## Warning & Cautions:

- 1. This temperature control soldering station is a specialized soldering tool, not suitable for the persons without being trained to use.
- 2. Please keep it out of reach of children to avoid any danger.
- 3. If any failure occurred to the temperature control soldering iron, please send it to the factory or the authorized distributor for good repair so as to guarantee the maintenance quality.

# Structure Features

- 1. With alluminum alloy shell design, it has the advantages of strong structure, good radiation and effectively resisting eletromagnetic interference.
- 2. The panel is designed with an angle suitable for human body engineering and a big size screen and pressing keys are easy and comfortable for use.
- 3. The standing machine body with extra small size saves a lot of space.

4. The waterless cleaning brush applied to soldering tip can effectively avoid violent temperature changes of the soldering tip so as to guarantee soldering quality and the working life of soldering tip.

5. The soldering pen with a smaller hand grip is comfortable for a user to use.

6. The standard soldering tip is easy for replacement.

7. An earth jack attached to the back of the body is convenient for the connection of static electricity wrist strap.

# Product Functions

1. With single chip microcomputer control, the product has been provided with intelligent functions.

2. Digital display and pressing keys operation is clear and visual.

3. The soldering temperature locked by password is convenient for production management.

4. By pressing keys to revise temperature is easy to operate.

5. Suspend and power-off functions: When no soldering continues for 20min, the system will enter into the Suspend state and temperature goes down to 200°C. After 40min of suspending without wake-up, the heater will be powered off so as to save energy, protect soldering tip and guarantee the safety of the operation.

6. Alarming function:

Sensor circuit breaker: Display "S—E" and cut off the power of the heater; Heater circuit breaker: Display "H—E" and cut off the power of the heater.

7. The ceamic heater with the advantages of high power, long work life, fast temperature rising and fast temperature compensating is more advantageous for lead free soldering.

8. The heater provided with AC32V low voltage power supply is absolutely safe.

9. Zero voltage to switch on and off will not cause any interference.

10. The soldering iron wire covered by silicone wire with high temperature endurance is inflammable.

# **Specifications**

Model	LF-2000 Intelligent Temperature Control	
	Welding Iron	
Power Supply/ Voltage	230V/50Hz	115V/60Hz
Power Fuse	T1A	T2A
	(Slow-speed type)	(Slow-speed type)
Output Power	90W	
Temperature Set Range	200°C-450°C (392°F-842°F)	
Temperature Correction Range	+99°C~-99°C/+99°F~-99°F	
	200°C/392°F	
Default Set		
	Temperature correction value "00"	
Figure Dimension	111x158x137mm(W x H x D)	
Weight	1.4kg	

# Brief Introduction of Panel Functions

1. LF-2000 Front Panel



2. LF-2000 Back Panel



## 3. Signals Instruction:

1) Temperature display screen ;

2 Heating indicator light;

(3) Function key ;

(4) Down key ;

(5) Up key;

(6) 7PIN cable connection base ;

(7) Power switch ;

- (8) Power wire socket ;
- (9) Fuse socket;
- (10) Eearh socket

### **Operation Instructions**

#### 1. Operation Procedures

①. Firstly, confirm the position of the switch of the console is at the **OFF** place.

②. Connect AC power wire with the console and then with the power socket.

(3). For initial use, after switch on the product, firstly set the temperature at  $250^{\circ}$ C (482)

 $^{\circ}F$  ), then add zinc to the product, wait for 3min and the initial procedures of protecting the soldering tip is finished. At this moment, the user can operate the keys again until LED displays the required temperature.

④. When the temperature reaches to the set temperature, the heating indicator light starts to flash on and off to guarantee the temperature maintained at the required degree.

③. After a long time of use, if the user wants to make a correction of the temperature, we suggest using the 191 Temperature Measurement Instrument produced by our company to test the temperature. Before the test, the user must firstly add zinc to the soldering tip, then place the soldering iron tip at the right middle point of the sensor line. At this moment, the

user can see whether the temperature displayed in the 191 Temperature Measurement Instrument is the same as that of LF-2000. If there is a temperature difference, the user may correct the temperature according to the method of "Temperature Correction Value Setting".

Note: Because of different types of welding iron head and different measurement methods, there maybe an tolerance of 5 to 10°C during the measurement. Such tolerance is normal.

#### 2. Set Temperature (Temperature can be set if no password set)

① Up temperature set: Press " $\blacktriangle$ " key one time, the number displays will be increased by one. If press " $\bigstar$ " for at least 2 seconds, the number displays will be increased rapidly until the number the user required displays, then stop pressing the key.

② Down temperature set: Press " $\mathbf{\nabla}$ " key one time, the number displays will be decreased by one. If press " $\mathbf{\nabla}$ " for at least 2 seconds, the number displays will be decreased rapidly until the number the user required displays, then stop pressing " $\mathbf{\nabla}$ " the key.

#### 3. Set Parameters

① Press "SET" key and hold for at least 4 seconds until "- -" displays, then release "SET" key. The "- -" starts flashing, reminding the user to input the mode lock password "010" (fixed). If the user inputs the same number as "010", the system will enter the modes selection procedure, otherwise, the system will back from the current mode automatically.

② After the system enters the Modes Selection, the LED will display "F-0" and flash.

Press press  $\blacktriangle$ " or " $\blacktriangledown$ " key to select modes. If the user doesn't press  $\blacktriangle$ " or " $\blacktriangledown$ " key within 4 seconds or press "SET" key one time, the system will immediately back from the Parameter Set status.

For example:  $F-0 \rightarrow F-1 \rightarrow F-2 \rightarrow F-3$   $\uparrow \qquad \qquad \downarrow$  $\leftarrow \leftarrow \leftarrow \leftarrow$ 

③ Password Set

When the LED displays "F-1" and flashes, press "SET" key one time and the system enters the Password Set status. At this moment, the LED displays the preset value.

Press " $\blacktriangle$ " or " $\blacktriangledown$ " key to change password set value. If the user sets "000", that means the system will be under the state of no password. If the user sets "100", that means the system will be under the password state.

Press "SET" key once to finish password setting and the system will backup mode, the user can continue setting other modes or back from the setting mode.

(4) Temperature Correction Set

Press "SET" key once when the LED displays "F-2" and flashes, the system enters the Temperature Correction Mode. At this moment, the LED displays the preset correction value.

Press "▲" or "▼" key to change the temperature correction value. The first digit "-" means minus (actual temperature is down), "No display" means plus (actual temperature is up).

Press "SET" key once to finish the temperature correction and the system automatically backup mode. The user may continue setting other modes or back from the current setting mode.

An example of temperature correction: The current set temperature value is 200°C, however, the actual temperature is only 190°C. So it needs to correct by +10°C. Correction method: if the current correction value is 00 or-00, then change it to 10. If the current correction value is -20, then change it to -10. If the current correction value is 20, then change it to 30.

**(5)**Suspend State Set

Press "SET" key one time when the LED displays "F-3" and flashes, the system enters the Suspend Setting mode. At this moment, the LED displays the preset value.

Press " $\blacktriangle$ " or " $\blacktriangledown$ " key to change the suspend set value. If the set value is "000", that means the system without suspend state; If the set is "100", that means the system set with suspend state.

Press "SET" key once to finish the suspend setting, then the system automatically backup. The user may continue setting other modes or back from current set mode.

#### 4. Wake-up Method

 Temperature Down Suspend: If the system set with suspend function, after 20min of no welding, the system will enter the suspend state, the LED will display "----

-" as a suspend sign and the temperature will go down to 200°C which will be kept

until the welding table returns to work.

Three methods of wake-up the Temperature Down Suspend

a. Pick up the soldering iron.

b. Press any key of the system.

c. Switch off the unit and restart.

#### 5. Cautions during soldering

①.During the operation, do not touch the soldering tip and the tube so as to avoid burning the skin because they are very hot. And also do not touch any other inflammable materials to avoid inflammation.

②. To do a soldering, the thing being solder must be cut off the power so as to avoid a short circuit.

③. When the soldering iron is not used, please put it on a iron stand to prevent the soldering iron pen from any damage or from any burning the skin caused by touching it carelessly.

④. The smoke produced by soldering zinc contains harmful rosin soldering agent and metal components, please do not breathing it directly.

⑤. Use a moist cloth to clean the soldering table. Make sure to wrench the cloth dry and to pull out the power cord before cleaning. After the cleaning, wait a few minutes, then insert the power cord again to use.

(6). soldering Temperature

For non-lead zinc thread, the proposed soldering temperature is  $360^{\circ}C \sim 400^{\circ}C$  (680  $^{\circ}F \sim 752^{\circ}F$ ).

For lead zinc thread, the proposed soldering temperature is  $320^{\circ}C \sim 360^{\circ}C$  ( $608^{\circ}F \sim 680^{\circ}F$ ).

To adjust the soldering temperature to an over high degree may cause damage to the accessories of the PC board and will also shorten greatly the work life of the soldering tip

#### 6. Cautions about Using Soldering Tip

①. When the temperature is above 400°C (752°F), the soldering tip will carbonized because of instant high temperature produced when it touched rosin agent in the zinc threads. And its head will become black and unable touch zinc.

②. Do not use the soldering tip to touch any chemical mateirals such as plastic, rubber and paint, otherwise they will stick to the soldering tip and cannot be removed.

③. Do not use the soldering tip to force on the solder thing, otherwise, the soldering tip under a high temperature state will be deformed.

④. When make a replacement of a soldering tip, firstly switch off the power, and wait for
10 minutes to ensure that the temperature is down to the room temperature, then start to
replace the soldering tip

③. During the operation, if the soldering tip is not used for a short time, it should be added with zinc and then put on the iron stand. If the soldering iron is not used for a long time, we suggest switching off the welding table to save energy and prolong the work life of the soldering tip.

(6). If the soldering iron is kept at higher temperature degrees (400°C or 752°F above) for a long time, the work life of the welding iron head will be shortened.

⑦. If the soldering tip is stained with black oxide and cannot touch the zinc, use a thin sandpaper with 600-800 textures to rub away the oxide and reapply it with the zinc. This method is only for proposal, we cannot guarantee the soldering tip can recover its performance of touching the zinc because there are various kinds of zinc threads.
⑧. For initial use, we suggest adjusting the temperature to 250°C (482°F), then apply the soldering tip to the zinc and wait 3min, then adjust the temperature to the required temperature. It may help to prolong the work life of the soldering tip.