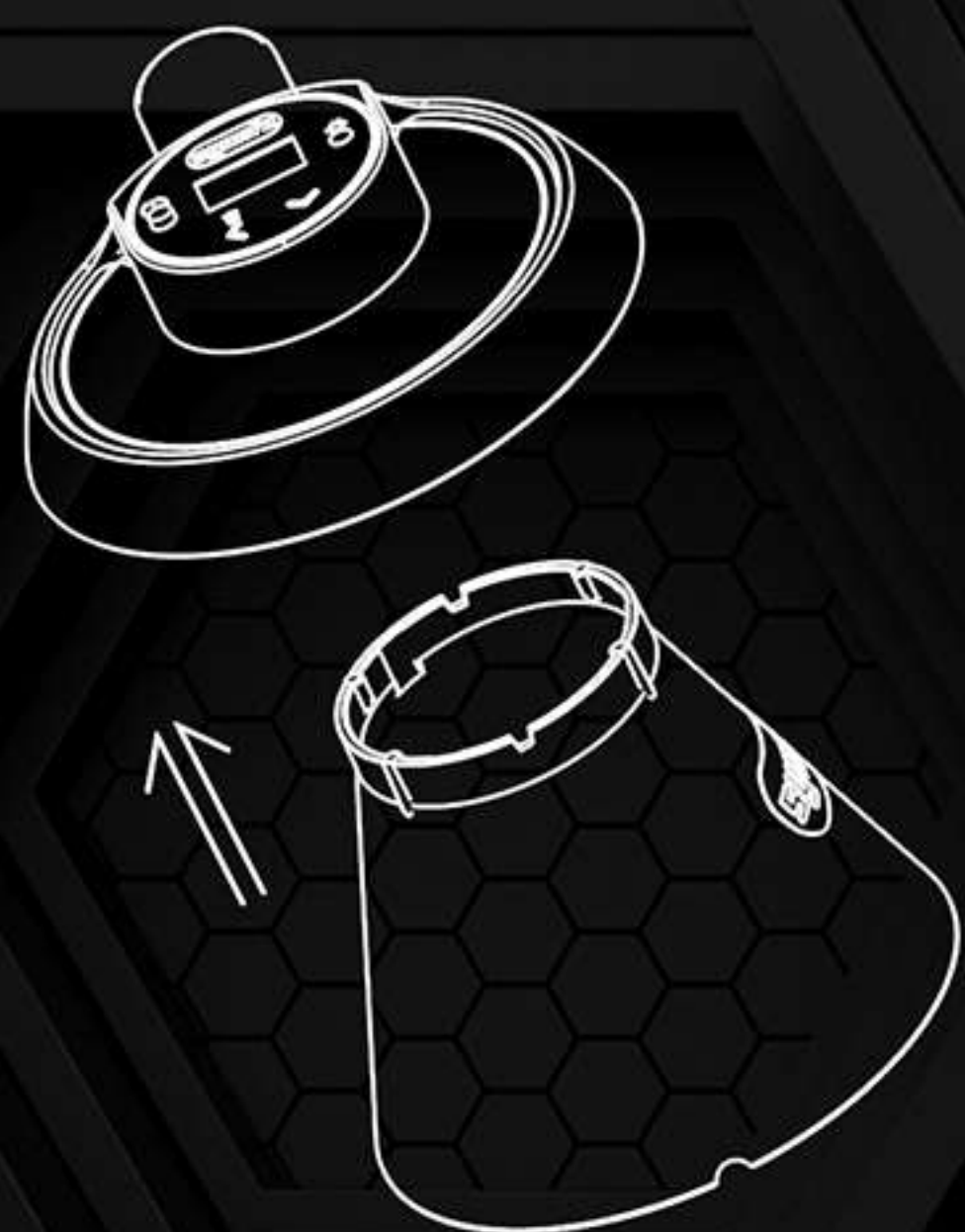
Calibrate



## 4. Top Unit Calibration (Roasting score)

How to operate:

Color calibration is divided into 3 types. Bean plate on bottom unit or upper unit base, another will be bean chamber. Before taking out the calibration plates, please wear the glove that is provided to operate at all time. Please note that color calibration plate has two sides. Side A and B. follow instructions on the screen. (please use glove to remove calibration plates at all time)



图a

Bean plate calibration  
(use large color calibration plate)



图b

Upper unit base.  
calibration  
(use small color calibration plate)



图c

Bottom unit  
Calibration  
(use large color calibration plate)





## 5. Bottom Unit Calibration(Moisture/Density)

How to operate:

Please pour the moisture calibrating sample into the measurement cup (full cup). Then pour the sample into the bean chamber and follow the instruction on the screen to calibrate. Please note there are 2 serial codes on the sample bag need to key in.

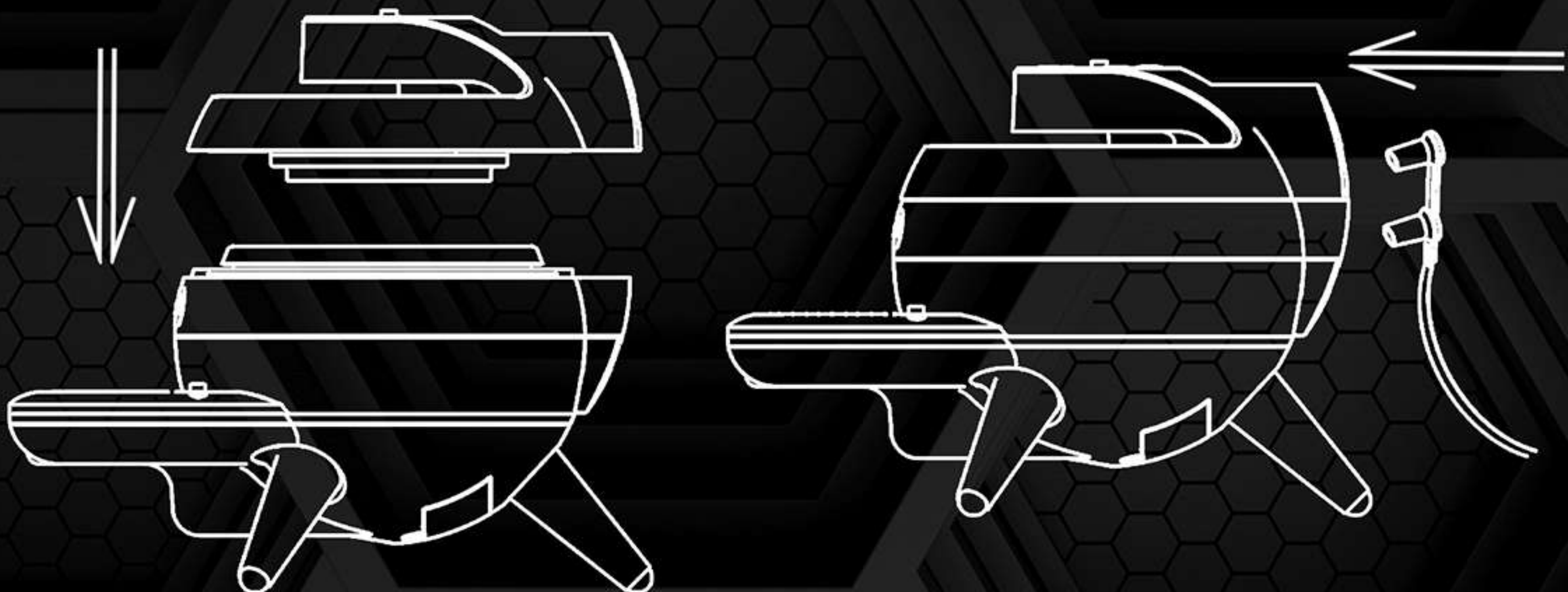


Note: Use the bean plate push the surface of beans slightly to make it smooth and flat. Make sure the surface is as high as the edge of the plate.

## 6. Battery Charging

How to operate:

Please place the top and bottom units together into sphere. Then place the cable line close to the back side the magnetic on the cable will automatic connected.





# V. Function Explanation

## A. Control panel Explanation



## B. Function Explanation

### Bottom unit

#### 1. On/Off

Press the power button to turn on the unit. Screen will display welcome and after 2 second, unit will display important attention notes: Please empty the bean chamber and place the cover, then press "Enter" ● to continue... Please make sure the unit is place on a flat level surface. Push and hold power button for 3 seconds to turn your Syncfo off.

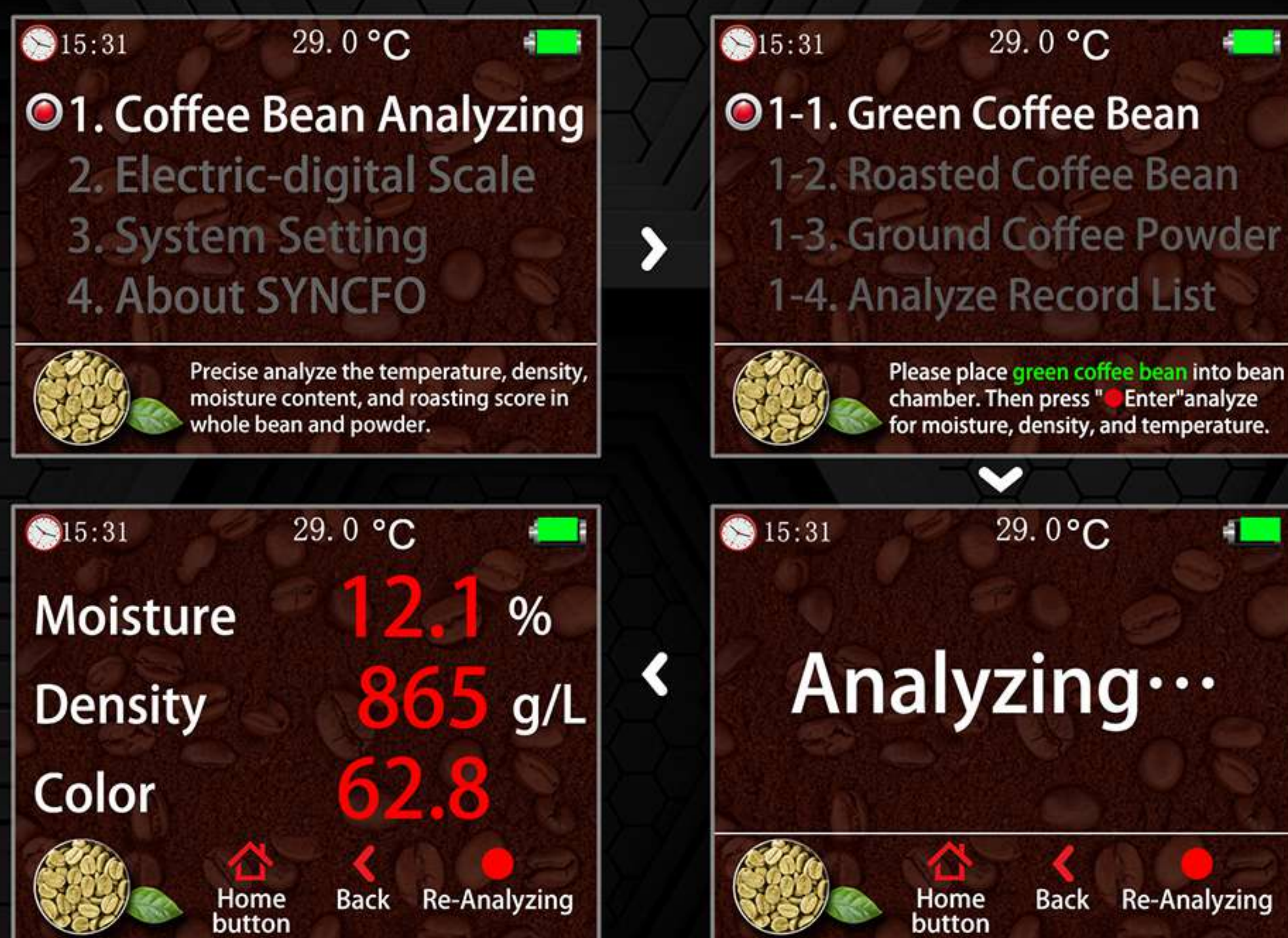




## 2.Menu 1-Coffee Bean Analyzing of Measurement

### (a)Menu 1-1~ 1-3

green coffee bean, roasted coffee bean, grounded coffee powder.  
According to the screen display options, choose the item list to start testing.  
Analyzing measurement result will show on the display screen after 3 sec. (During Measurement; pressing touch sensor home button or left touch sensor button to cancel Syncfo measurement at anytime, and bring you back to home screen.)



### (b)Menu 1-4 testing recorded data list.

Top and button unit will save 100 latest results in the unit, under, Analyze Record List menu. While viewing, top row will indicate data measured. Press up and down arrow to scroll recorded list, follow indicated buttons for actions needed.





### 3.Menu 2-Digital Scale

Built in Digital Scale is included in Syncfo Unit. Max 1 kg. weight tested to precise scale of  $\pm 0.1\text{g}$  accuracy. (Press Blue Scale button on the top left-hand corner, this will activate digital scale measurements).



### 4.Menu 3-System Setting

#### (a)Menu 3-1 Date and time setting

Follow instruction from the tips column, please follow and set by year, month, date and time (24Hr. TIME). Please press the enter button for confirmation. Bottom unit will automatically adjust the top unit. (Must place the Top unit on top of the bottom unit)

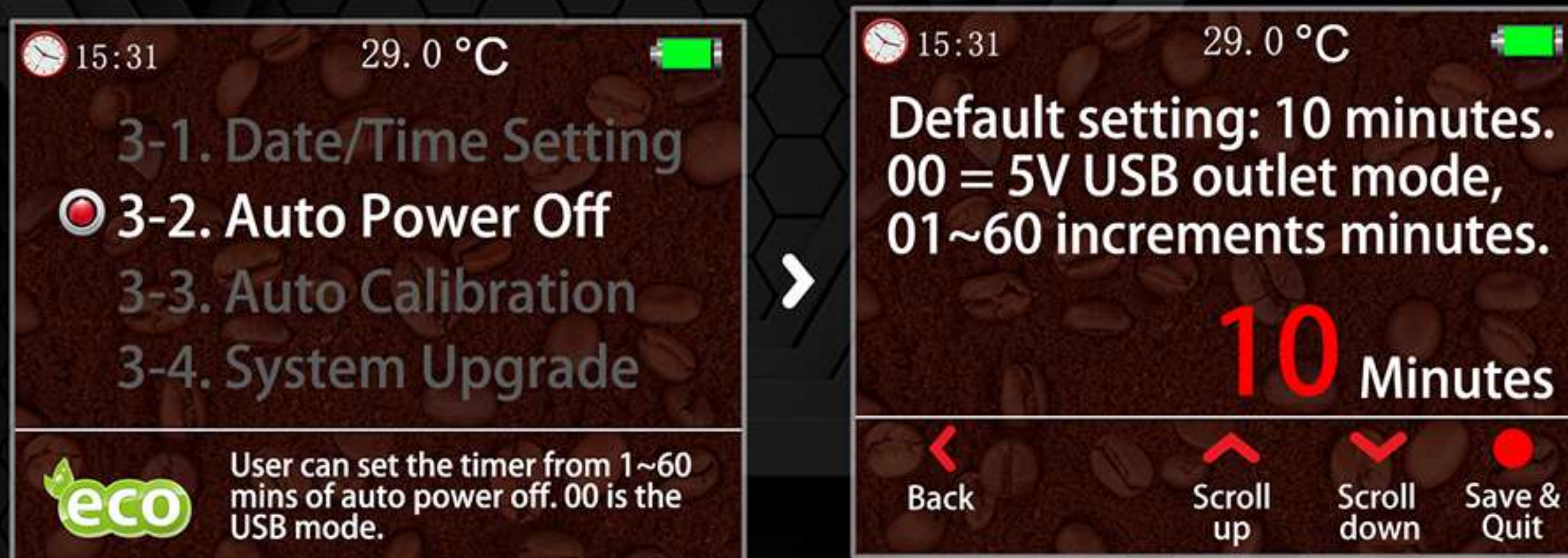




## (b)Menu 3-2 Auto power off

This option allows to set auto power off by time (default setting is 10 minutes) or select user defined option for your own settings for Auto Off. Choose from "01" to "60" minutes for auto power off time. For long period usage, choose "00" Micro USB power supply mode.

**\*Place the top unit on the bottom unit to set the time, the whole unit can be synchronized.**



When the analyzer setting in "00" mode, please make sure the analyzer connects to the power supply.

## (c)Menu 3-3 Auto-Calibration

After unit has been used for a period of time, we recommend user use calibration sample to maintain analyzing accuracy .

**Warming:**

Wrong calibration procedure will make the unit lose its accuracy. Please carefully follow the calibration procedure step by step. Press up and down buttons can change the number figure. Push left and right to move from column to column. Default password is 1234. With this password, you can enter the calibration menu.



Enter default password 1234  
please press enter to confirm.



## Menu 3-3-1 Bottom Unit Calibration

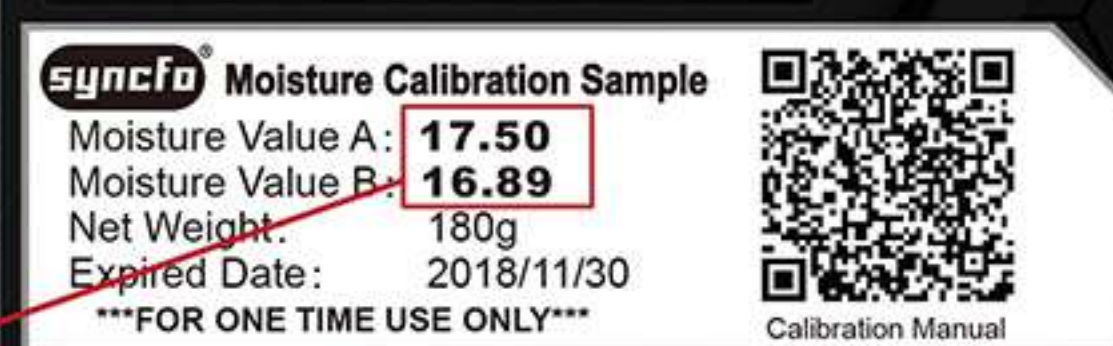
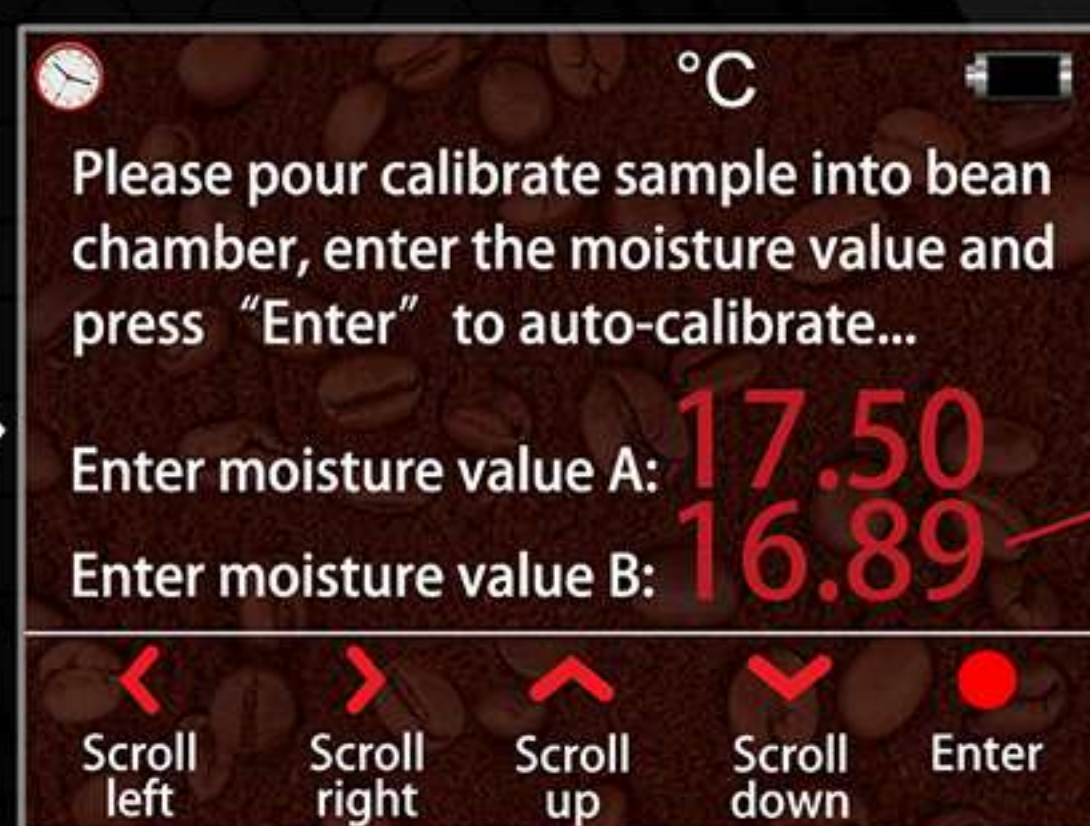
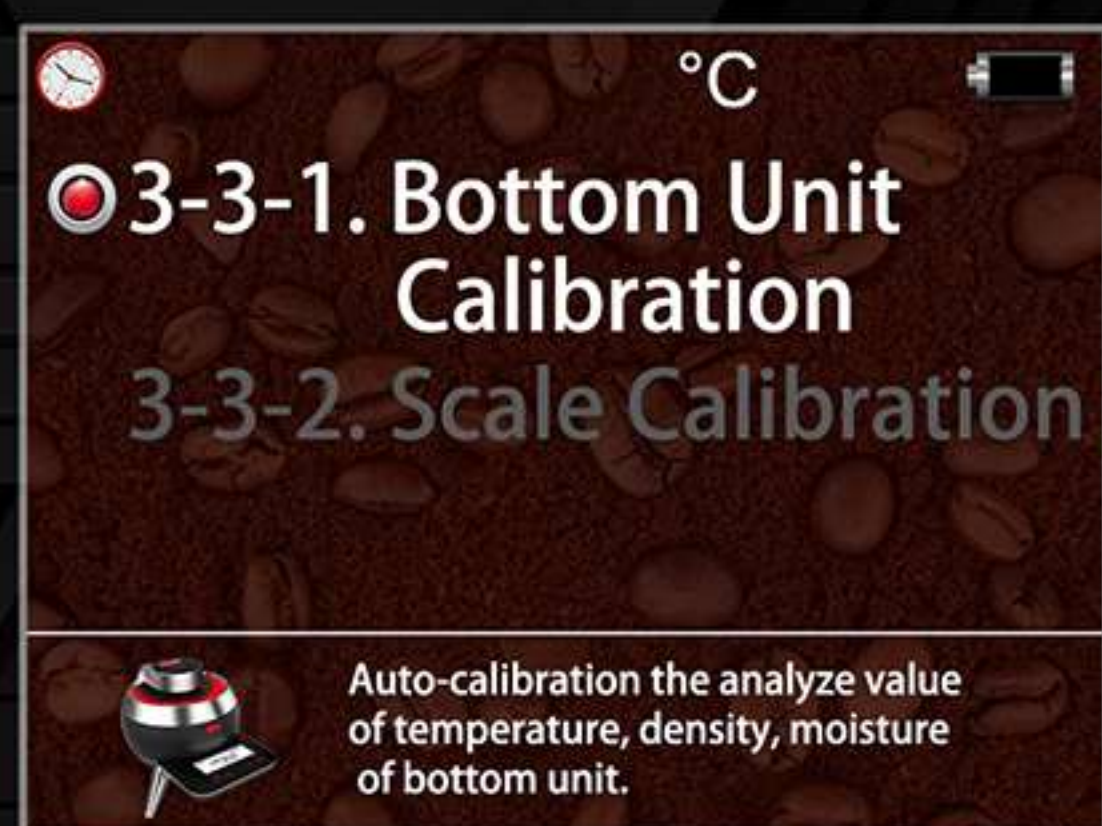
(d) To calibrate the moisture for bottom unit, you need to use standard SYNCFO calibration sample which is provided by Syncfo suitcase. calibration Sample pouch will include 2 serial codes A and B.

(e) Enter the main menu -> 3. System Setting -> 3-3 Auto Calibration -> Enter the password 1234 -> 3-3-1 Bottom Unit Calibration.

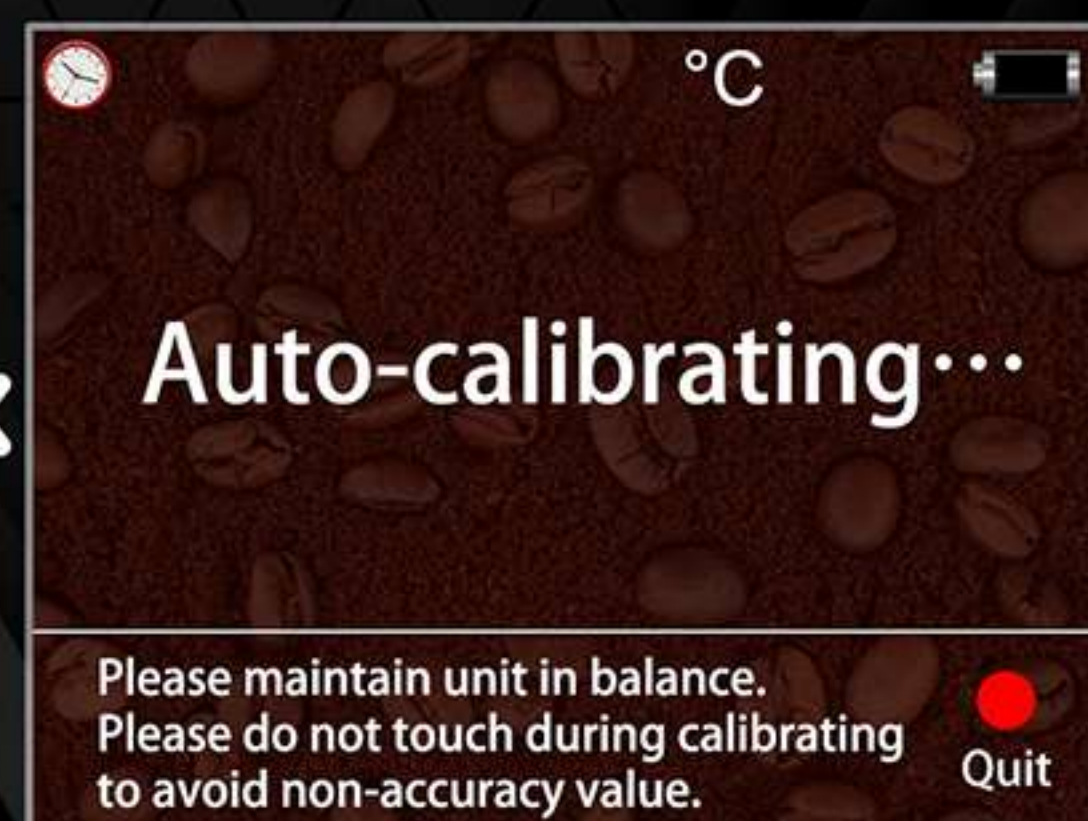
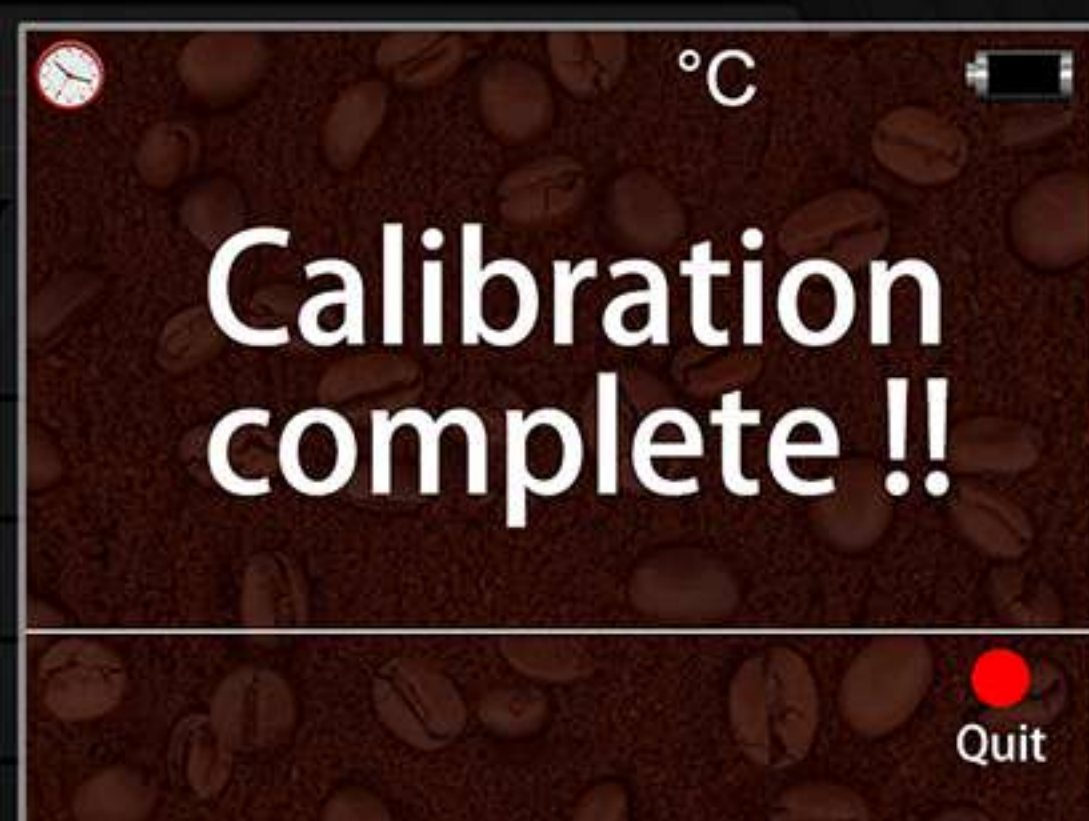
(f) Follow the instruction to empty the bottom unit bean chamber and press enter. Pour calibration sample in bottom unit bean chamber. Correctly key in the serial codes, then press enter to confirm. It will automatically calibrate Syncfo moisture. (Check the picture from p.6)

Note: After using the calibration sample please seal it back to the bag as soon as possible. Otherwise the humidity might affect the sample quality.

Note: Please make sure the sample doesn't expire. If the sample expire, please contact the local distributor to purchase the new one.



Please enter the number A and B on bag label.



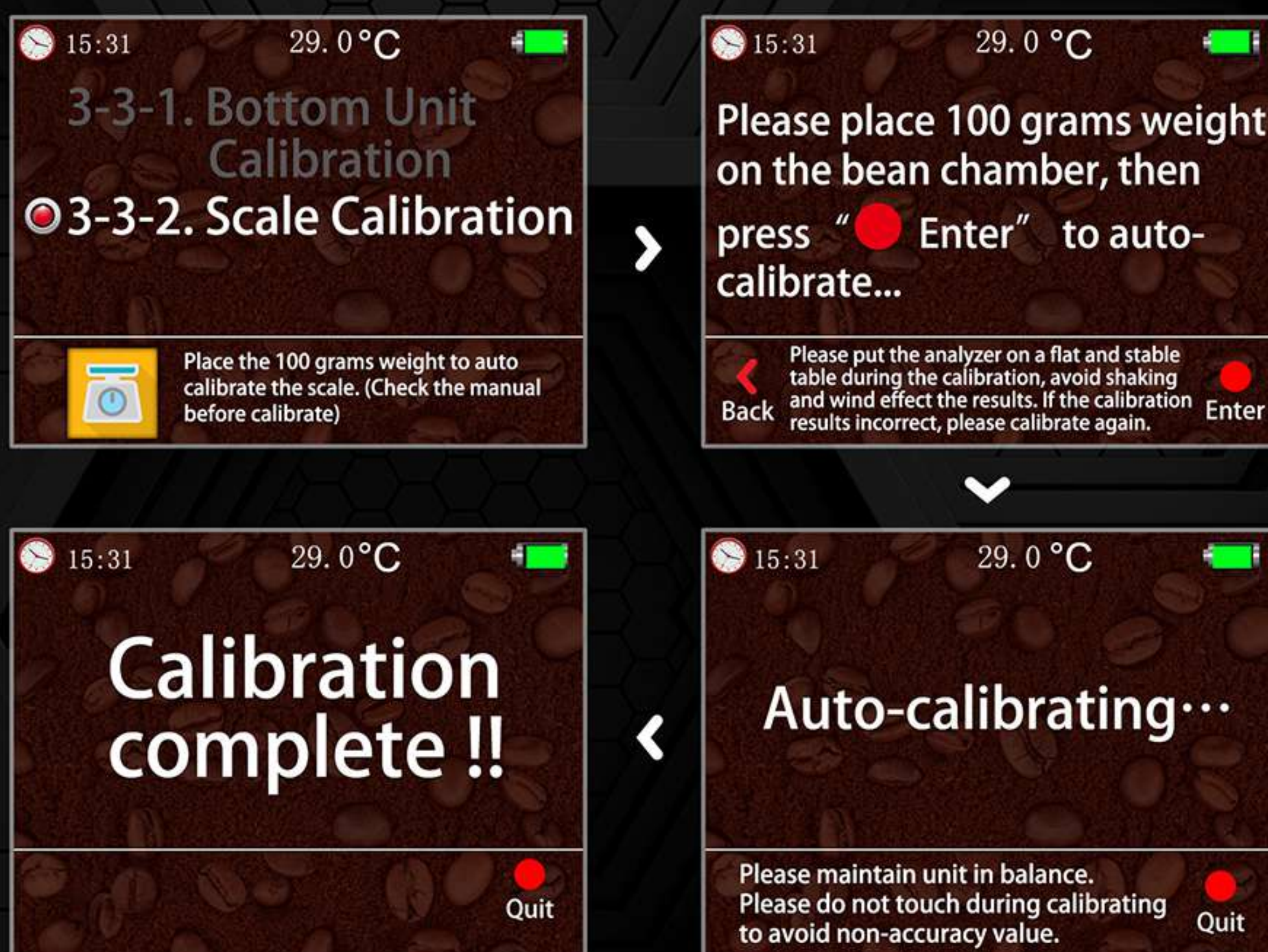


## Menu 3-3-2 Digital Scale Calibration

(f) 100gr. weight is included in your Syncfo Unit suitcase. Enter the main menu -> 3. System Setting -> 3-3 Auto Calibration -> Enter the password 1234 -> 3-3-2 Electric-Digital Scale Calibration.

(g) Make sure the bottom unit is on the flat surface. Follow the instruction on the screen to empty the bottom unit bean chamber. Place the weight on the middle of the bean chamber. Press enter to calibrate. (Check the picture of p.4)

Note: The tolerance of digital scale is  $\pm 0.1\text{g}$ . Make sure the testing results is in the tolerance range.



Please press ● quit before remove the weight.

## 5.About SYNCFO

The screen displays SYNCFO official website, contacting information, firmware version and model serial number. Please provide Syncfo information to us, so we can provide better customer support.





# VI. Top Unit

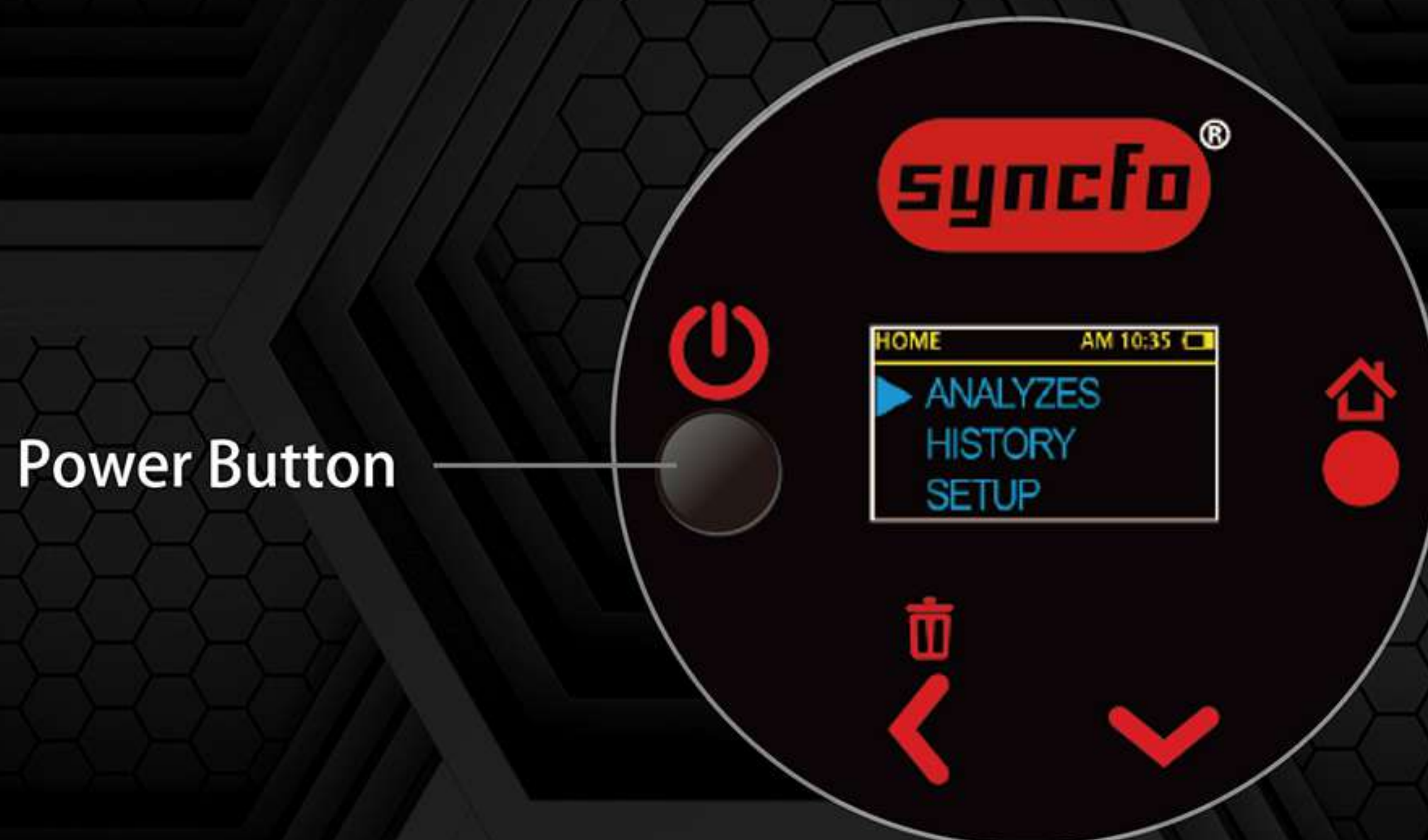
## A.Control Panel Description



## B.Function Explanation

### 1.On/Off

Push power button to turn on the unit. When menu shows main menu, Syncfo is ready to analyze measurement data. Push and hold power button for 3 second to turn off.





## 2.Menu 1-Analyzes

Choose this option, you can directly test the roasted coffee bean or grounded coffee powder for color scores. Please use the bean plate to place on the bottom unit or upper unit base to calibrate.



Press ▼ to choose option

Press [Home Icon] to confirm

The screen will display N/A if the analyzing objects over the range (0~150).



## 3.Menu 2-History

Choose this option will show the latest 100-testing history list in Syncfo record. Press and hold left button to delete all the records.



Press ▼ to next page

Hold 3 sec to delete



Press to choose option

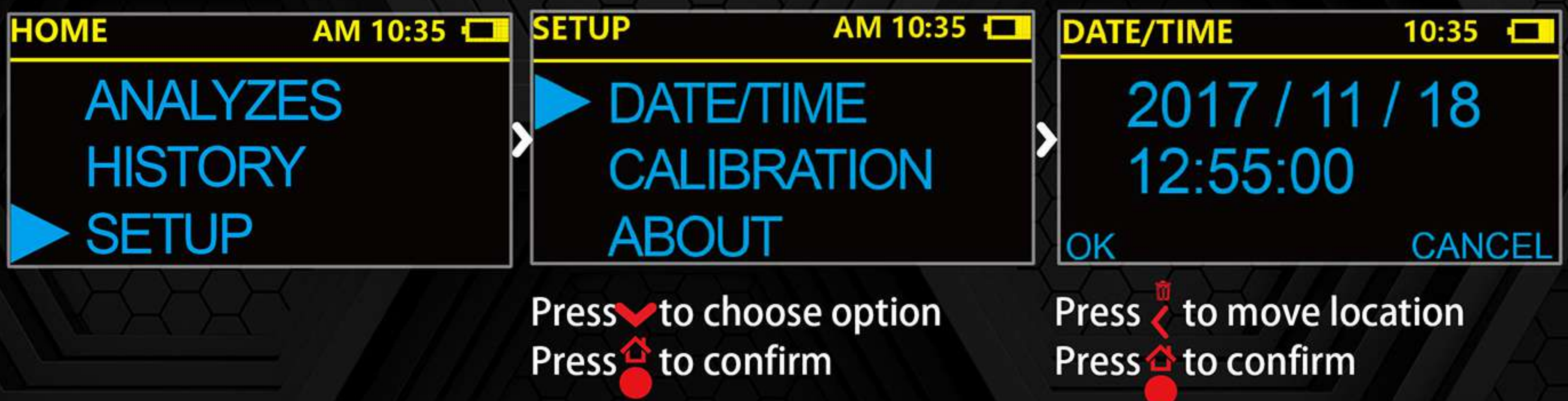


## 4. Menu 3-Setup

Choose this option for access to the date, time, auto-calibration and auto off for the top unit.

### (a) Menu 3-1 Date/ Time

Choose this option you can access the date, time. Press the left button to move from column to column. Press the down button to change the set value. Press left button to choose "ok" and press the home button to confirm and save.



### (b) Menu 3-2 Calibration (Automatic)

Choose this option you must use with the SYNCFO color calibration plate (A&B sides) to calibrate the top unit. Please wear the provided gloves before operating the calibration procedure.

#### (1) Menu 3-2-1 Bean Plate (Large color calibration plate)

Choose this option, you need to put the color calibration plate A into the bean plate. Place the bean plate on the bottom unit and cover up with top unit and cyclone cover then follow the instruction press home button to confirm. Enter the side A number and choose "ok" to enter. Flip the color calibration plate to side B and enter B number to finalize full calibration. When the screen shows "CALIBRATION COMPLETE!!" means calibration succeed.



## (2) Menu 3-2-2 Bean Chamber (Small color calibration plate)

Put the small calibration plate into bottom unit bean chamber with A side up. Cover the top unit and cyclone cover then press home button to confirm. Enter the side A number and repeat the procedure as same as bean plate again.

\*Note: If the analyzer firmware version is before 180330, please pour coffee bean into the bottom unit and make sure it's half height of the bean chamber before putting the small color plate into the chamber for calibration. Make sure the tolerance of the results is in the range  $\pm 0.1$ .

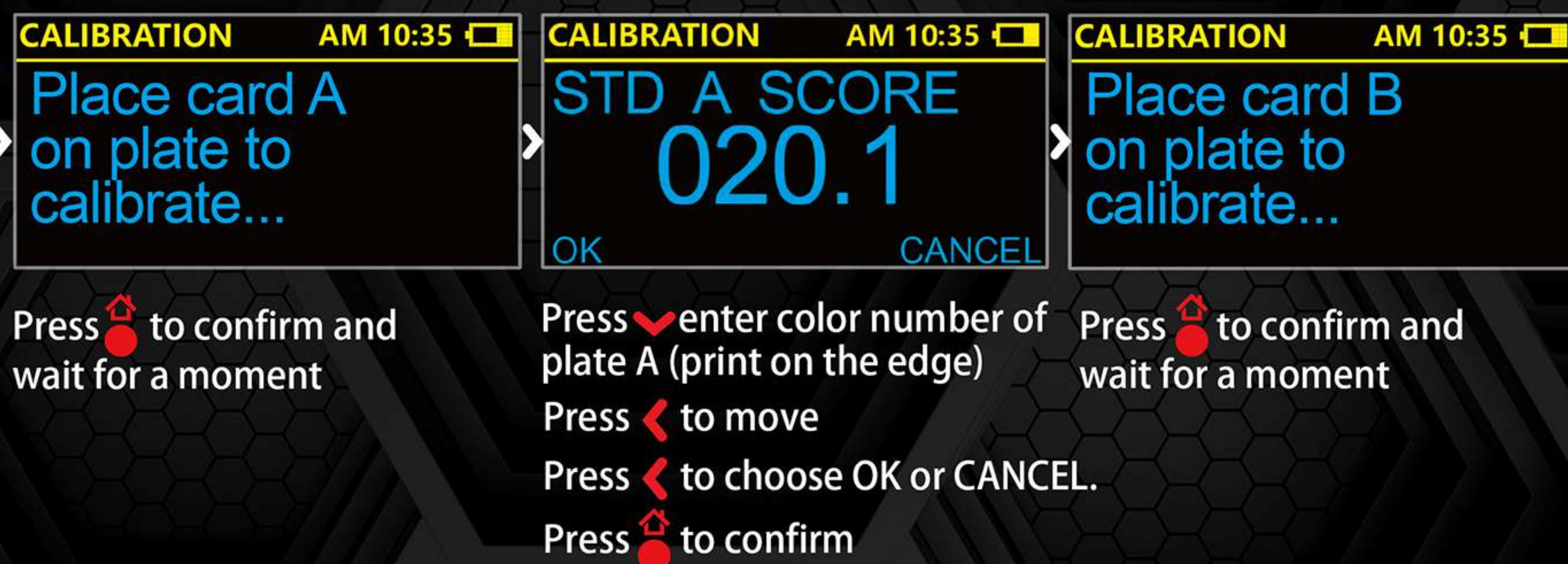
How to check firmware version: Home → About SYNCFO

## (3) Menu 3-2-2 Base Unit (Large color calibration plate)

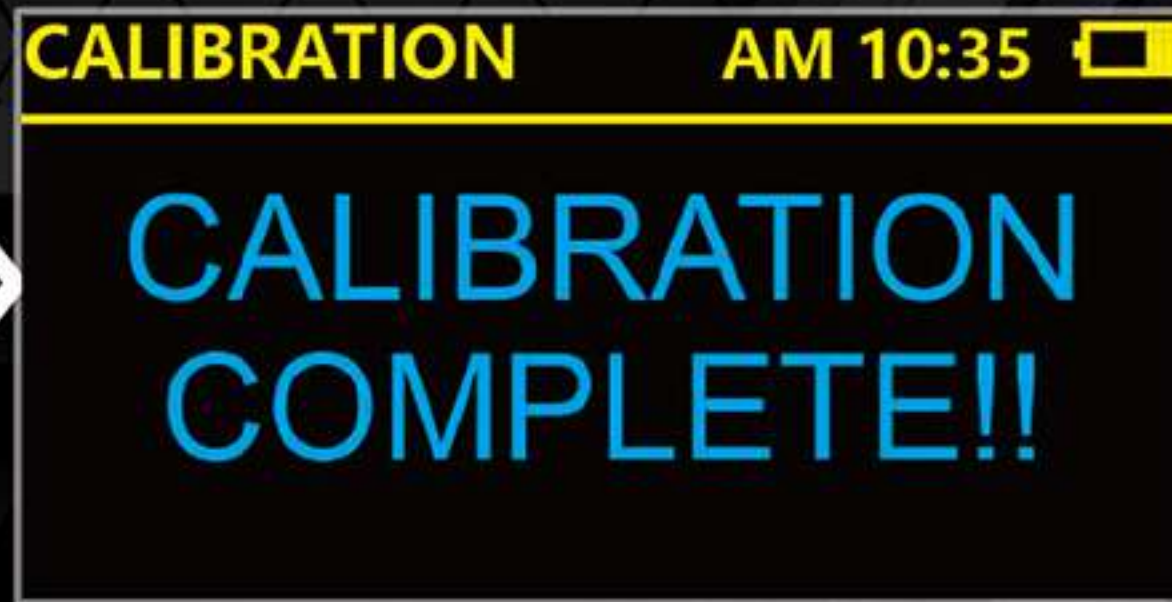
This option will follow the same procedures as previous (bean plate) but need to put the bean plate on the upper unit base to calibrate.



Side A (Up)







Press enter color number of plate B (print on the edge)

Press to move

Press to choose OK or CANCEL.

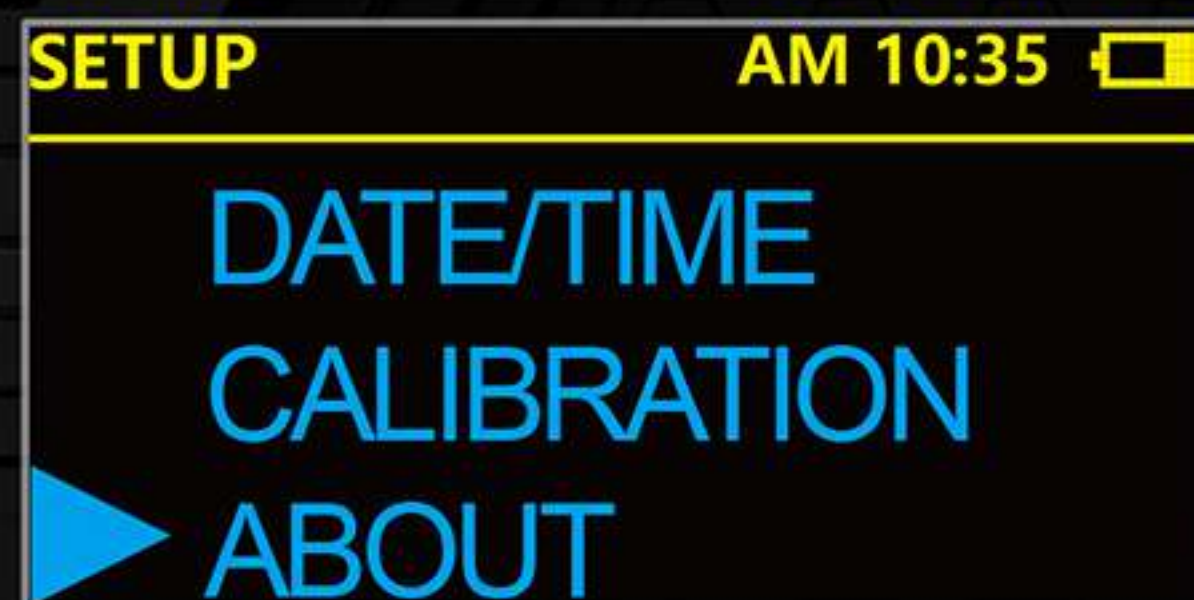
Press to confirm

Complete

\*Note: please complete the whole calibration procedures before next analysis.  
Able to use the number on the color calibration plate for testing accuracy and make sure the tolerance. within range  $\pm 0.1$ .

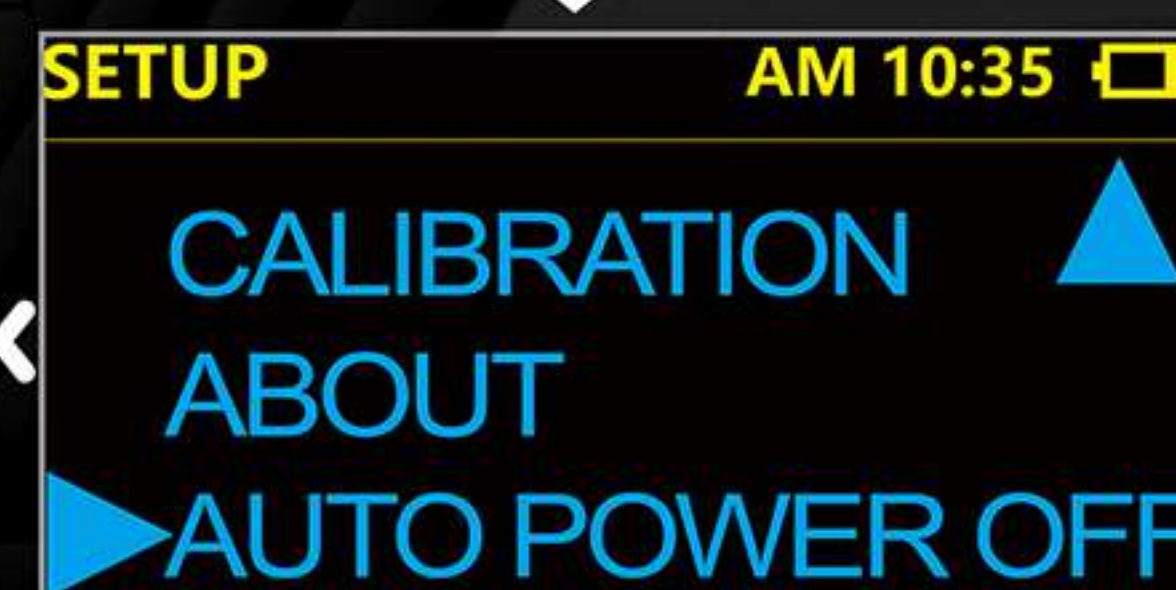
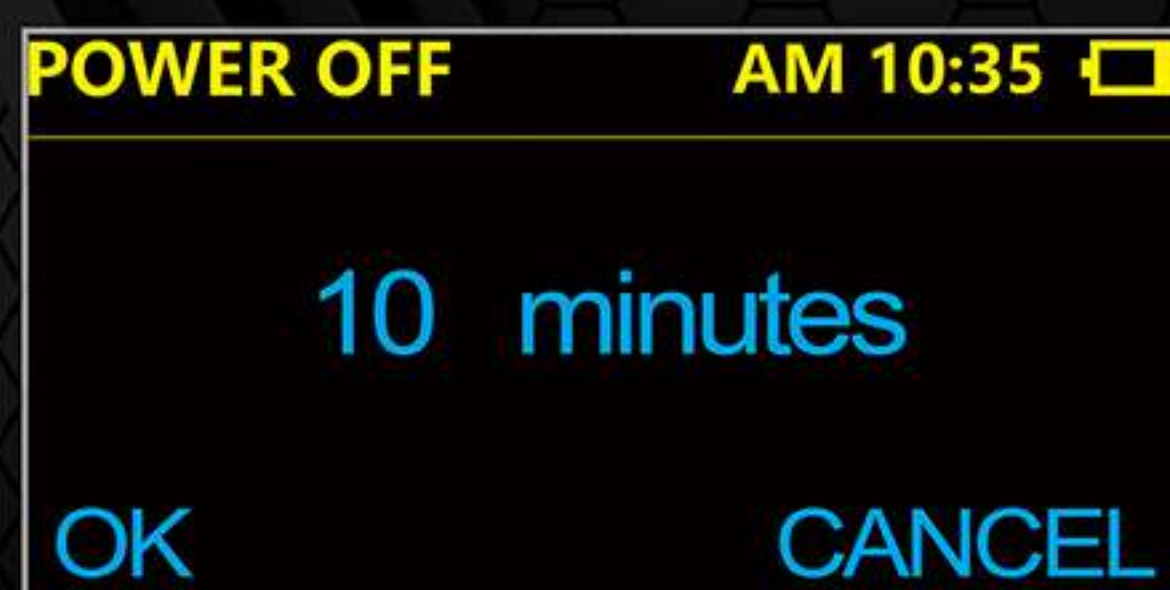
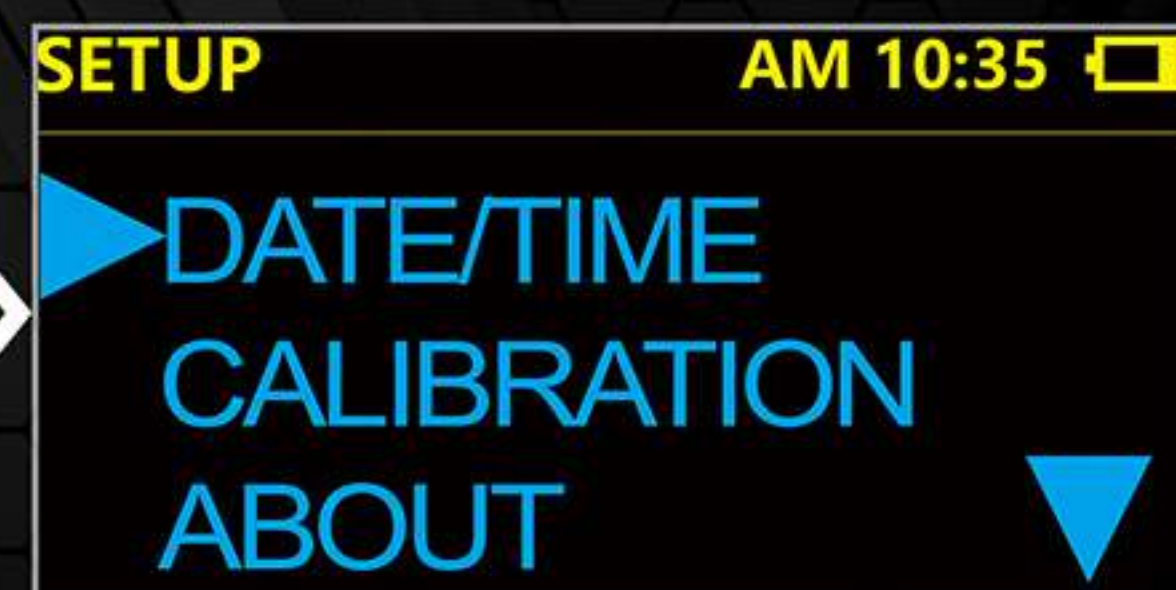
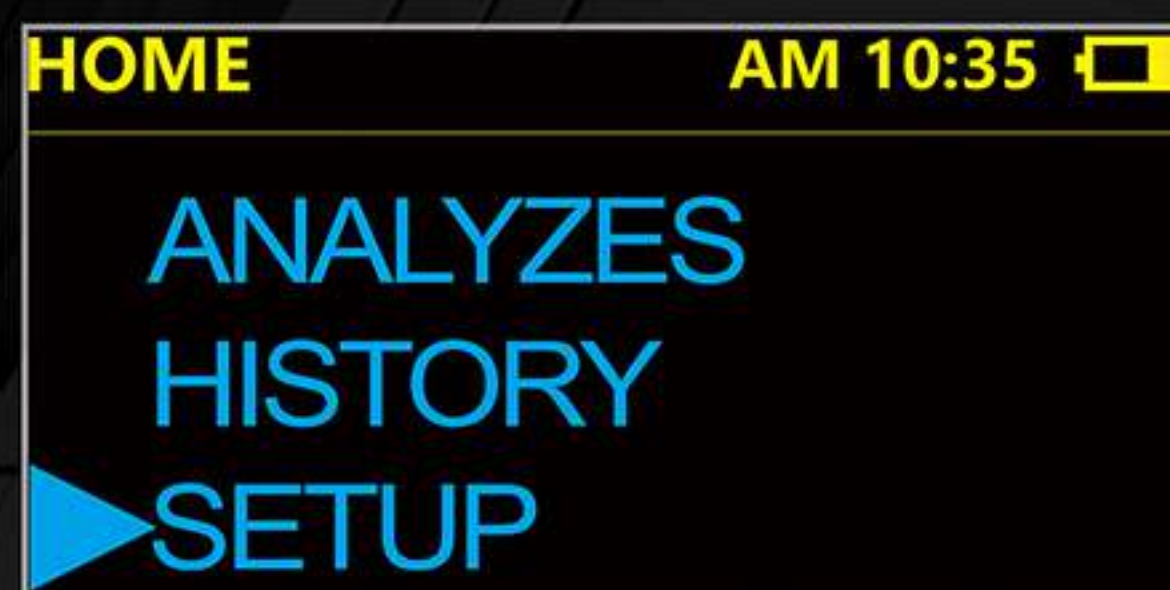
## 4.Menu 3-3 About SYNCFO

Screen will display the model and firmware version.



## 5.Menu 3-4 Auto Power Off

Choose this option to set the auto power off time.



\*This function only for analyzers with the version after SF-180813.



## VII. Battery Charging

During first time battery charging, please use the dual headed magnetic charger that is provided in the box to charge top and bottom unit at the same time. Following details show the meanings of different lights.

Top Unit: Flickering red light represent battery in charging condition. Red light steady represent fully charged.

Bottom Unit: Red light represent battery in charging condition, and green light represent fully charged.

(If lights are not showing after connected, please contact with your local dealer.)

If dual headed charger is not included in the box, please remove the magnetic head off the USB plug and use normal Micro USB charger to charge your unit.

Display screen will show "Battery Low" when unit power is less than 10%.

Please charge the unit immediately or the unit will shut down automatically to protect battery from being over used.



Uses Dual headed magnetic charger

Flickering red light: In Charging Condition  
Constant red light: Fully Charged

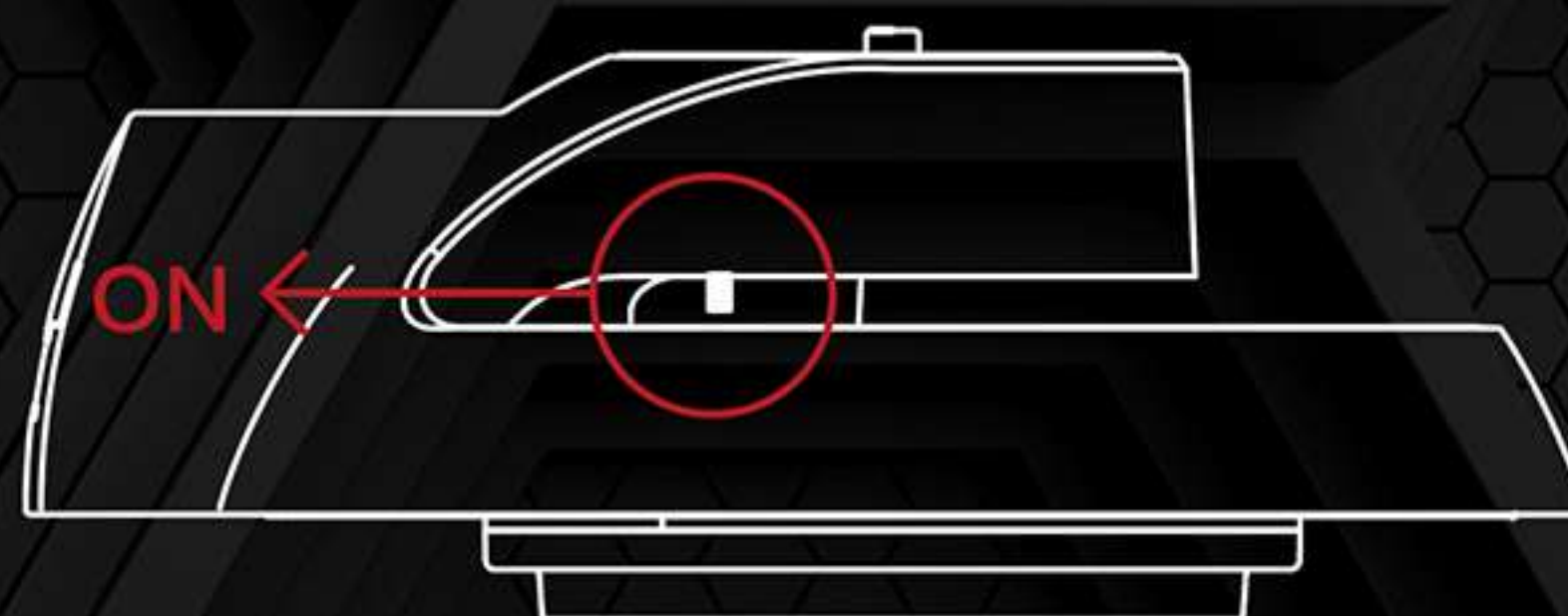
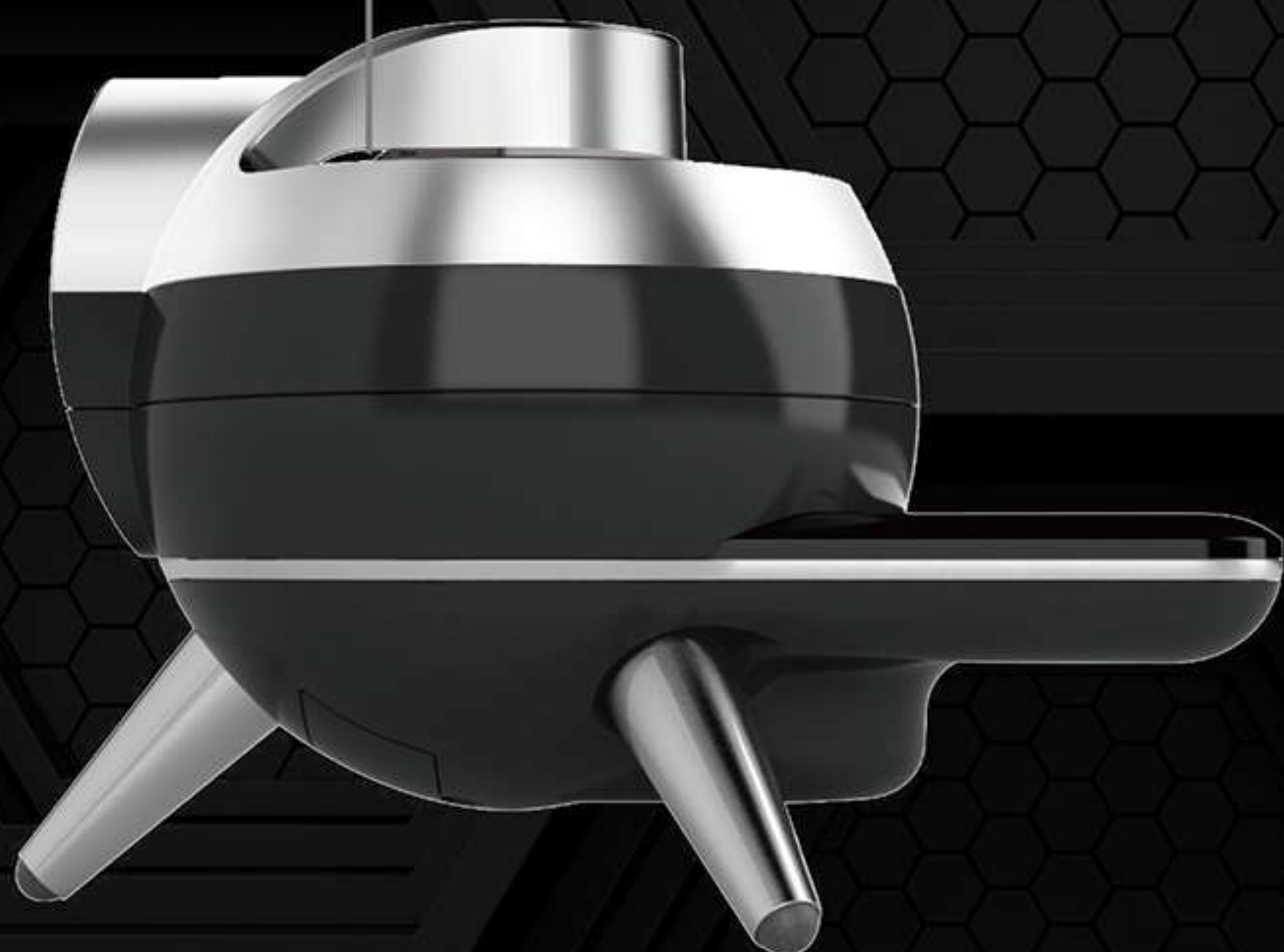
- Red Light: In Charging Condition
- Green Light: Fully Charged





- When the unit is totally out of power. It is normal that the battery charging will be slow at the beginning.
- Avoid battery to be totally out of power, please turn off top and bottom units power safety protection switch.

Power Safety Protection Switch



Version A



Version B



Power Safety Protection Switch



## VIII. Error Definitions: (N/A)

- Moisture : N/A-Please check and confirm bean chamber testing object.
- Density : N/A-Please check and confirm bean chamber testing object.
- Color Score : N/A-Please check the Top unit is turn on.
- Temperature: N/A-Please turn off the bottom unit by pressing the power button for 10 seconds and restart. If it does not recover, please send the analyzer to your local dealer.
- If the screen panel has no response , please turn off the power safety protection switch at the top unit and bottom unit. After 10 seconds turns it on and activate again.
- When the top unit out of the accuracy tolerance, please use the OEM calibration plates to calibrate it.
- If the user can't turn on the analyzer, please make sure the power safety protection switches of top unit and bottom unit are in the "on" position. And also make sure the battery power doesn't lower than 10%.
- If the user can't turn off the analyzer (crashed), please turn off the power safety protection switch on the top unit and bottom unit. After 10 seconds turns it on and activate again.
- When the electronic digital scale out of the accuracy tolerance, please use the OEM calibration weight to calibrate it.

If above problems are unable to solve, please contact with local distributor.

## Important notice:

Do not use alcohol to clean the color calibration plate, avoid direct contact with sunlight and ultraviolet light. This will affect calibration accuracy.

\*Caution: Analyzer and all the content accessories must use neutral detergent (pH=6~8) to clean, If customer use the strong detergent, may cause fading problems or effect the testing result.