TS2300C

Lead Free Soldering Station

Operation Manual

Thank you for purchasing our Lead Free Soldering Station. It is designed for lead free soldering. Please read this manual before operating the unit. Store this manual in a safe, easily accessible place for future reference.

Content

Ⅰ. Safety Instruction

⚠ CAUTION

When the power is on, the tip's temperature is very high. The mishandling may lead to burns or fire, be sure to comply with the following precautions:

- Please avoid an abuse of the unit and use the appliance only as the described manner.
- Do not touch the metallic parts near the tip.
- Do not use the product near flammable items.
- Advise other people in the work area that the unit can reach a very high temperature and should be considered potentially dangerous.
- While replace parts or install tips, turn the power off and allow the unit to cool to room temperature.

To prevent damage to the unit and ensure a safe working environment, be sure to comply with the following precautions:

- Appliance shall only be used with rated voltage and frequency. (Refer to the trademark back of equipment.)
- Don't use the appliance if it is damaged, especially the supply cord.
- This machine is equipped with a 3-wires grounding plug and must be plugged into a 3-terminal grounded socket. Do not modify plug or use an ungrounded power socket. If an extension cord is necessary, use only a 3-wire extension cord that provides grounding.
- Do not use the unit for other applications except soldering.
- Only use genuine replacement parts.
- Do not wet the unit. When your hands are wet, don't use and disconnect the unit, or to pull the supply cord.
- The soldering process will produce smoke, so make sure the area is well ventilated.
- While using the unit, don't do anything which may cause bodily harm or physical damage.

Ⅱ. Summary

The soldering station's temperature adopts LCD double temperature display and digital calibration, shortcut and convenience. The temperature induction is very exact and sensitive, the speed of heating and recovery of temperature is very fast, and so it is the one of the most perfect tools for lead free soldering.

1. LCD display
2. Touch switch (Power: soft switching)
3. Mounting positioning edge
4. Handle socket
5. Power switch (Hard switching)
6. Power supply socket
7. ESD socket

Ⅲ. Feature

1. Can preset technological parameter of three channels, more practical.
2. Temperature alarm function, temperature unit can be changed (℃/℉).
3. Sensor preposition, real-time monitor temperature of tin, return temperature rapidly.
4. Solder tip change convenience.
5. Anti-static device, ESD measuring ability.
6. Have on-line communication function, can manage 99 machines at the same time.

Ⅳ. Specifications

Type	TS2300C
Temperature displaying type	LCD
Power consumption	150W
Working voltage	100~240VAC
Temperature Range	100℃~480℃/212℉~896℉
Room temperature to 320 ℃	8s
Ambient Temperature(Max)	40℃
Tip to Ground Resistance	＜2 Ω

Tip to Ground Potential	＜2 mV
Dimension (W×H×D)	137×168×114mm
Weight	2 Kg

Suggestion thermometer is QUICK 191/192.

Ⅴ. Setting & Operating the Soldering Station

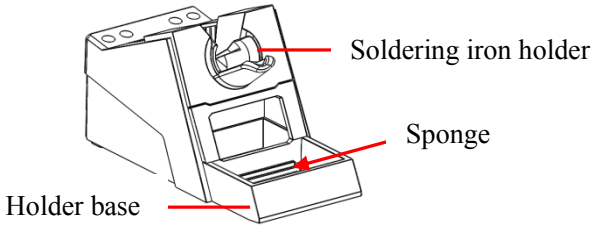
⚠CAUTION: The supply voltage is consistent with the unit!

5.1 Iron Holder and Sponge

⚠CAUTION:

- The sponge is compressed. It will swell when moistened with water. Before using the station, moisten the sponge with the water and squeeze it dry. Failure to do so may result in damage to the soldering tip.
- If the sponge becomes dry during working, add appropriate water.

1. Dampen the cleaning sponge with water and then squeeze it dry.
2. Place it in groove of the iron holder base.
3. Add a little water to holder base. The sponge will absorb water to keep the sponge around it wet at all times.



5.2 Connection

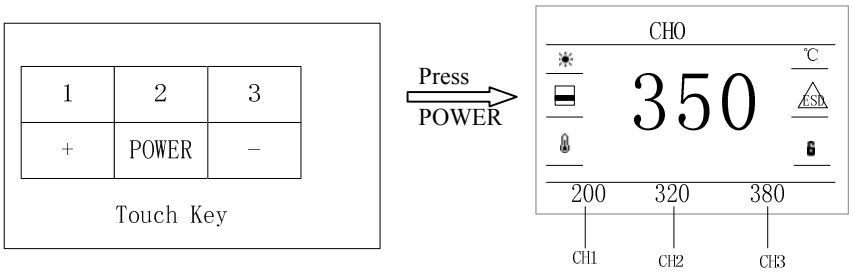
⚠CAUTION:

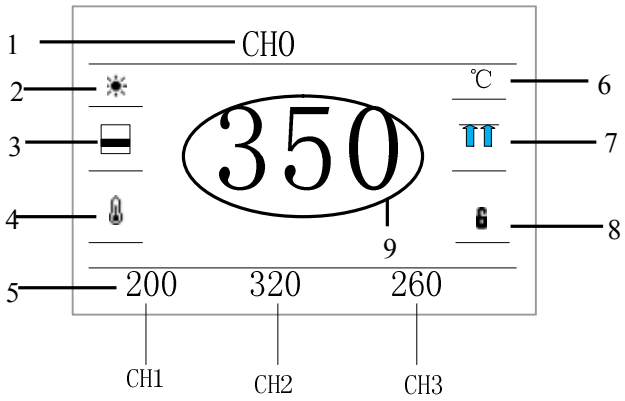
Be sure to turn off the power switch before connecting or disconnecting the soldering iron.

1. Connect handle cord to the handle socket (4).
2. Place the soldering iron into the iron holder.
3. Connect power plug to power supply socket (6).
4. Connect ESD socket (7).

5.3Turn on/off

1. Turn on the power switch (5).
2. Press and hold “POWER” button for 3s to enter main menu.





Item	Figure	Function
1	CH0	Header line (channel name)
2	☀	Heater element status (ON/OFF)
3		Channel 1
		Channel 2
		Channel 3
4		Temperature symbol
5	200/320	Display channel 1/2 setting temperature
	260	Channel 3 can be set two temperatures, “260”is the first setting temperature.
6	℃	Temperature unit (℃/℉)
7	ESD	ESD line connection
		Heater element heating
		Reach the setting temperature
		Heater element cooling
8		Unlock the station
9	350	Display real time temperature

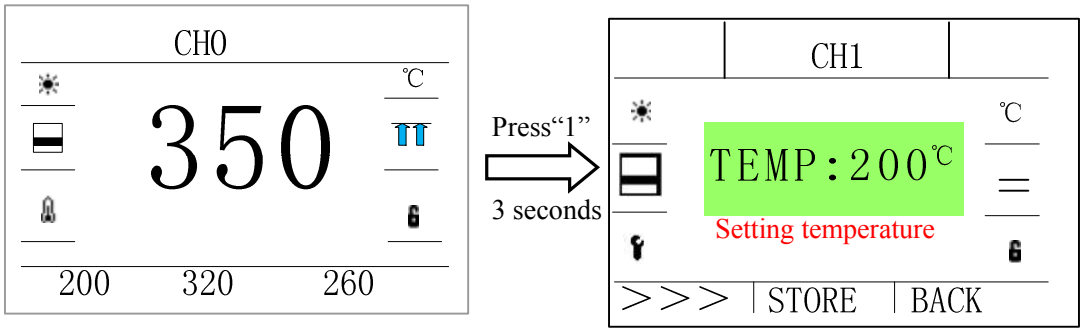
5.4 Setting the Temperature

⚠CAUTION:

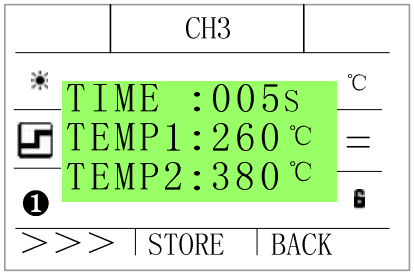
Make sure the unit is logon (the default password is 000000) and the heater element is enabled, setting temperature method:

1. The unit has three channels, press “1” button to select channel.

2. Press and hold “1”button for 3s to enter CH1 menu, see picture:



3. Press and hold “3” button for 3s to enter CH3 menu, see picture



TIME:005S indicates keep first temperature (260℃) 5s.

Temperature setting

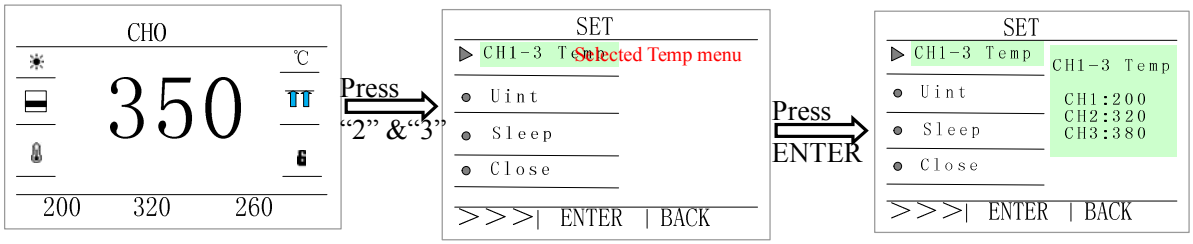
1) Press the “+” button once to increase the value by one digit, press and hold it to continuously increase.

2) Press the “-” button once to decrease the value by one digit, press and hold it to continuously decrease.

Ⅵ. Setting Working Parameters

6.1 Enter into SET menu

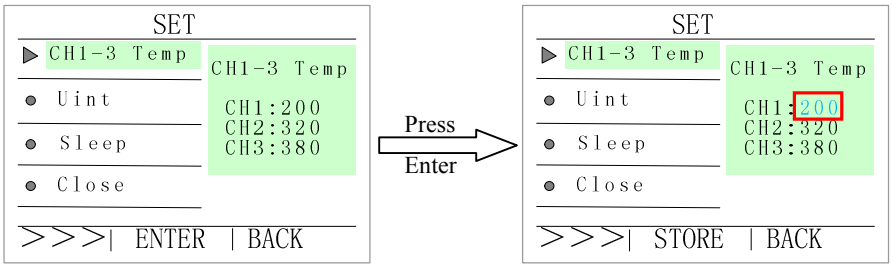
1. Press “2” and “3” buttons for 3s to enter into SET menu.
2. Press “1” (“+”) or “-” button to select menu.
3. Press “ENTER” button to enter selected menu, see picture.



6.2 Temperature setting

1. In the selected “CH1-3 Temp” menu, press “ENTER” button to Temperature Setting Menu.
2. Press “1” button to select channel.

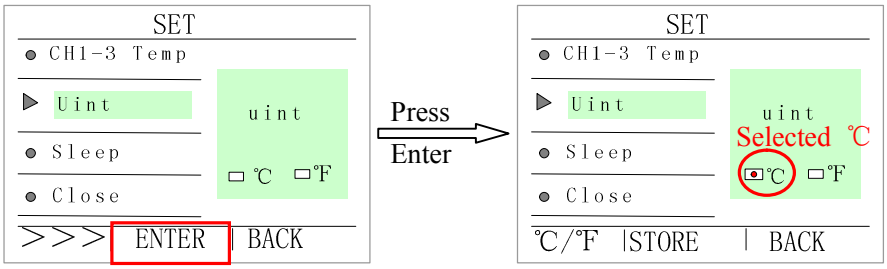
3. Press “+” and “-” button to adjust the temperature value, see picture.
4. Press “STORE” to save the value and press “BACK” to return “CH1-3 Temp” menu.



CH1-3 Temp menu **Setting menu**

6.3 Temperature unit setting

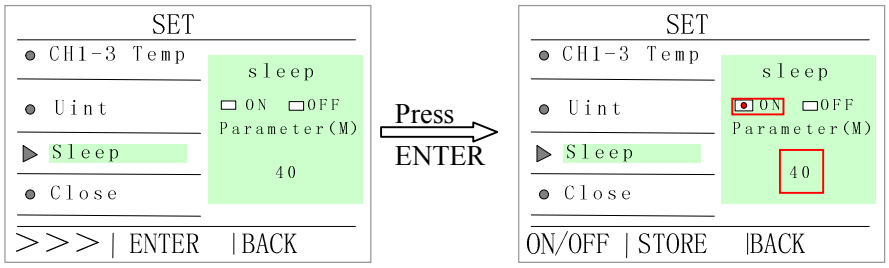
1. Press “ENTER” button to enter into “unit” Setting Menu.
2. Press “1” button to select temperature unit (℃or℉) .
3. Press “STORE” button to save the selection unit and press “BACK” to return unit menu, see picture.



Unit menu **Setting menu**

6.4 Sleep time setting

1. Press “ENTER” button to enter into Setting Menu.
2. Press “1” button to select sleep status (“ON” or “OFF”).
3. Press “+” and “-”button to adjust sleeping time (The sleep time setting is effective in the “ON” status).
4. Press “STORE” button to save it and press “BACK” to return Sleep menu, see picture.



Sleep menu **Setting menu**

⚠ The soldering station enters into sleep state with a beep.

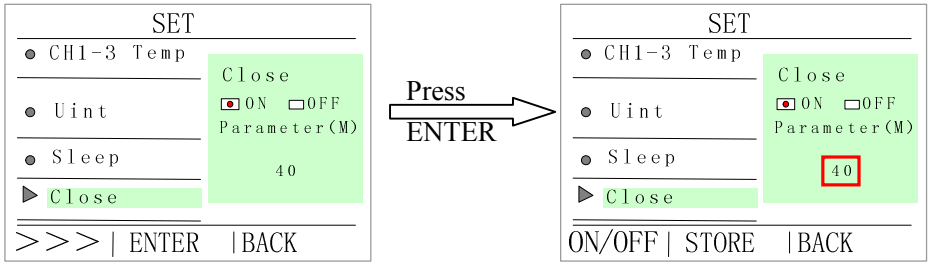
⚠ After entering the sleep state, the figure “☕” will be displayed and the LCD display screen will dim.

⚠ Note: The sleeping time range is 5s to 99 m, press any touch switch to activate station.

⚠ The sleep time is reached, the soldering station will power off automatically.

6.5 Close time setting

1. Press “ENTER” button to enter into Setting Menu.
2. Press “1” button to select close mode (“ON” or “OFF”).
3. Press “+” and “-”button to adjust close time (The close time setting is effective in the “ON” status).
5. Press “STORE” button to save it and press “BACK” to return Close menu, see picture.

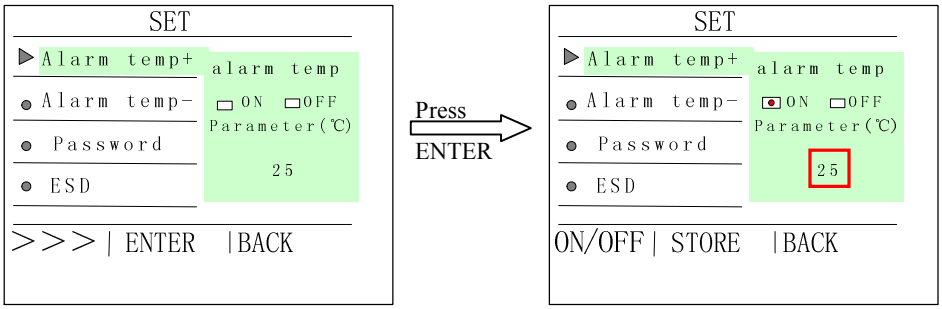


Close menu **Setting menu**

Note: The close time setting range is 1-240min.

6.6 Alarm temperature+ setting

1. Press “ENTER” button to enter into Setting Menu.
2. Press “1” button to select status (ON or OFF).
3. Press “+” and “-”button to adjust value (The alarm temperature setting is effective in the “ON” status).
4. Press “STORE” button to save it and press “BACK” button to return Alarm+ menu, see picture.

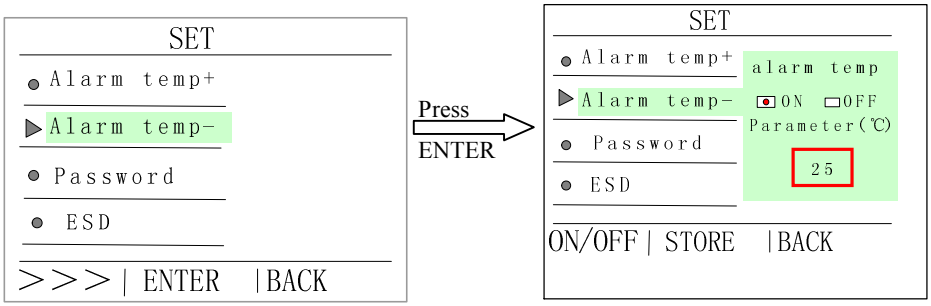


Alarm + menu **Setting menu**

Note: The alarm temperature + setting range is 2-99℃.

6.7 Alarm temperature- setting

1. Press “ENTER” button to enter into Setting Menu.
2. Press “1” button to select mode (ON or OFF).
3. Press “+” and “-”button to adjust alarm temperature value (The alarm temperature- setting is effective in the “ON” status).
4. Press “STORE” button to save it and press “BACK” button to return Alarm- menu, see picture.

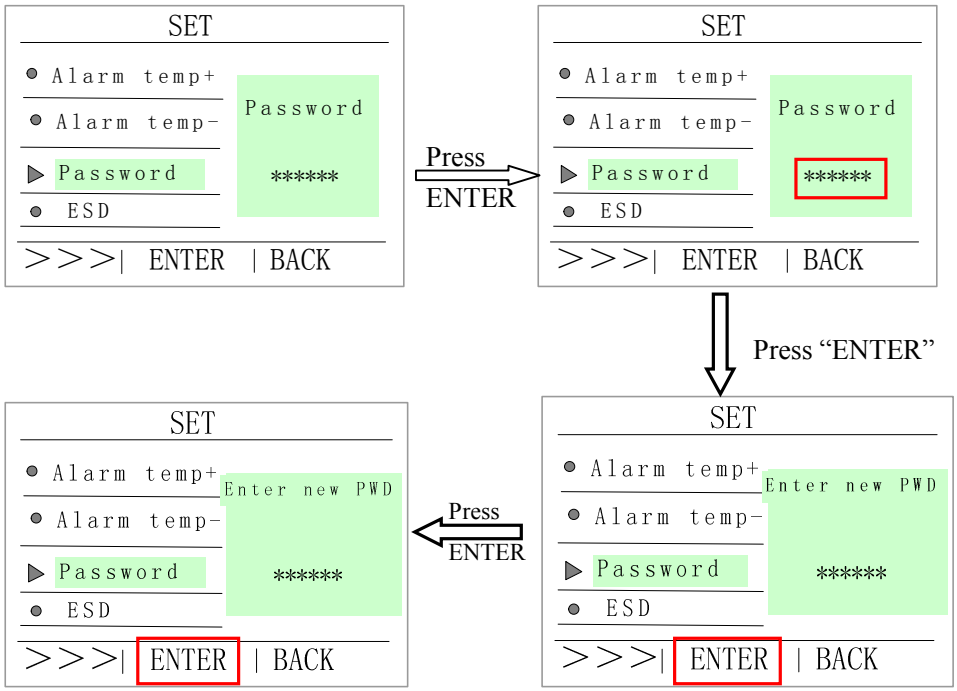


Alarm - menu **Setting menu**

Note: The alarm temperature - setting range is 2-99℃.

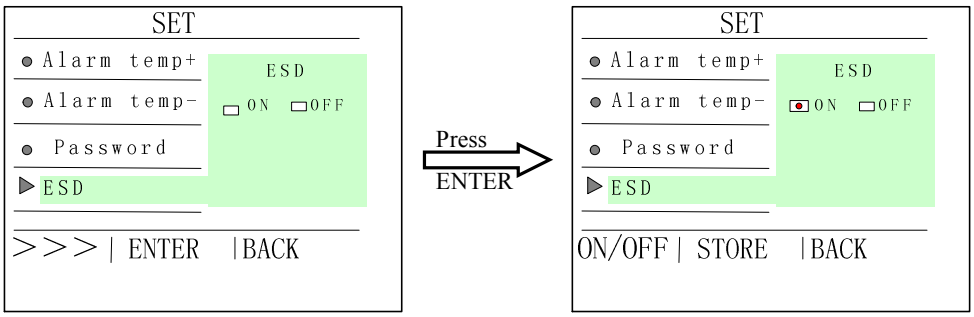
6.8 Change password

1. Press “ENTER” to enter password menu and enter the default password 000000(Press “+” and “-”button to adjust password value and press “1” to move the cursor to the next digital).
2. Press “ENTER” button to confirm it.
3. Enter the new password two times.
4. Press “ENTER” button to save it, see picture



6.9 ESD

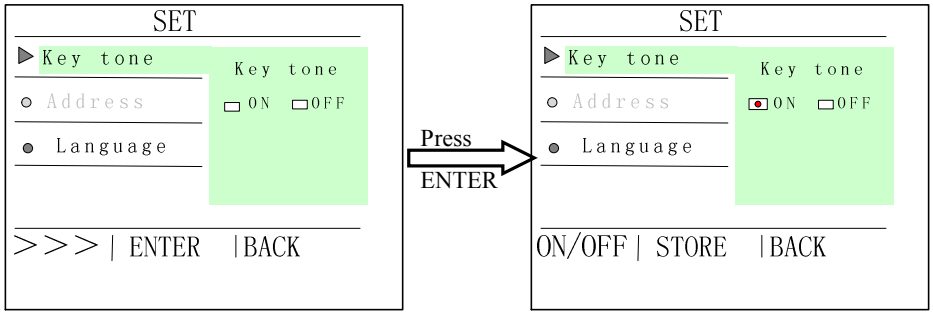
1. Press “ENTER” button to enter ESD menu.
2. Press “1” button to select mode (ON or OFF).
3. Press “STORE” button to save it and press “BACK” to return ESD menu, see picture.



ESD menu **Setting menu**

6.10 Key tone setting

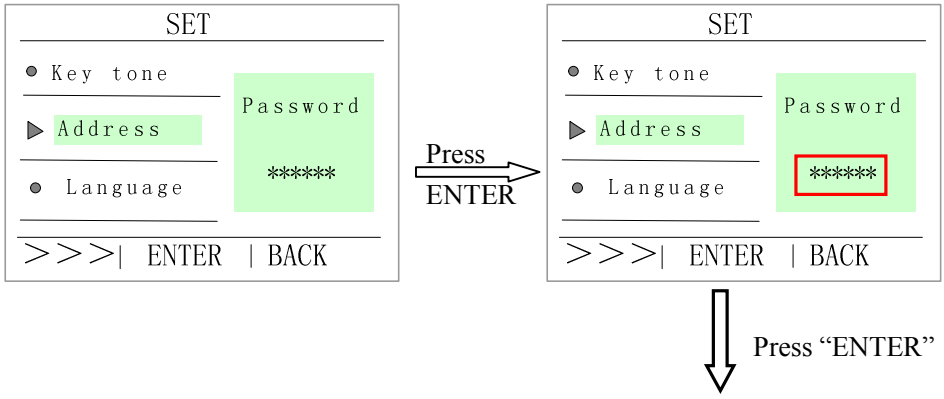
1. Press “ENTER” button to enter into Key tone menu.
2. Press “1” button to select sound mode (ON or OFF).
3. Press “STORE” button to save it and press “BACK” to return Key tone menu, see picture.

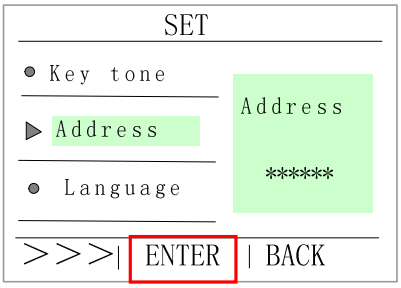


Key tone menu **Setting menu**

6.11 Address setting

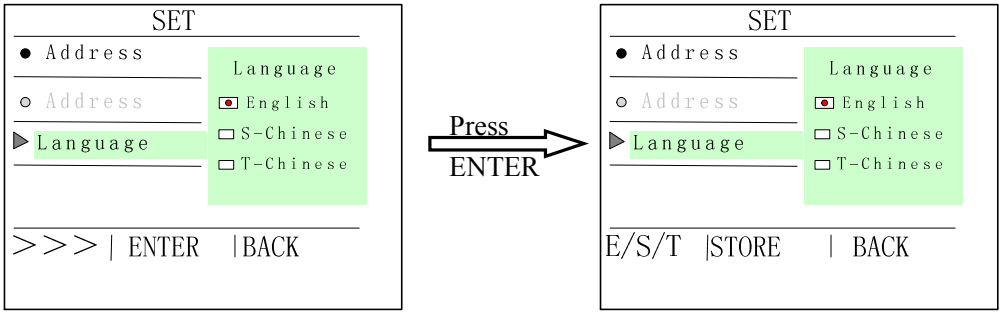
1. Press “ENTER” to enter password menu and enter the default password 865637(Press “+” and “-”button to adjust password value and press “1” to move the cursor to the next digital).
2. Press “ENTER” button to confirm it.
3. Enter the new address (1-99).
4. Press “ENTER” button to save it, see picture





6.12Language setting

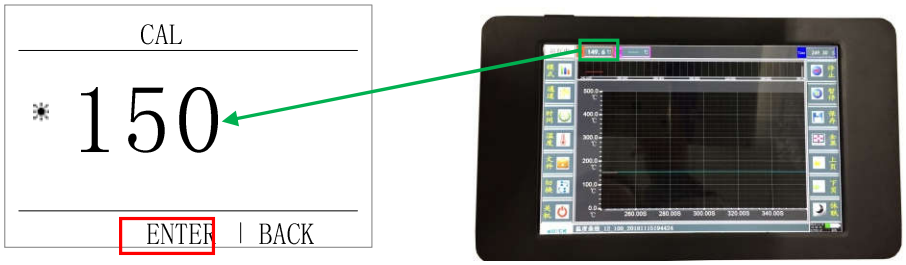
1. Press “ENTER” button to enter Setting menu.
2. Press “1” button to select language (English/S-Chinese / T-Chinese).
3. Press “STORE” button to save it and press “BACK” to return Language menu, see picture.



Language menu **Setting menu**

Ⅶ.Calibrating the Temperature

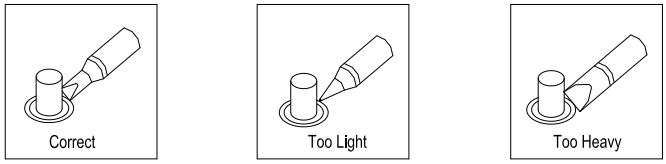
The soldering iron should be recalibrated after changing the iron.
Tool: QUICK 191/192 thermometer
Method: 1.Press and hold “1” and “3” buttons at the same time to enter into calibration menu.
2. The LCD display is flashing, press “+” and “-” button to enter value.
3. When the value is the same as the thermometer, press “Enter” to calibrate it.



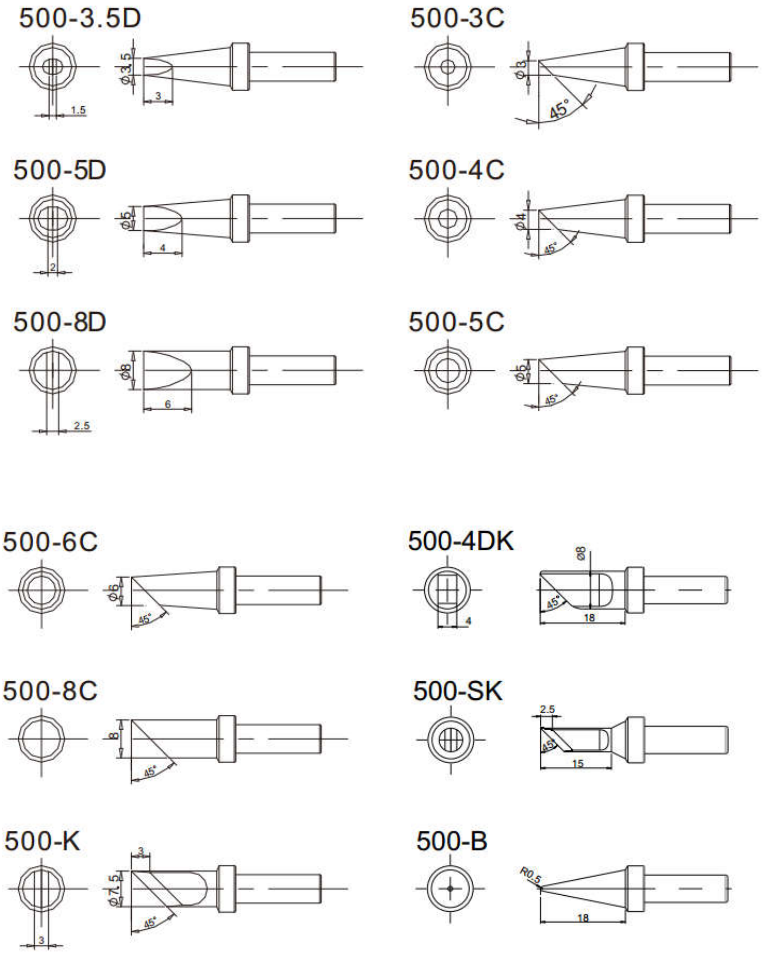
Ⅷ、Tip Care and Maintenance

Select Tip

1. **Select a tip that maximizes contact area between the tip and solder joint. Maximizing contact area gives the most efficient heat transfer, allowing operators to produce high quality solder joints quickly.**
2. **Select a tip that allows good access to the solder joint. Shorter tip lengths allow more precise control. Longer or angled may be needed for soldering densely populated boards.**



3. **Tip type**



Soldering tip maintenance

1) High temperature would affect/decrease the lifetime of soldering tip. Set the temperature as per application but as low as possible.

2) The oxide and carbide produced by residual flux will damage the soldering tip, like soldering deviation and slow heat conduction etc. Clean the soldering tip regularly (every week for long time continuous using).

3) Under high temperature, the solder in tip will produce oxide, which will damage its heat conduction. Turn off the heating controller when not use.

Prolong the lifetime of soldering tip

1) Coat the soldering tip with solder to prevent oxide.

2) Set the temperature as per application but as low as possible.

3) Choose the right type of soldering tip.

4) The plating would be broken if the tip is bent. Do not use the soldering tip as a detecting tool.

5) Activated rosin will corrode the tip plating. Choose the solder wire with less activated rosin.

6) Do not press the soldering tip. Much pressure is not helpful for heat conduction. Melt the solder wire to create a solder bridge between tip and point, to speed up heat transfer.

Ⅸ.Error messages

Various error messages will be displayed when there is something wrong with the unit.

"Sensor broken": sensor open a way

"Handle type": handle type wrong

"NO handle ": handle is not insert

"sensor shorten": sensor short circuit

"Heater broken": heater element open a way (Tip low temperature alarm)

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