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- ① Check whether the SD card is installed, for storing your curves after roasting
- ② Click to enter your target temperature, you can also adjust it by “Temp set + -”



③ Click **Start heating**, the preheating system automatically works. The system automatically approaches the target bean temperature. To prevent uneven heating which will result in deformation of the drum, the “Roller” will be automatically turned on and guarantees the minimum speed.

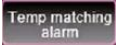
④ Use " **Auto** Fire" during preheating phase to allow the system to automatically adjust the "Fire" to reaches the target temperature with maximum speed and stability
 You can also “Fire +/-” to adjust Fire values manually, after you change the Fire manually, the system will enter manual Fire mode, the maximum preheating Fire power will not exceed the you adjust, in order to gain the rate of heating you want . The Fire mode button is changed from **Auto** to **Manual control**, click this button will be in the switch between “Auto” and “Manual” fire modes.



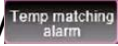
⑤ The preheating curve is displayed at the far left of the curve pane. The preheating phase curve is not important, so we only have 30 second window so you can observe the temperature change situation within 30 second.

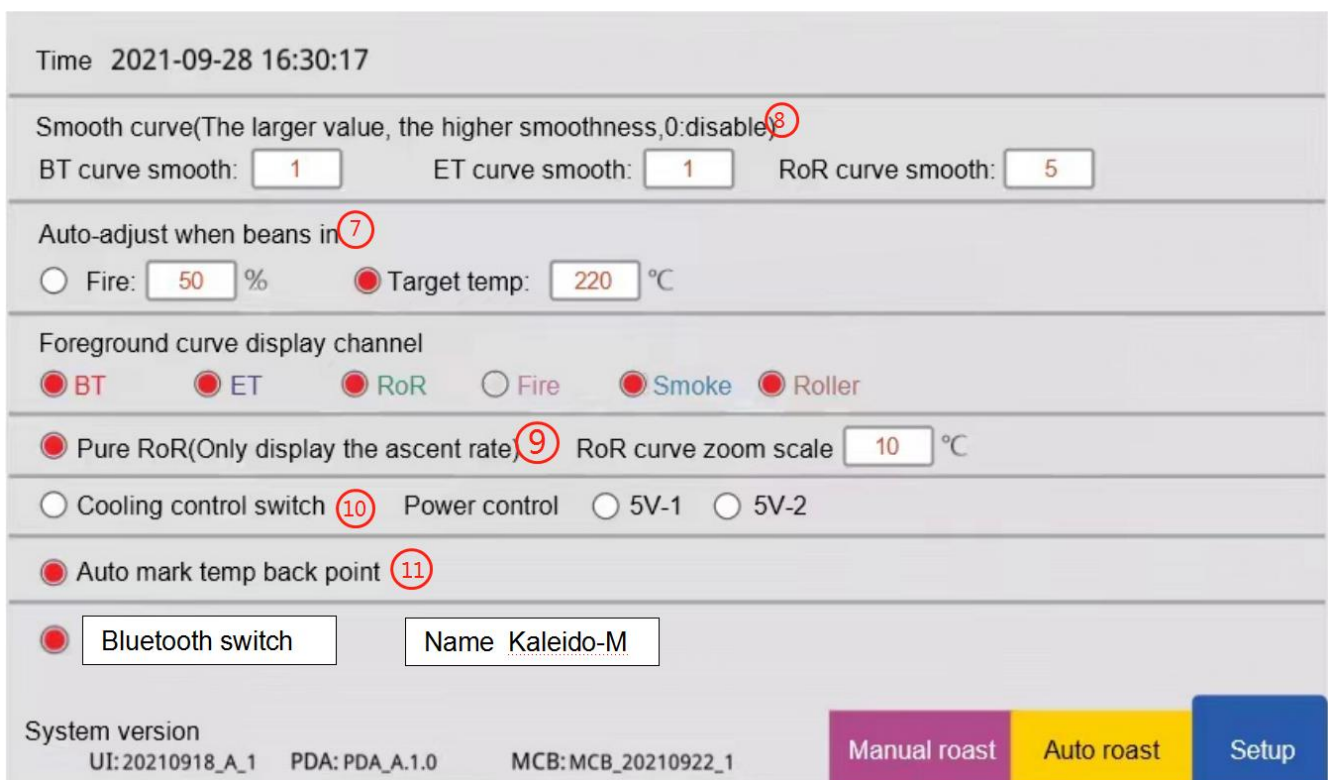
Red curve indicates BT (bean temperature), Blue curve indicates ET (environment temperature), Green curve indicates ROR. Their color corresponds to the value color of the temperature real-time display area above. There will be no Fire, Roller and Smoke curves



⑥ Click , when reaches the target temperature, this button will flashes and alarm.

But at this time, usually we need to keep preheating at least 10 minutes to guarantee the roaster inside and outside environment to reach thermal equilibrium state.

This is a very necessary waiting process for us to finish the stable roasting. I usually  on " " and hear it "beep" sound continuously for 10 minutes before I start roasting



Time 2021-09-28 16:30:17

Smooth curve(The larger value, the higher smoothness,0:disable) ⁸

BT curve smooth: ET curve smooth: RoR curve smooth:

Auto-adjust when beans in ⁷

Fire: % Target temp: °C

Foreground curve display channel

BT ET RoR Fire Smoke Roller

Pure RoR(Only display the ascent rate) ⁹ RoR curve zoom scale °C

Cooling control switch ¹⁰ Power control 5V-1 5V-2

Auto mark temp back point ¹¹

Bluetooth switch

System version
UI:20210918_A_1 PDA:PDA_A.1.0 MCB:MCB_20210922_1

Manual roast Auto roast Setup

⑦ Before Pouring the green beans into, we also need into the "Setup" interface and check "Auto-adjust when beans in" .

If you select "Fire" and "Target temp", system will be automatically adjust "Fire" and "Temp set" when you click "Beans in".

The system is designed to be temperature-oriented and fire-oriented in the whole process. If there is no finger target bean temp after "Beans in" , then when the drum temperature returns the preheating temperature, the heating will stop and the system will maintain the temperature for insulation.

So it is necessary to set a new target temperature after "Beans in", so we can set up here in advance. Select "Target temp" here to allow the system to complete the adjustment automatically to avoid manual adjustment delays.

Fire has the same logic. Because in preheating phase we usually use "Auto Fire". But "Auto Fire" often causes confusion after "Beans in". because of the temperature will sudden decrease after "Beans in" will make the system into full Fire power state, the sudden decrease will make the system into full firepower state, at this time the manual intervention appears to be in a hurry, even forget to operate to cause roasting failure.

Therefore, I usually select these two items and set "Fire 0%" after "Beans in", then add the Fire power near the temp back point according to roasting experience.

I usually set "Target temp 220°C", which is my upper protection temperature for roasting.

⑧ "Smooth curve" is also the setting we need to determine, although we can adjust it during the curve generation at any time, but the new Smooth curve only applies to future data, the generated curve will not be smoothed by the new value.

⑨ "Pure RoR" stands for "temperature rate". RoR if you deselect, the ROR curve will also show the rate of change during the temperature drop.

⑩ "Cooling control switch" will give you an additional cooling switch to enable you can turn on or off the Cooling fans at any time instead of being linked only by the event button.

⑪ If select "Auto mark temp back point", the system will automatically mark the temp back point for curves. Of course, you can still pre-mark or re-mark manually

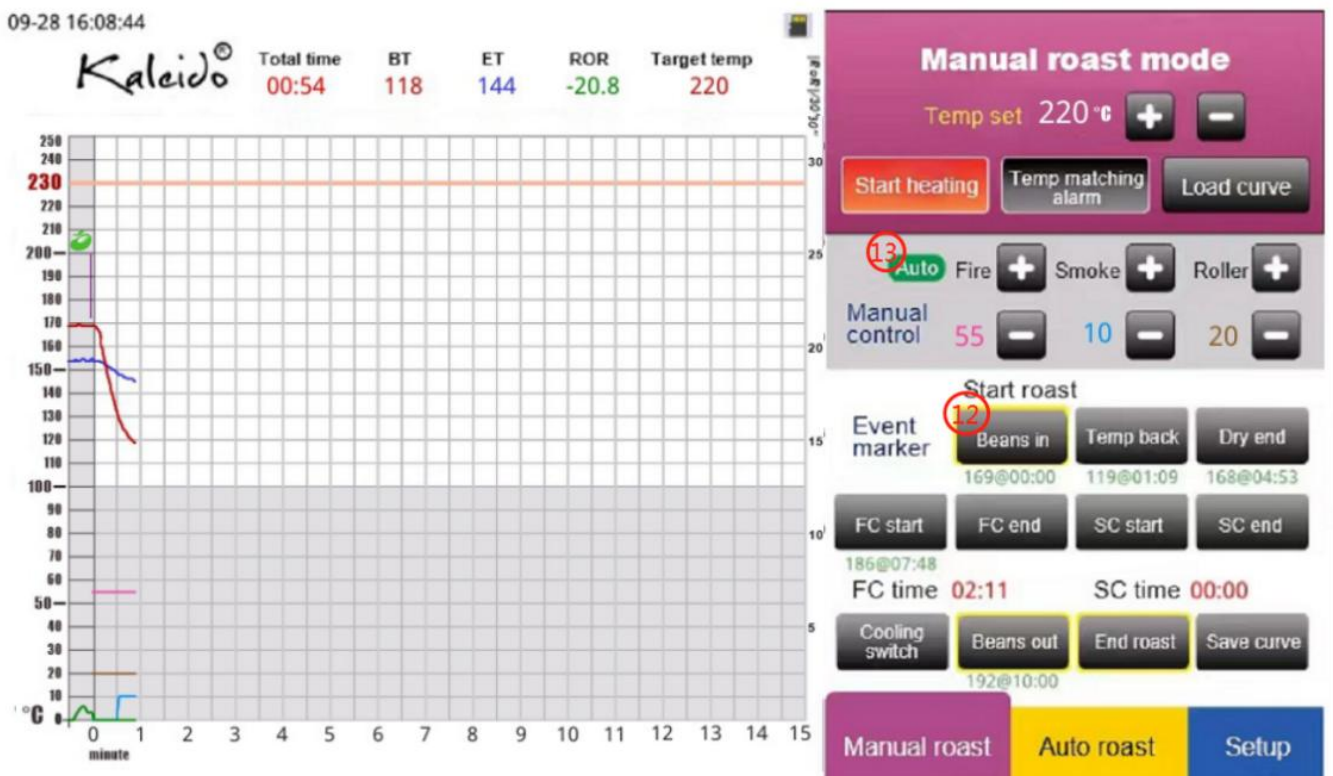
⑫ Once everything is ready, Pouring into the green beans to experience the ultimate roasting control process.

Correct steps:

Click "Beans in" , then open the bean entrance door immediately, pour into the green beans and close the door.

The "Beans in" event will be aligned to moment 0 of the curve pane, extending from the preheating temperature curve. "Total time" starts working.

We set up small icons for each event to facilitate your quick recognition while keeping the interface simple.



Marking events does not affect Fire, Smoke, and Roller parameters. they are process control nodes, which are irrevocable. There are order dependencies between events. Except for the process-controlled button, other events marking is completely controlled manually, you can only mark one event or no event marked.

You can go to the "Setup" interface at any time during roasting process and choose the curves you want to see.

They are:

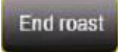

BT(Red curve), ET (Blue curve), RoR(Green curve), Fire (Pink curve), Smoke (Another Blue curve), Roller (Brown curve)

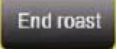
In "Auto Fire" mode, the Fire curve jumps up and down, because the system needs to adjust the fire in real time.

⑬ After the formal roasting starts, "Manual control Fire" mode is necessary because we need to decide Fire power of each phase. At the system level, it determines the speed of the approach to the target bean temperature.

⑭ Now, you're about to finish roasting. Click **Beans out** the system will turn off the "Fire" and turn the "Cooling" automatically. Meanwhile open the bean export door



⑮ Click  indicate the end of cooling. Curves stop updating and you can continue to view the whole roasting date includes event node temperature @time. While Click , you can save your roasting curve for future reference or use for automatic roasting.

Click  again, and all event buttons return to the initialization state. The curves are still displayed on the curve window for your viewing of most recent roasting performance. If need clear them, please switch to the "Auto roasting" interface.

Note: When the temperature drops below 50 °C, turn off the Roller

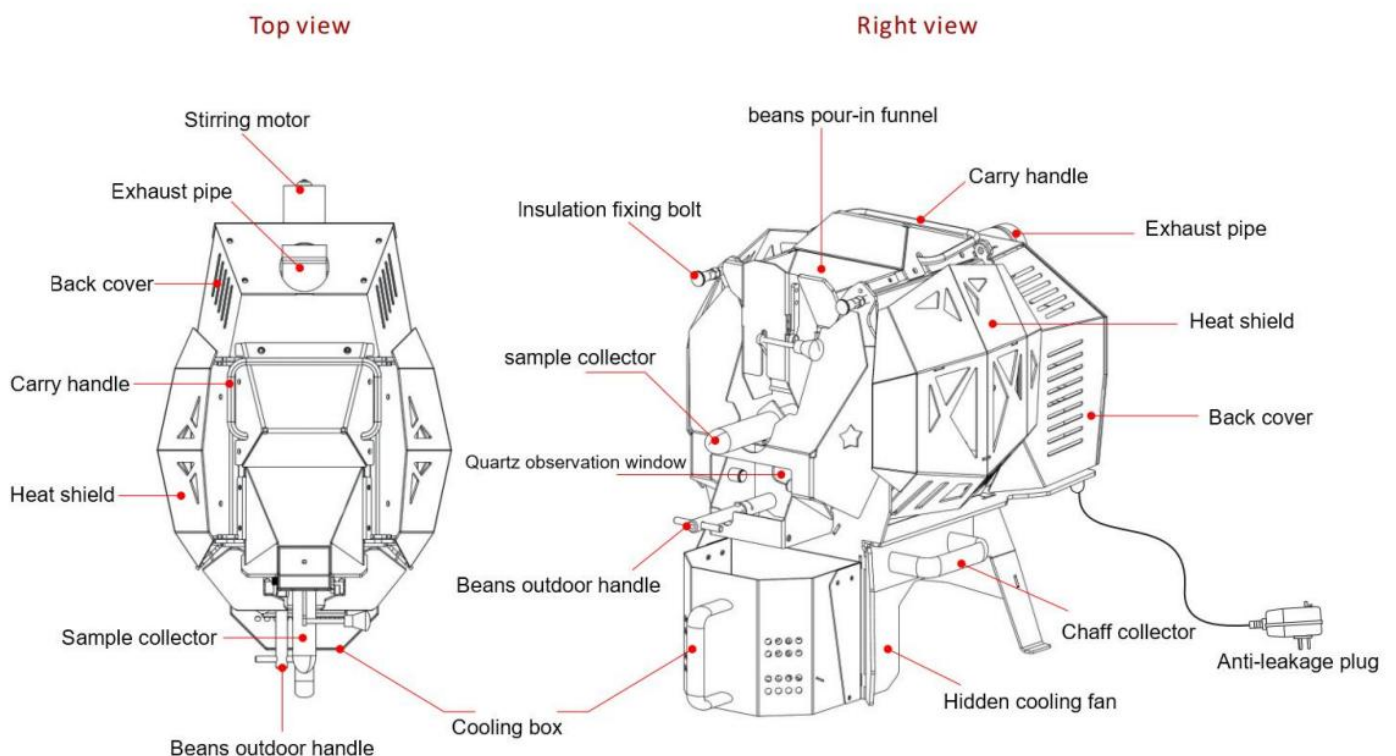
II. Kaleido System ➔ Automatic Roasting

Check the roaster to ensure that all components are properly installed. The area around the roaster should be kept clean and tidy without combustible covering. Connect the touch screen panel and power on the device.

After the beep, the roaster self-check is normal, and the control screen initializes and enters the roasting interface.

Check whether there are beans or foreign body residues in the drum, can turn on the "Roller" to discharge it. Close the entrance door and exit door, clean the chaff collector and place the chaff collector.

Position the horizontal sample collector.



① Click **Load curve** to open the Background roasting curve Management window.



② Select your background roasting curve.

③ Here shows each events time node of background roasting curve.

Select background curve file

Remove BG

924_2	Total time	10:09	Pre-heat	36	Roast time	21-9-24 1 9:29:38	Com ment	0-100Curve
924_3	Total time	09:19	Pre-heat	42	Roast time	21-9-24 1 9:54:59	Com ment	100-150Curve
924_4	Total time	11:07	Pre-heat	43	Roast time	21-9-24 2 0:24:21	Com ment	150-200Curve
924_5	Total time	13:18	Pre-heat	47	Roast time	21-9-24 2 0:57:25	Com ment	200-250Curve
924_6	Total time	11:45	Pre-heat	170	Roast time	21-9-24 2 3:4:8	Com ment	Curve 4
924_7	Total time	11:51	Pre-heat	168	Roast time	21-9-24 2 3:32:10	Com ment	Curve 3
925_1	Total time	11:51	Pre-heat	169	Roast time	21-9-25 0: 0:24	Com ment	Curve 2
928_1	Total time	10:00	Pre-heat	169	Roast time	21-9-28 1 6:1:39	Com ment	Curve 1

Load 5

Delete file

119@01:09

168@04:53 192@10:00

186@07:48 --:--

--:-- --:--

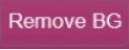
Comment:
Curve 1

Save Cancel

Load channel: BT ET RoR Fire Smoke Roller

④ Select the date of background curve you want to display through the "Load channel" box.

⑤ Click , load the background roasting curve.

⑥ Click  to clear the background roasting curve.

⑦ To hide or show loaded background curves temporarily, click on this blank area.

Background curves appear in lighter colors on the curve window. BT (Red curve), ET (Blue curve), RoR (Green curve), Fire (Pink curve), Smoke (Another Blue curve), Roller (Brown curve)

Background curve event time nodes are displayed below each event button.



⑧ Select follow mode for automatic roasting

Follow temp: The system will follow the bean temperature curve to automatic roast operations. Automatic fire control is used by default.

Fire curve will show jitter state, you can enter the "Setup" interface to deselect the "Fire" in "Foreground curve display channel" box.

During automatic roasting process, the "Fire", "Smoke" and "Roller" speed will be tuned to follow the background curve. You can still manually control them.

In "Follow temp" mode, the "manual control Fire" will put the "Fire" into manual mode.

It can be used to force the following velocity of the temperature curve. Click **Auto** to switch back to "Automatic control Fire" mode.

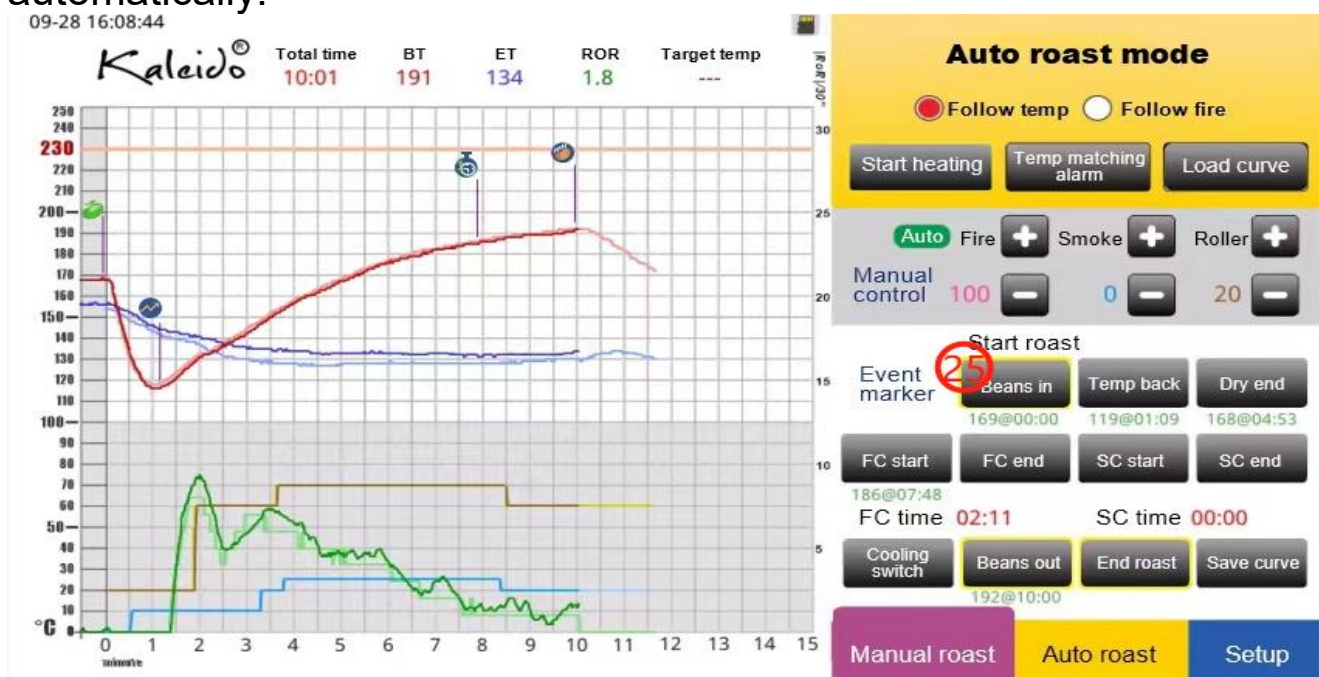
Follow fire: The system will follow the bean Fire curve to automatic roast operations. You can still manually control. Click **Auto** to switch back to "Automatic control Fire" mode.

"Follow temp" and "Follow fire" can be switched at any time during roasting, and the system will complete the switching procedure automatically

⑨ When ready, click **Start heating**, the target bean temperature will set to "Beans in" temperature of the background curve automatically. The roaster will start preheating automatically.

For optimal curve replication, when reach target temp, keep preheating temperature steady for at least 15 minutes before "Beans in".

⑩ After full preheating, Click **Beans in**, then pour green beans into the drum. Automatic roasting process begins, target temperature will adjust automatically.

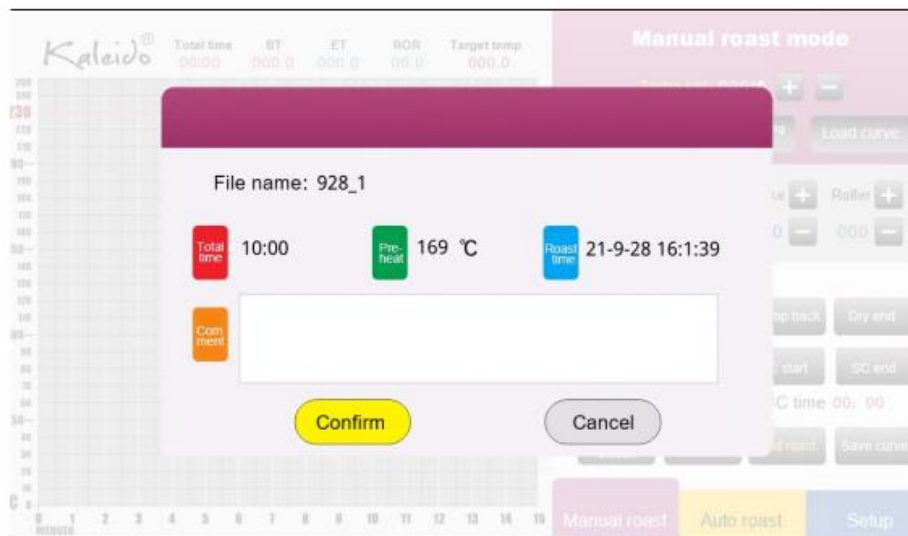


Next, using the same operation to mark events as manual roasting or not mark, including the "Beans out" , "End roast" and "Save curve"

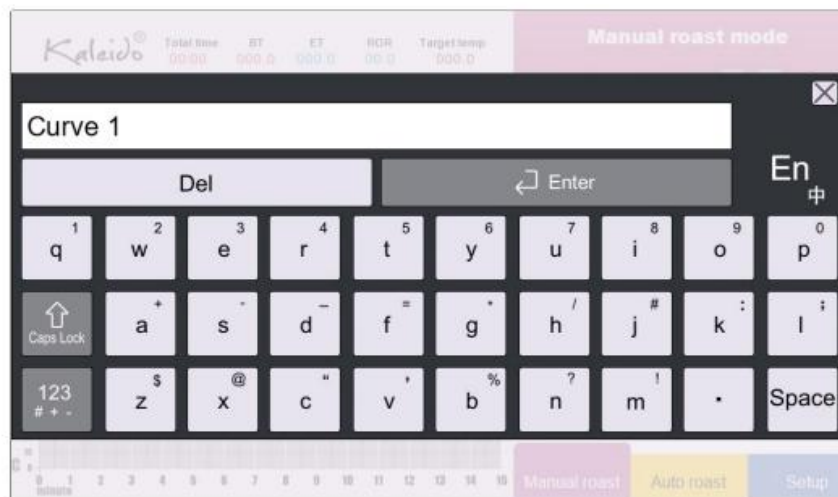
When following operation reach the "Beans out" time of background curve, the system will stop heating automatically.

If it does not reach your "Beans out" standard, you can click **Start heating** to turn on the Fire again to continue your roasting. The "Beans out" needs your manual operation.

Save roasting curve



Save your roasting curve for your next roasting reference. All event information will be recorded.



Type in the name of your roasting curve, so that you can find it easily next time.

Note: When the temperature drops below 50 °C, turn off the Roller

III. Artisan System ➡ Manual Roasting

Check the roaster to ensure that all components are properly installed. The area around the roaster should be kept clean and tidy without combustible covering. Connect the touch screen panel and power on the device.

After the beep, the roaster self-check is normal, and the control screen initializes and enters the roasting interface.

Check whether there are beans or foreign body residues in the drum, can turn on the "Roller" to discharge it. Close the entrance door and exit door, clean the chaff collector and place the chaff collector.

Position the horizontal sample collector.

For All In One version roaster, the USB only plugs into the 7" touch screen panel

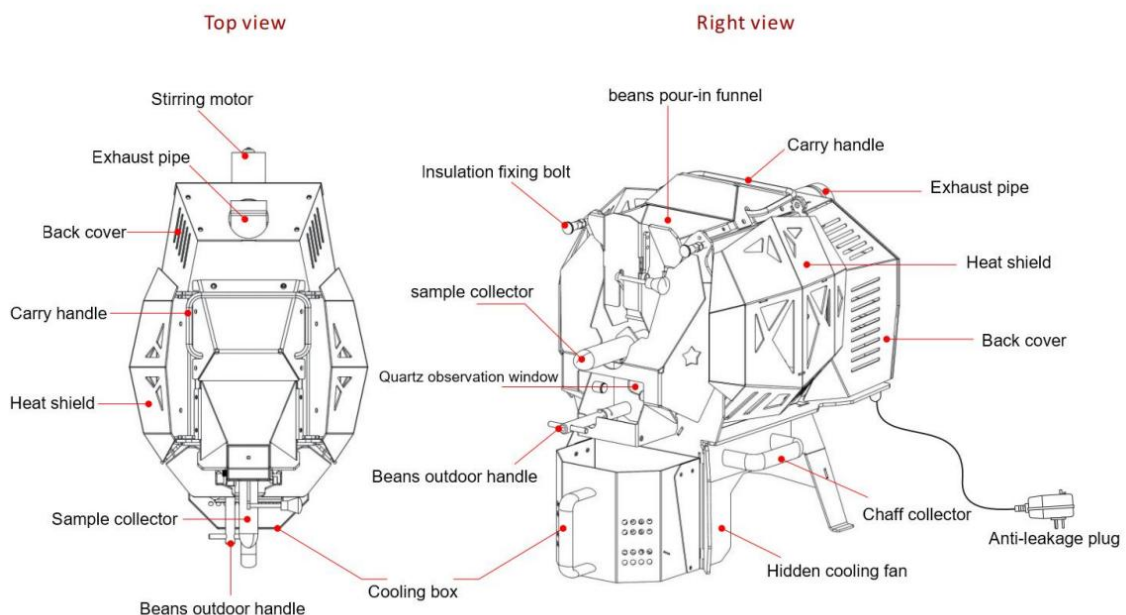
Here are two connection ways:

(Be sure at the outset if you need a 7" touch screen panel to assist with Artisan roasting.)

A : Connect the roaster to computer directly by bluetooth.

(Notice:Connect 7" touch screen panel in Artisan roasting process, which will cause computer Artisan bluetooth to disconnect.)

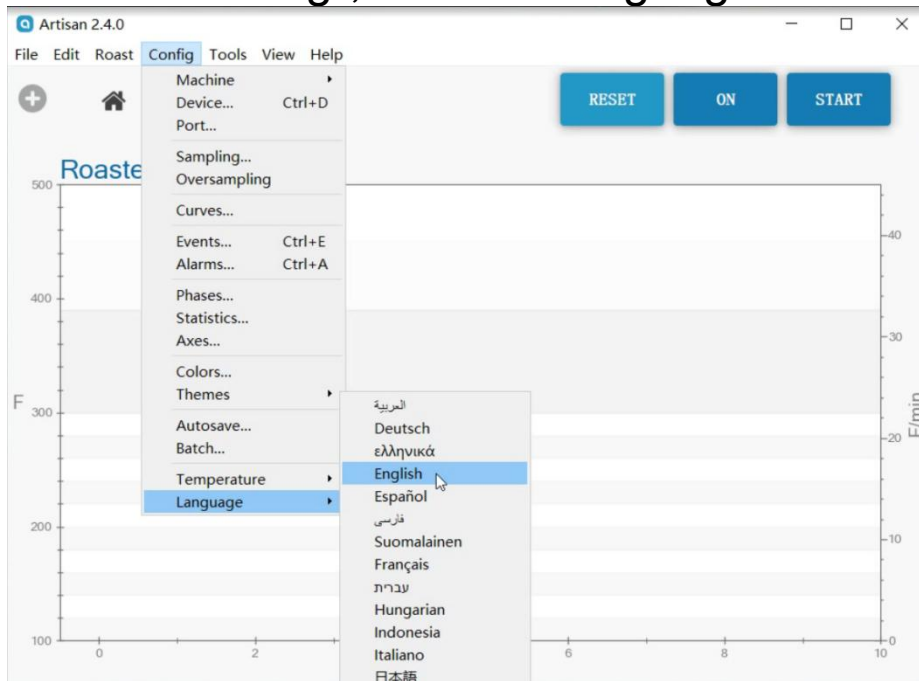
B : After connecting 7" touch screen panel bluetooth code to your computer bluetooth, do not disconnect any of the connections



Install Artisan To your computer :

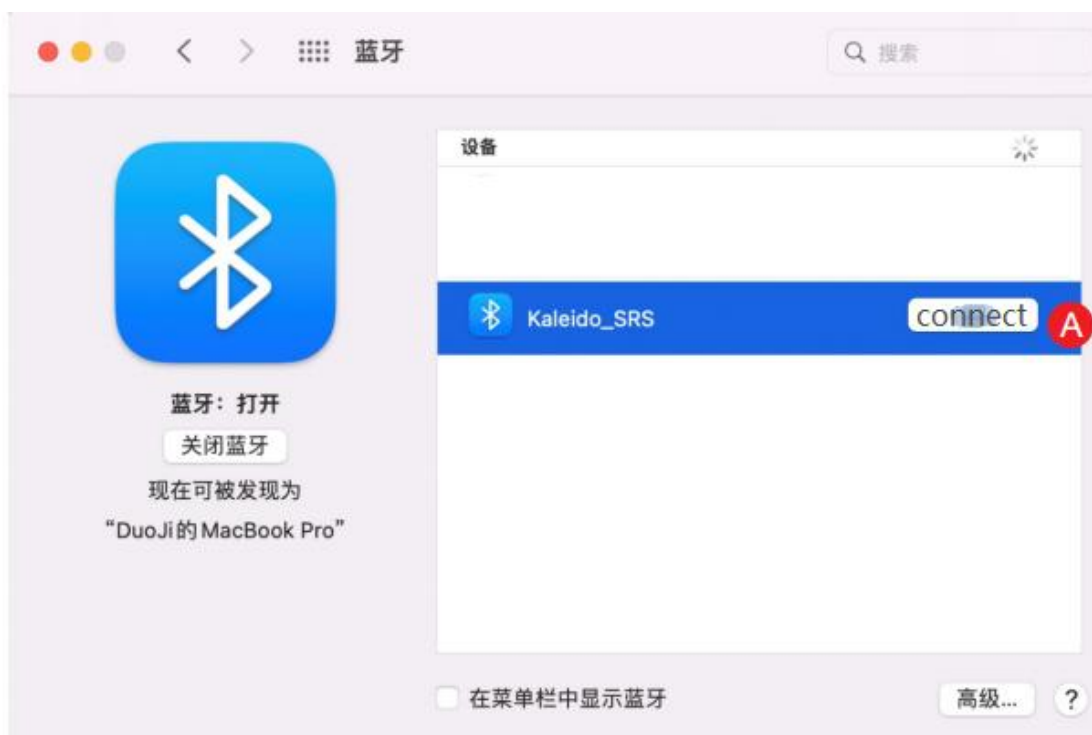
(Artisan website: <https://github.com/artisan-roaster-scope/artisan/releases/tag/v2.4.6>)

1. Click “Config”, choose “language”.

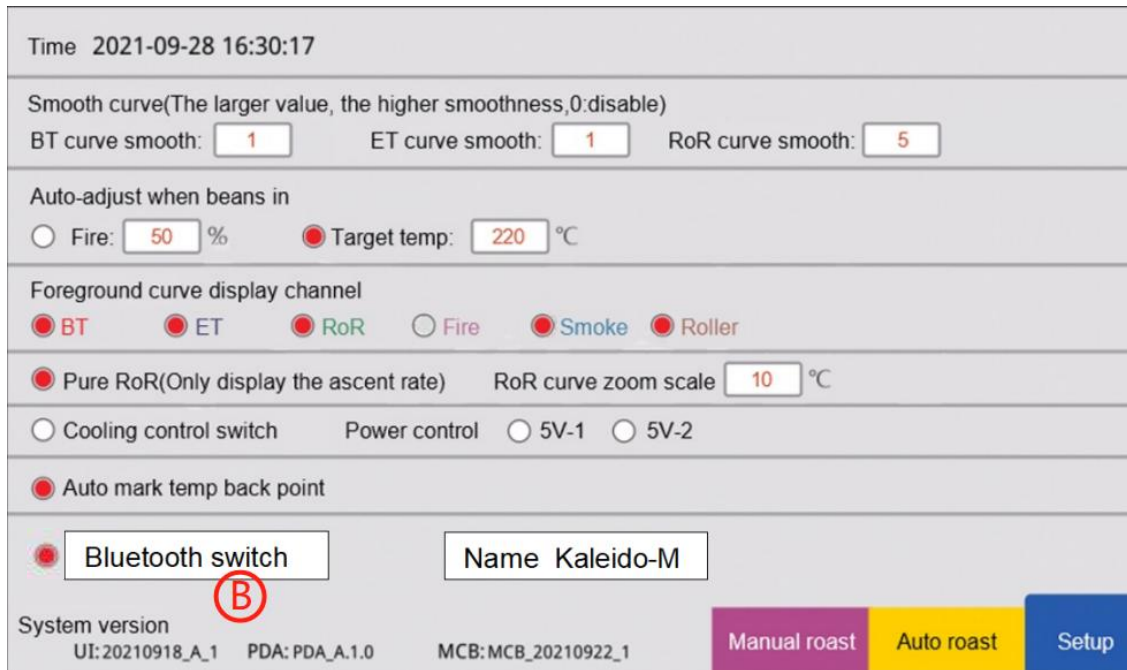


2.Connection: Two ways A and B, choose one way you need.

A. Enter bluetooth search interface on your computer and connect "Kaleido_M" device without authorization confirmation.



B. First, click "Setup" on 7" touch screen panel, Click the Bluetooth switch.



Then, enter bluetooth search interface on your computer and connect "Kaleido_M" device without authorization confirmation.



Please check your device bluetooth name next to the Bluetooth switch on the "Setup" interface.

When the computer interface is connected to Bluetooth, you need to go to the "Setup" interface of the 7" touch screen panel to click "Allow" authorized, it can prevent unauthorized operation of the device.

3. Find Port:

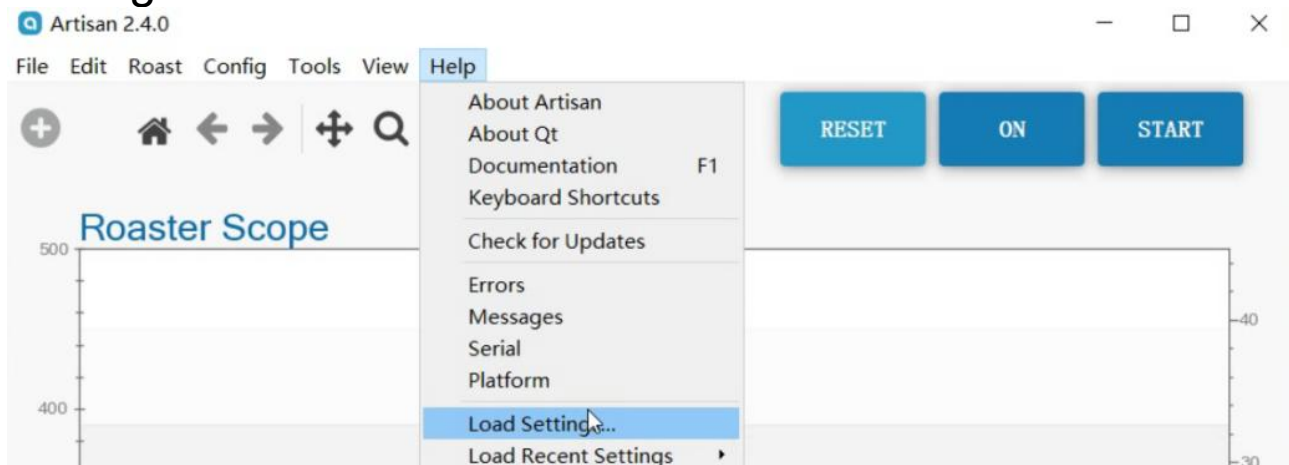
Click "Equipment and Printer". Click the "Kaleido_M"



Click "Service". Then remember the COM code.



4. After Bluetooth connection, Back to Artisan, Click "Help → Load Setting..."

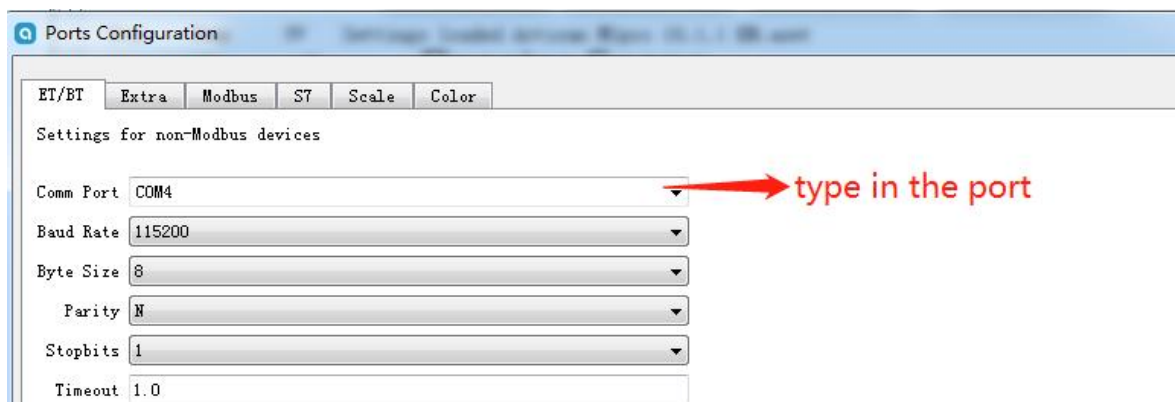


Obtain the latest Artisan setting file from your supplier

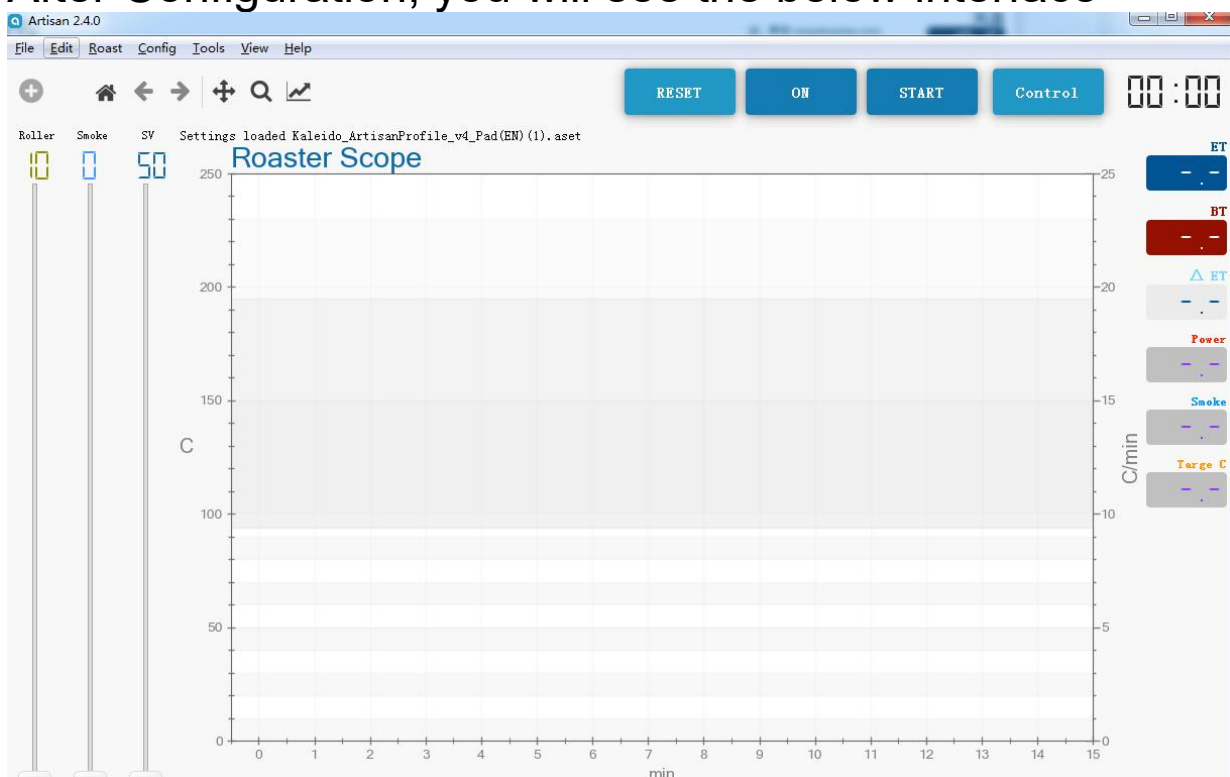


Kaleido_ArtisanProfile_v3.aset
Artisan Settings - 32 KB

5. Configuring Port: Click “Config→ Port...”, then type in the port found in step 3



After Configuration, you will see the below interface



6. Click "On", and Artisan will begin establishing a communication with the roaster. You should see the below interface



① This area displays the current roaster operating status in real time.

② The SV slider is used to set the target bean temperature and the next button allows you to increase or decrease the temperature quickly and accurately.

③ We have prepared adjustment buttons for Roller and Smoke, so these two sliders are not used.



④ This is the control button area. Quick setting buttons for “Power, Roller and Smoke”.

There is also the Power mode switching and manual cooling button

⑤ Click “Start”, and Artisan begins plotting temperature data onto a roasting curve

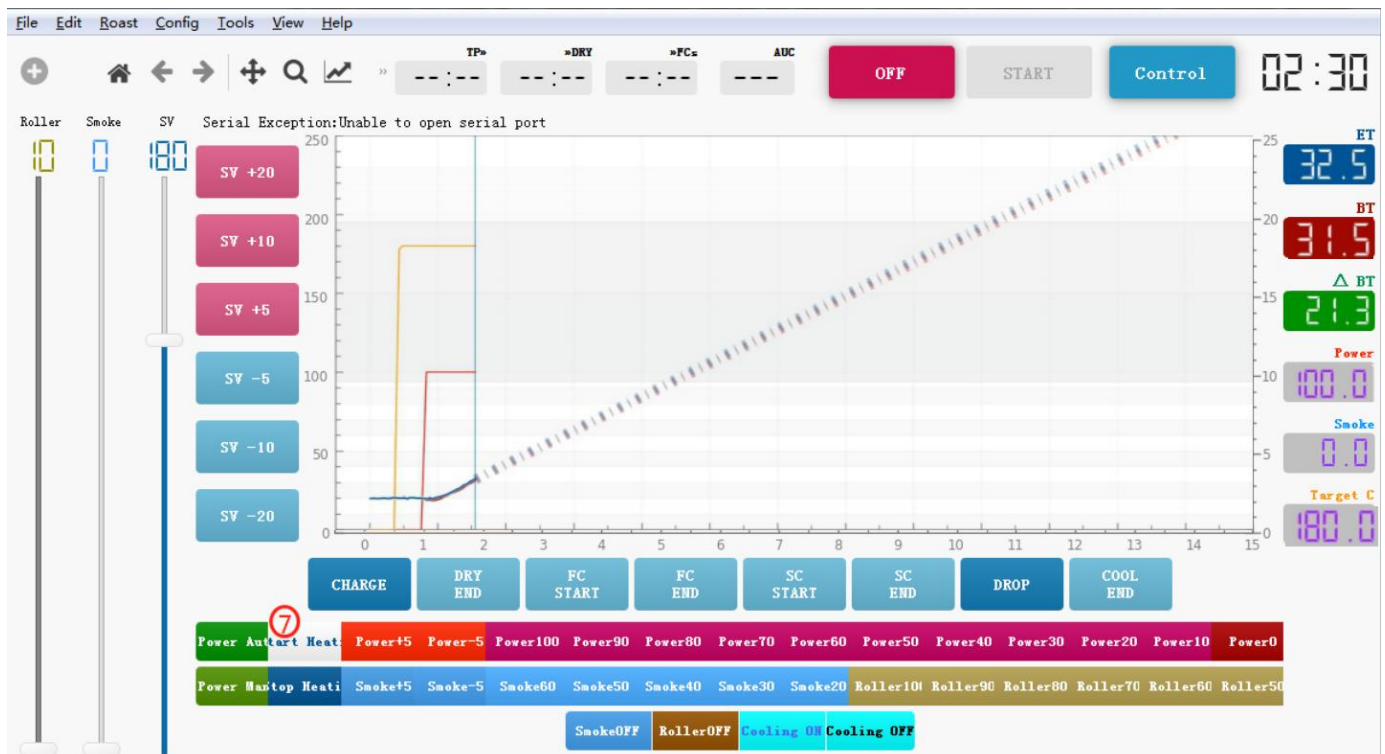
⑥ Now let's prepare the roaster. Drag the SV slider or click the SV button to set your target temperature (180°C Preheating temperature).

The orange curve in the curve window indicates the SV setting process. Dark red is bean temperature curve, blue is wind temperature curve.

If you need to use a 7" touch screen panel to record Artisan's roasting process, you must adjust panel to "manual roast" interface. And finish the whole roasting processes on the Artisan, these processes are synced to the 7" touch screen panel and you can save roasting curve on panel when finished . You can adjust the temperature, Fire, Smoke and Roller via the 7" touch screen pane.

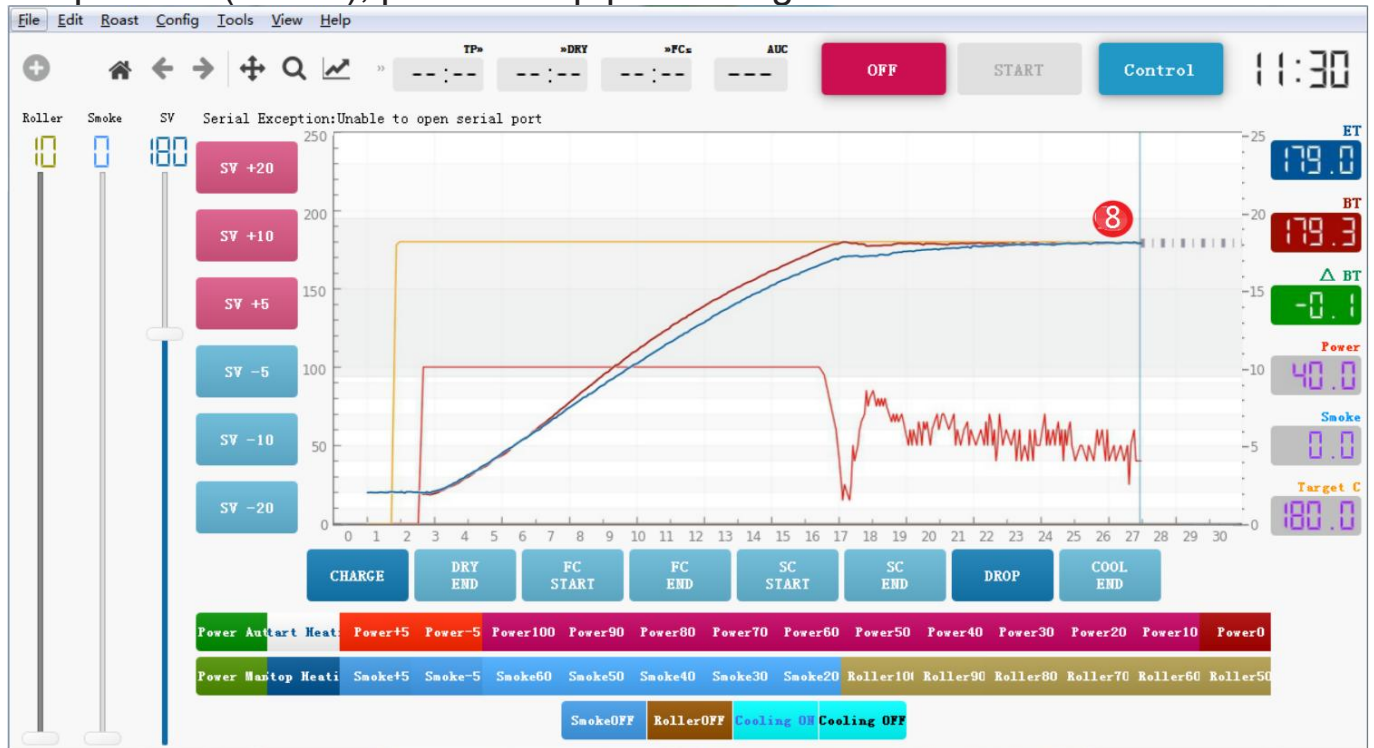
⑦ Click “Start heating”, the Artisan system starts to automatically adjust the power heating.

The red curve shows the evolution of heating power. The red curve will jump in "Power Auto" mode



⑧ The temperature curve will rise to the target value and stabilize.

Full preheating is the condition to ensure stable roasting, after reaching the set temperature(180°C), please keep preheating at least 10 minutes



Now we're ready to roast the beans.

When pouring green bean into the drum, you need to specify a fixed heating power, I usually set "Power 0", and start adding heating power at the "TP" (Temperature rise point)

⑨ Click "Power 0" to set the initial heating power of the Bean In.



⑩ Click "CHARGE", then immediately open the bean entrance door and pour green beans into the drum, then close the door



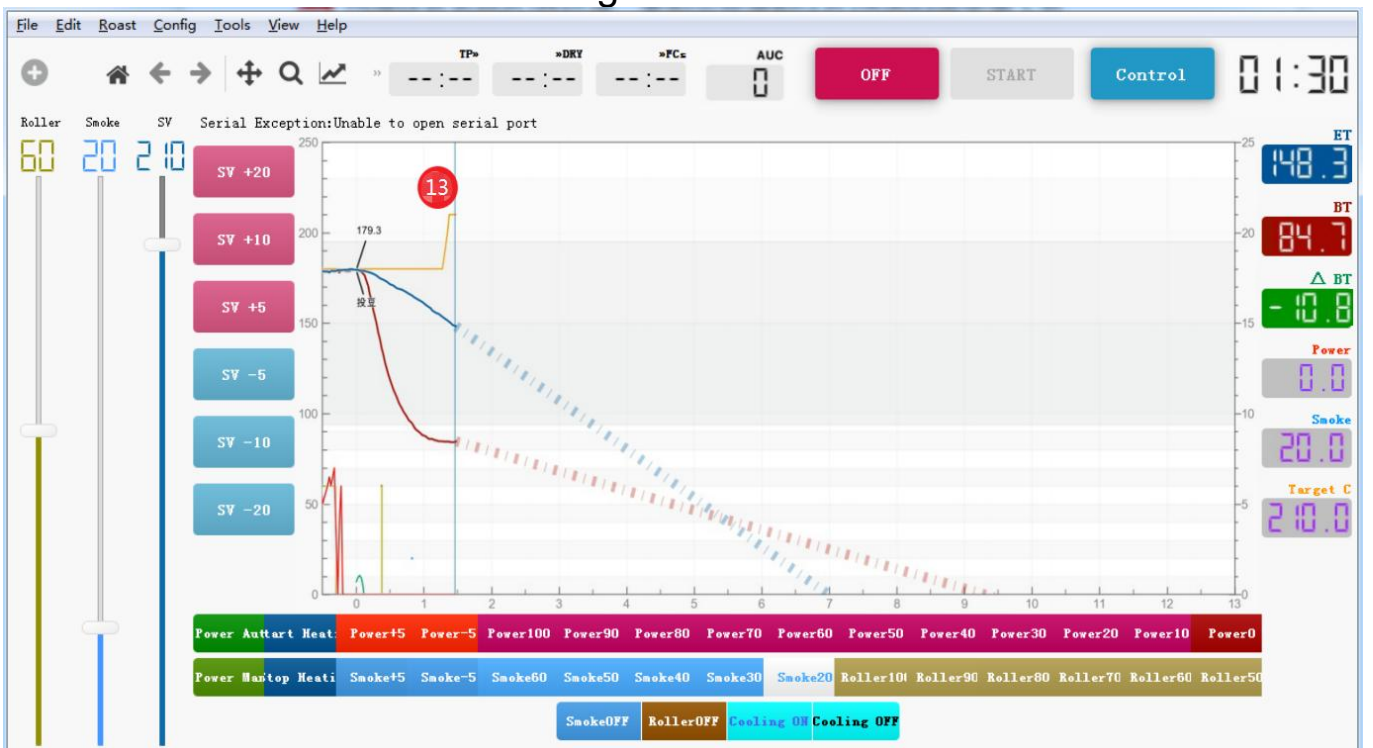
⑪ Use the "Roller" button to set the desired drum rotation speed
The brown curve indicate the drum's rotation speed change processes



⑫ Use the "Smoke" button to set the desired exhaust smoke speed
The blue curve indicate the exhaust smoke speed change processes



⑬ Remember to pull up your SV target. Otherwise, the bean temperature will not rise when it reaches the SV setting.



14) add to "Power 70" near the "TP" (Temperature rise point)

The demo is only for the convenience of process instructions and does not represent any roasting criteria, please roast according to your own understanding and experience



15) Remember to control the "Smoke" when reach "TP" (Temperature rise point)

The demo is only for the convenience of process instructions and does not represent any roasting criteria, please roast according to your own understanding and experience



16 Mark the events where you think they are correct



17 I adjust "Power", "Roller" and "Smoke" multiple times during the roasting process and click "DROP" at 10:36. The artisan system automatically turn on the cooling fan, then open the bean exit door

The demo is only for the convenience of process instructions and does not represent any roasting criteria, please roast according to your own understanding and experience

18 After finished cooling, click "COOL END" and the roaster will turn off the cooling fan. You can also click below "Cooling ON" and "cooling OFF" to switch the cooling fan at any time.

19 When complete roasting, click "OFF" to finish roasting





② Click "File--Save" to save your roasting curve. If you don't need to save, click "RESET"



Note: When the temperature drops below 50 °C, turn off the Roller

IV. Artisan System ➔ Automatic Roasting

Check the roaster to ensure that all components are properly installed. The area around the roaster should be kept clean and tidy without combustible covering. Connect the touch screen panel and power on the device.

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Check whether there are beans or foreign body residues in the drum, can turn on the "Roller" to discharge it. Close the entrance door and exit door, clean the chaff collector and place the chaff collector.

Position the horizontal sample collector.

For All In One version roaster, the USB only plugs into the 7" touch screen panel

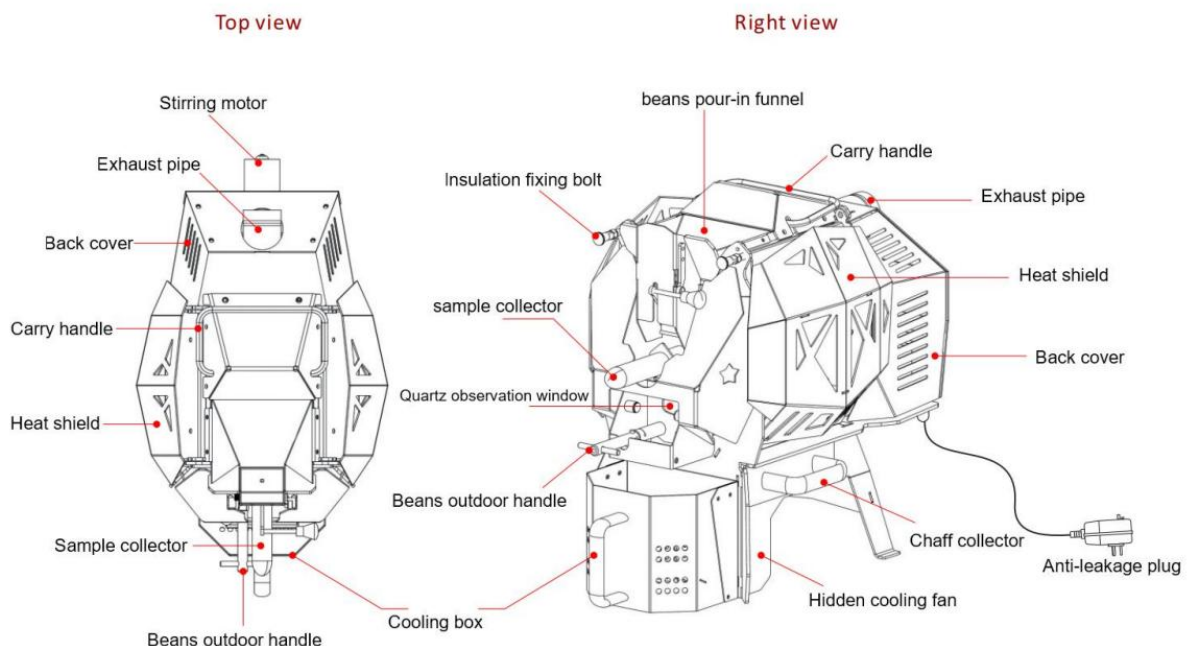
Here are two connection ways:

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(Notice:Connect 7" touch screen panel in Artisan roasting process, which will cause computer Artisan bluetooth to disconnect.)

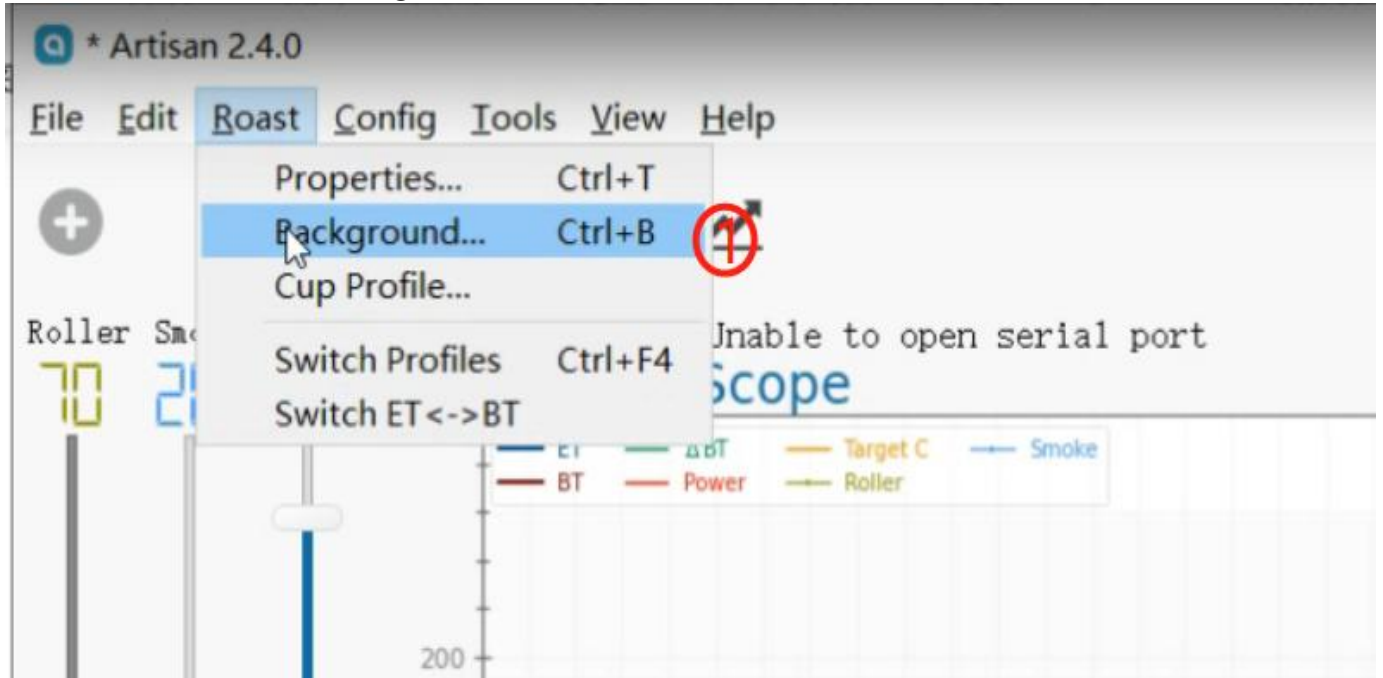
B : After connecting 7" touch screen panel bluetooth code to your computer bluetooth, do not disconnect any of the connections



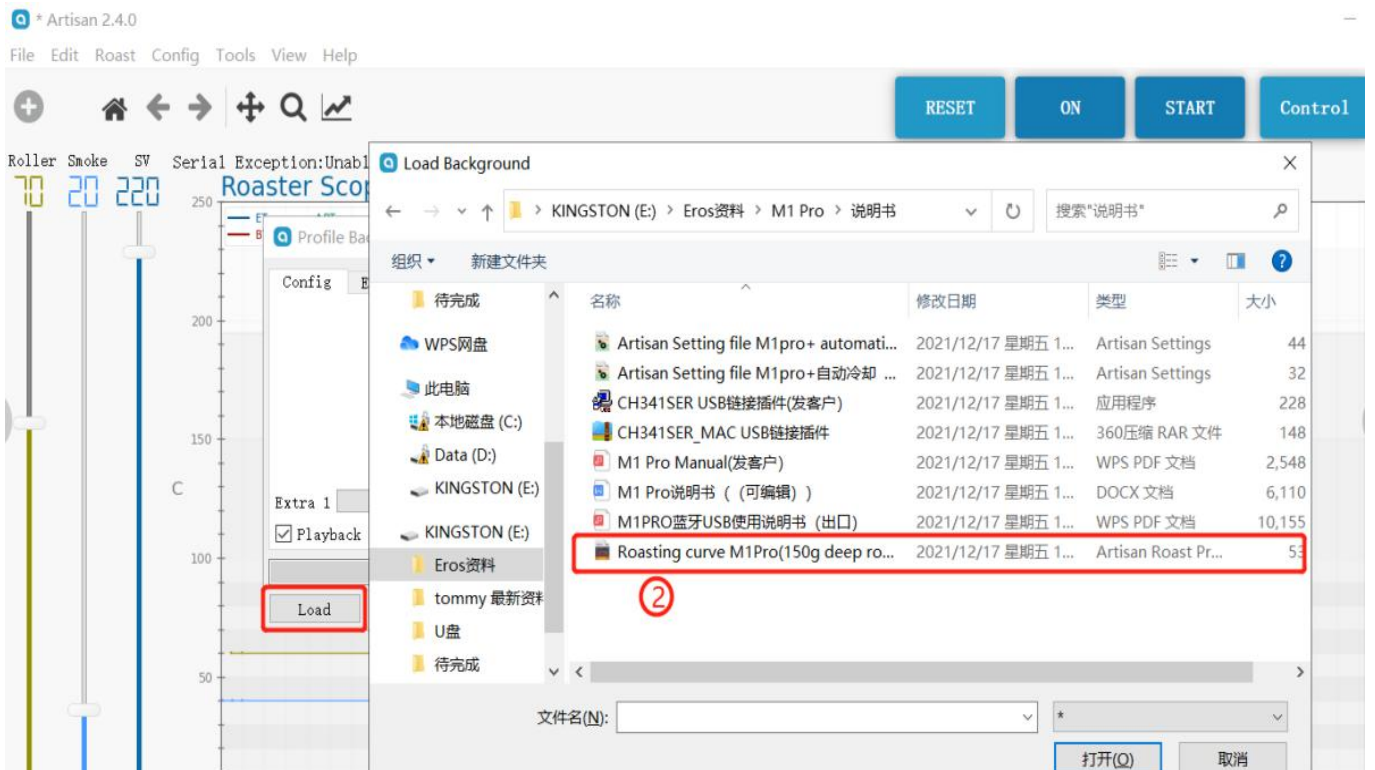
1-5. steps is same as manual roasting

6. Start the automatic roasting

① Click "Roast---Background..."

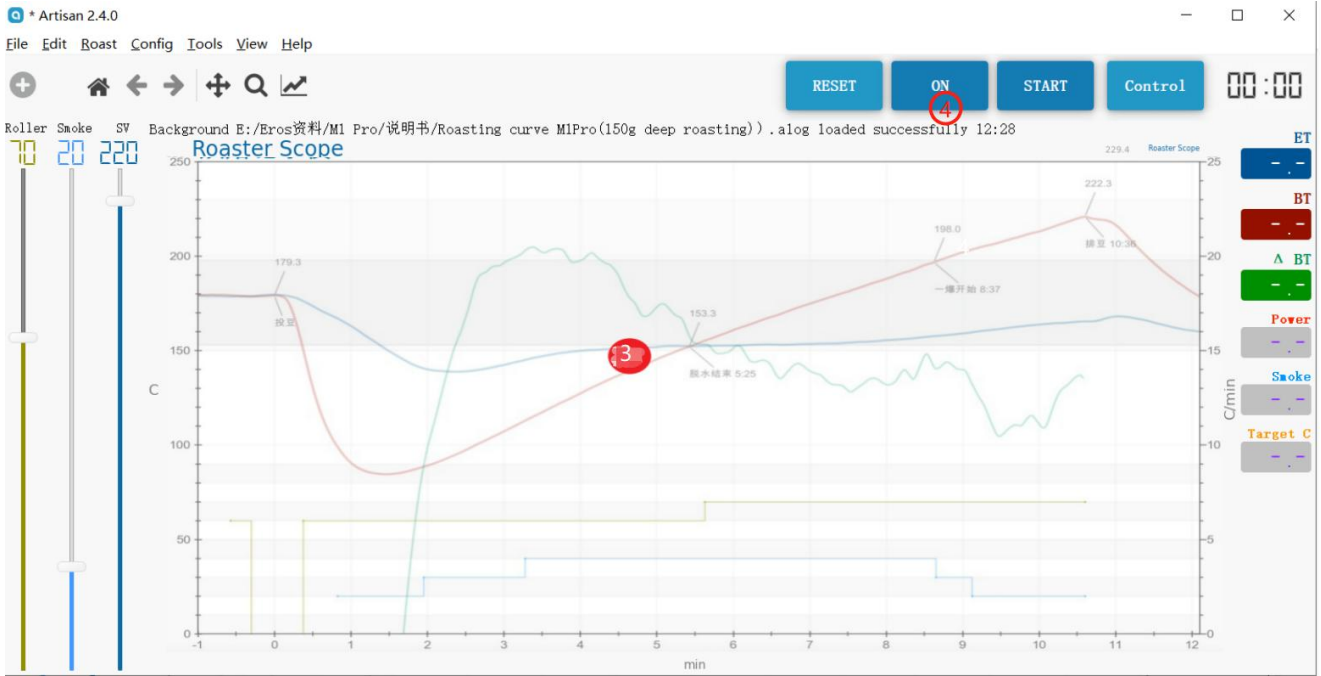


② Load the background roasting curve



③ The background curve appears in a lighter color on the interface
 Red curve is BT, Blue curve is ET, Green curve is ROR, Brown curve is Roller, another Blue curve is Smoke

④ Click "On", and Artisan will begin establishing a communication with the roaster



⑤ Click "START", and Artisan begins recording the temperature curve



⑥ Now click "Start Heating" directly, SV will be dragged to setting value according to the roasting curve automatically, Then start heating



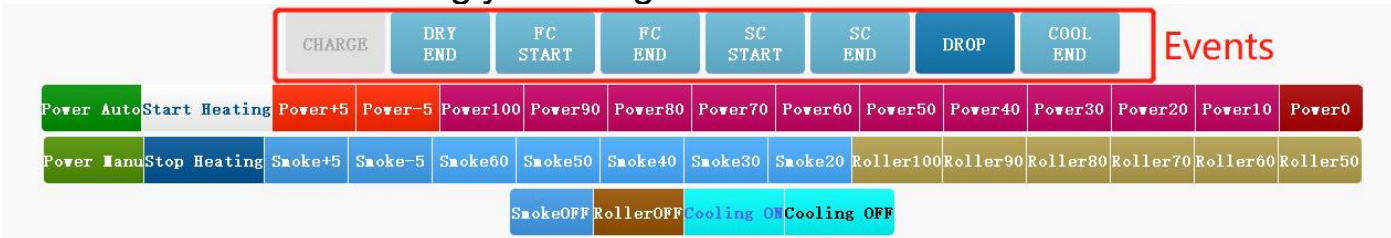
Please ensure at least 15 minutes of preheating waiting.



⑦ When fully preheating, Click "CHARGE", then immediately open the bean entrance door and pour green beans into the drum, then close the door. The system automatically adjusts the heating power to follow the curve according to the background curve bean temperature.



Mark the events accordingly roasting situation



⑧ When completed roasting, open the bean exit door to cooling the roasted beans.



Note: When the temperature drops below 50 °C, turn off the Roller

Intelligent coffee bean roasting system

