Circuit Specialists

2 in 1 Anti-static parallel Tweezers soldering station

INSTRUCTION MANUAL

CSI-STATION 2+

English

Thank you for purchasing this intelligent soldering station, this product is specially designed for lead-free soldering design, please read the instructions carefully before use. After read, please keep it for future reference.

Warning!!!

Use the machine, the following basic measures should abide, avoid electric shock or cause injury or damage caused by fires.

2. You must use the original approval or recommendation of the parts, otherwise it will lead to serious consequences.
3. Machine failure must be by professionals or the company designated personnel for repair.
4. This product is grounded three - wire plug, must be inserted within the three - hole grounded outlet, do not change the plugs or use ungrounded three adapter made it bad grounded.
5. Hot air gun or soldering station is open, its temperature are likely to reach 400°C. Do not use it near flammable gas, objects. Tube and the heat emitted very hot, can burn the body, do not touch the hot pipe and direct injection to heat the human body.
6. Before hot air gun turned on, please ensure it is in safety environment, do not leave the jobs site.
7. When the hot air gun opening do not install nozzle, the heat pipe and the nozzle must be cooling. Then installed the other nozzle.
8. After use, the machine need to cool down when packing.
9. Do not use a soldering iron to weld outside the work; Do not iron percussion table to clear the residual flux, this could seriously damage the iron.
10. The machine welding will take smoke, please do proper ventilation.

1. If the supply cord is damaged, it must be replaced by a special cord or assemble available from the manufacturer or its service agent.
2. WARNING: This tool must be placed on its stand when not in use.
3. --Be careful when using the appliance in places where there are combustible materials;
   --Do not apply to the same place for a long time.
4. --Be aware that heat may be conducted to combustible materials that are out of sight;
   --Do not leave the appliance unattended when it is switched on.
5. --This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge. Unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
   --Children should be supervised to ensure that they do not play with the appliance.

I. Characteristics of the Product

1. 2+ type with double iron soldering station combo design,extremely simple and fast , is an electronic component removal, installation of welding it is a best combination, can be used alone or two iron soldering station set different temperatures in different welding environments select iron rapid desoldering can also double use, very user-friendly.
2. BD + type with parallel electric tweezers and electric iron combo design, very convenient for small electronic components, chips, removal and installation of welded patch element.When you need to remove the parallel electric tweezers can be used directly on the resistance of the two components Heating the end of the weld. Without prejudice to the case of peripheral devices easily and quickly dismantled components. Meanwhile electro cautery. Iron can be quickly disassembled for electronic components to reposition install welding.Usage is extremely simple and fast, small electronic components demolition or installation welding is the best combination.
3. Using the PID programmable control technology and, the most sophisticated PID program. Machine speed tracking and correction the tweezers soldering iron temperature. Magic Temperature compensation make temperature error is small, temperature stability, and temperature compensation rapid fast than the same type of products.
4. Machine upgrade the display to LCD, using the latest LCD show. Appearance of beautiful, accurate display of tweezers soldering iron temperature and various prompt function.
5. Using SMT Double sided board technology, Process and signal flow clear, machine stability and safety performance was improved, can adapt to all kinds of harsh environment.
6. The machine design has the powerful and humanization function.
   A. Three preset memory function:
   The user can according the demand memory to preset temperature. At the soldering working, the user choice the suitable preset memory to CH1/ CH2/CH3.
   B. Celsius / Fahrenheit temperature display function:
   Designed to meet different regions and market, can choose according to the habit.
   C. Iron sleep function:
   Iron Automatic detection of working state, if long time not use and reach the sleep setting time, that the iron will be down to 100°C and into sleep mode. It is effectively prevent the oxidation of the iron tips, extended the iron tips life, energy saving and environmental protection. Sleep time range: 0~99 minute, if no need sleep could be set the sleep time for 0.
   D. Automatic shutdown function:
   The Iron After sleep, and automatic shutdown time are not using it, the machine will be shutdown to save energy and environmental protection. Automatic shutdown time:0~99 minute.
   E. Temperature correction function:
   To adapt the environmental impact or replace the heating element caused by the iron temperature and display the temperature error. Correct the temperature by this function. The correction of temperature range: -50°C ~+50°C.
7. Touch sensitive using new intelligence virtual touching Keynesian, touch sensativa / rapid and stable performance. The user experience more comfortable

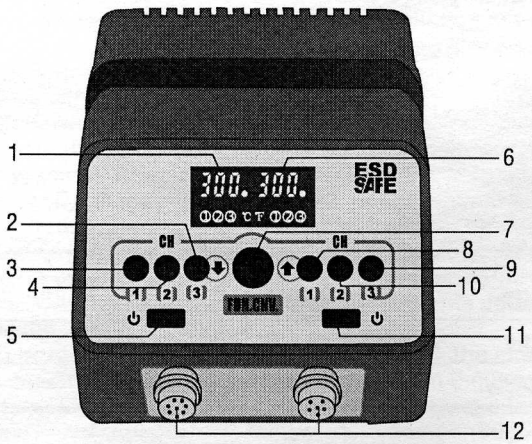
and powerful that compared with the traditional button ! At the same time, service life longer than traditional buttons.

II. Specification

TEMP.range	100°C~480°C/212°F~896°F
Display type	LCD
Temp.stability	± 2°C (static)
Heater voltage	AC 24V ± 10% 50Hz
Tip of ground resistance	< 2ohm
Tip of ground voltage	< 2mV
Measurement	L150xW136xH93mm ± 5mm
Handle cable length	⩾120cm
Working temperature	0~40°C/32°F~104°F
Storage temperature	-20°C~80°C/-4°F~176°F
Storage humidity	35%~45%

III. Panel Schematic Diagram

Front

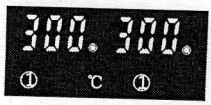


1. Tweezer/soldering station 1 temperature display
2. Tweezer/soldering station 1 CH3(memory temperature)button/cool down button
3. Tweezer/soldering station 1 CH1(memory temperature)button
4. Tweezer/soldering station 1 CH2(memory temperature)button
5. Tweezer/soldering station 1 power switch
6. Soldering station 2 temperature display
7. Function key
8. Soldering station 2 CH3(memory temperature)button/heating up button
9. Soldering station 2 CH3(memory temperature)button
10. Soldering station 2 CH2(memory temperature)button
11. Soldering station 2 power switch
12. Common heater soldering iron(6 core)/imported heater soldering iron (7 core)/ tweezers soldering iron socket(8 core)

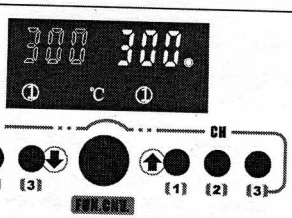
IV. Operation instruction

1. Connect the soldering iron and the machine. 2. Plug on the power cord. 3. Switch on main power switch, display - - - - - - means enter into standby state.	

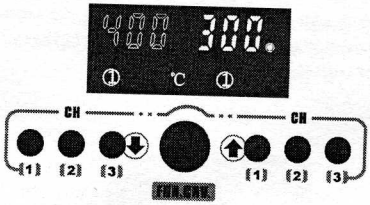
4. Switch on Tweezers/ soldering station 1 or soldering station 2, display relatively temperature(original display CH1 memory temperature),3 seconds, begin to heating up quickly. You can normally work when temperature stable.



5. Adjust tweezers/ soldering station 1 current temperature: Press FUN.CHV. key, the current temperature flashing.

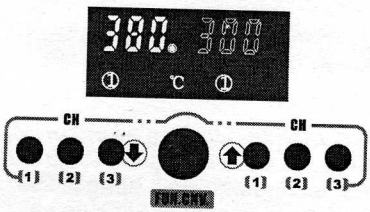


Press ⬆ key (heating up) or ⬇ key (cooling down) adjust soldering iron temperature. Adjust to desired temperature, stop operation, after temperature flashing 6 times will auto memory the setting temperature. LCD display set temperature 3 seconds, temperature begin to heating up from current temperature quickly, you can normally work when temperature stable.

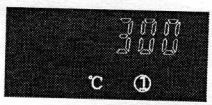


6. Adjust soldering station 2 current temperature:

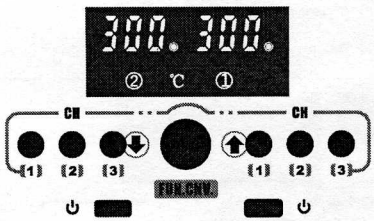
A. Tweezers/ soldering station 1 or soldering station 2 switch on at the same time: Press FUN.CHV. two times, LCD right temperature flashing, can adjust current temperature. Adjust method is the same with 5.



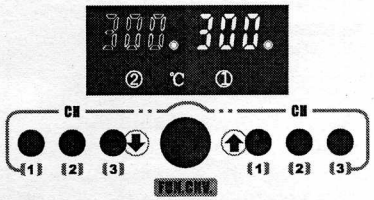
B. Only switch on soldering station:Press FUN.CHV. LCD right temperature flashing, can adjust current temperature.



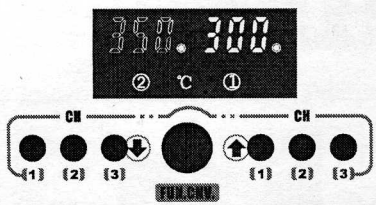
Tweezers/ soldering station 1 three section temperature memory setting. For example:CH2



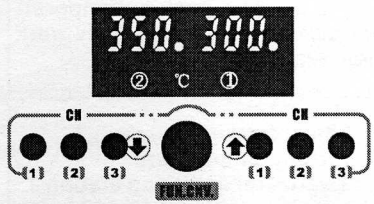
1-1. Open the main power switch, tweezers/ soldering station 1 power switch,the screen display CH1 memory temperature, press left panel (2) key, converse to CH2 memory temperature.
1-2. You can open soldering station 2 power switch at the same time.



2-1. Press FUN.CHV. key ,temperature flashing.
2-2. When soldering station 2 power on at the same time, if press FUN.CHV. one more time, it will change to soldering station 2 CH1 temperature memory adjust.



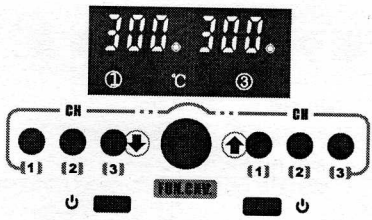
3. Press ⬇ key(cooling down) or ⬆(heating up) adjust to desired temperature. For example:350°C (long press the key -heating up or cooling down quickly, short press the key-heating up or cooling down step-by-step)



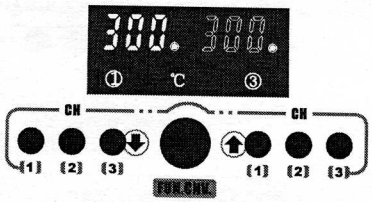
4. Adjust the temperature, stop operation. Tweezers/ soldering station 1 CH2 temperature flashing 6 times, system will auto memory data.The screen display tweezers/ soldering station 1 CH2 set temperature 3 seconds, soldering station 1 CH2 setting completed.

Tweezers/ soldering station 1 CH1/CH3 memory temperature setting is the same with Ch2. After setting, can select tweezers/ soldering station 1 CH1/CH2/ CH3 enter into relevant temperature to solder.

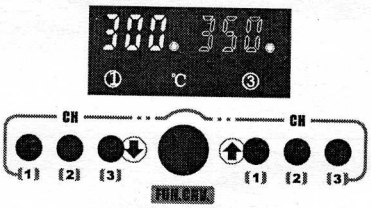
Soldering station 2 three section temperature memory setting.
For example: CH3



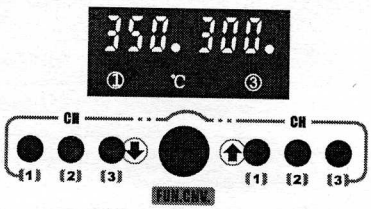
1-1. Open main power switch, open soldering station 2 power switch, the screen display CH1 memory temperature, press left panel (3) key, change to CH3 memory temperature.
1-2. You can open tweezers/ soldering station 1 power switch at the same time.



2-1. When only open single soldering iron, press FUN.CHV key,temperature flashing.
2-2. When open tweezers/ soldering station 1 at the same time, press FUN.CHV key twice. soldering station 2 CH3 temperature flashing.



3. Press ⬇ key (cooling down) or ⬆ key(heating up) adjust to desired temperature. For example:350°C (long press the key -heating up or cooling down quickly, short press the key-heating up or cooling down step-by-step)



4. After adjust the temperature,stop operation. Soldering station 2 CH2 temperature flashing 6 times, system will auto memory data. The screen display soldering station 2 CH2 set temperature 3 seconds, soldering station CH2 setting completed.

Soldering station 2 CH1/CH3 memory temperature setting is the same with Ch2. After setting, can select soldering station 2 CH1/CH2/CH3 enter into relevant temperature to solder.

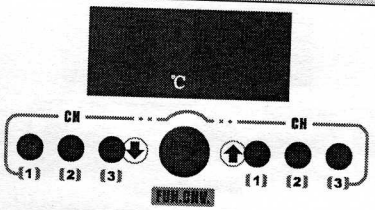
V. Function Setting

The order of function setting(the order can cycle)press FUN.CHV. key to converse.

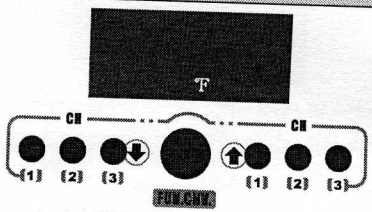
1. Fahrenheit/Celsius temperature display switch
2. Tweezers/ soldering station 1: Iron sleep
3. Soldering station 2: Iron sleep
4. Tweezers/ soldering station 1: Auto-off time
5. Soldering station 2: Auto-off time
6. Tweezers (1) / soldering station 1: Temperature correction
7. Tweezers (2): Temperature correction
8. Soldering station 2: Temperature correction

Note: 938D+ series item no 7th steps

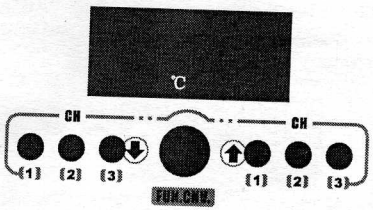
1. Switch Fahrenheit/ Celsius display mode setting:



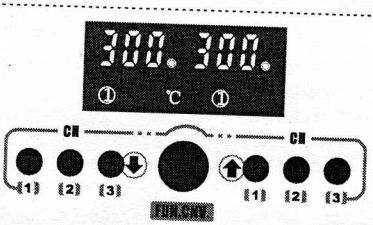
1. Press FUN.CNV. key the same time open main power switch on the machine right side, the screen display °C three seconds, °C begin flashing. This time is °C /°F switch mode.



2. Press ⬆ key, the screen change to °F flashing.

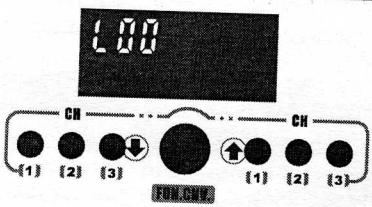


3. If need to set the °C, press ⬇ key, it will be successful.



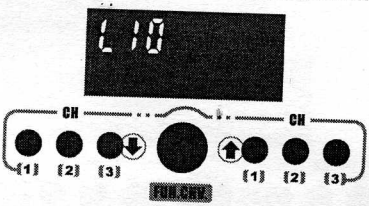
4. After setting, wait for 3 seconds, turn off main power switch, system will auto memory data, complish setting. Re-open machine, the screen display the setting display type and CH1 memory temperature.
(if need to continue other function setting, no need to turn off the machine, direct press FUN.CNV. key enter relevant setting interface)

2. Tweezers/ soldering station 1: Soldering iron sleep time setting

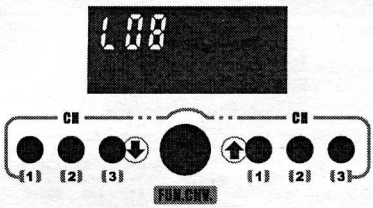


1-1. In OFF state, press FUN.CNV. the sametime open main power switch on the machine right side, the screen display °C three seconds, °C begin flashing. Press FUN.CNV. key, the left of screen display L00 is flashing.

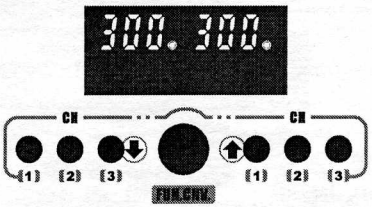
1-2. Like the °C/°F switch setting state, direct press FUN.CNV. key, enter into tweezers/ soldering station 1 sleep time setting:



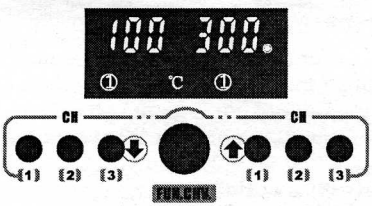
2. Sleep time set to 10 minutes, press ⬆ key to increase, step by 1 minute.

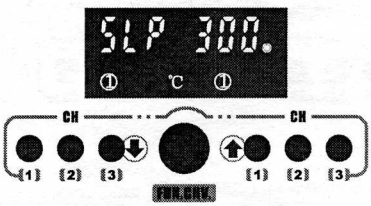


3. If need to change the sleep time to 8 minutes, press ⬇ key to decrease sleep time, step by 1 minute.



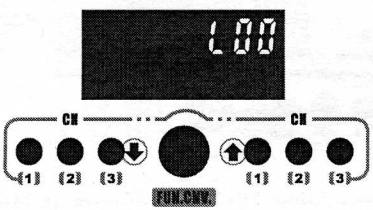
4. After setting, wait for 3 seconds, turn off main power switch, system will auto memory data, complish setting. Re-open machine, the screen display the setting display type and CH1 memory temperature.(If need to continue other function setting no need to turn off the machine, direct press FUN.CNV. key enter relevant setting interface)



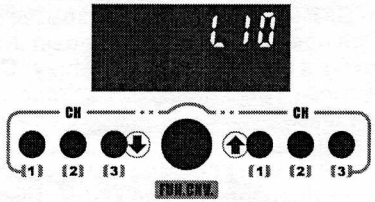


5. Soldering iron self detect working condition, when not in using during stationary state, the setting sleep time over, soldering iron temperature will auto down to 100°C enter into sleep mode. Screen will change between 100 and SLP. End sleep method: A. Take the soldering iron swing it slightly;
B. Press any key
C. Re-open the machine.
Sleep time range: 0~99 minute, step by 1 minute, users can setting by personally, if no need sleep, can set the sleep time to 0

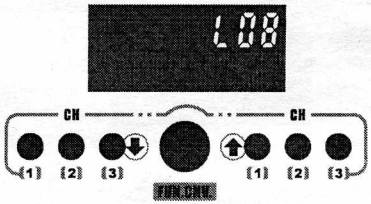
3. Soldering station 2: Sleep setting



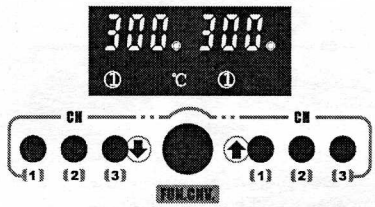
1-1. In OFF state, press FUN.CNV. key the same time open main power switch on the machine right side, the screen display °C three seconds,°C begin flashing. press FUN.CNV. key, the left of screen display L00 is flashing.
1-2. Like tweezers/ soldering station 1 setting: soldering iron sleep time setting state, direct press FUN.CNV. key enter into tweezers/ soldering station 1 sleep time setting.



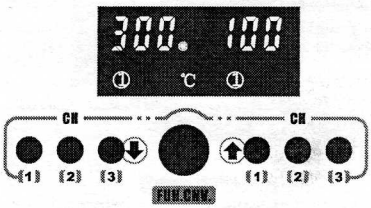
2. Sleep time set to 10 minutes, press ⬆ key to increase, step by 1 minute.

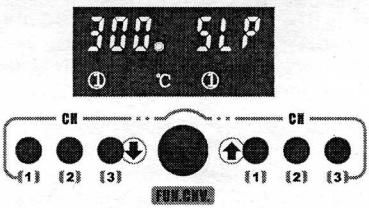


3. If need to change to 8 minutes, press ⬇ key to decrease sleep time. Step by 1 minute



4. After setting, wait for 3 seconds, turn off main power switch, system will auto memory data, complish setting. Re-open machine, the screen display the setting display type and CH1 memory temperature. (If need to continue other function setting, no need to turn off the machine, direct press FUN.CHV. key enter relevant setting interface)

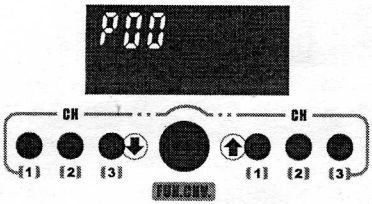




5. Soldering iron self detect working condition, when not in using during stationary state, the setting sleep time over, soldering iron temperature will auto down to 100°C enter into sleep mode. Screen will change between 100 and SLP. End sleep method: A. Take the soldering iron swing it slightly;
B. Press any key;
C. Re-open the machine.

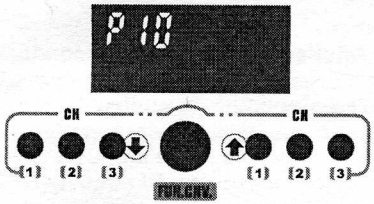
Sleep time range:0~99 minute, step by 1 minute, users can setting by personally, if no need sleep, can set the sleep time to 0 .

4. Tweezers/ soldering station 1: Auto-off time setting

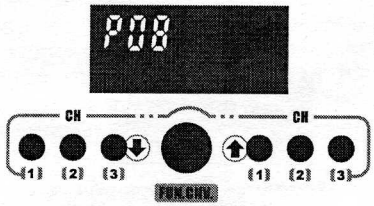


1-1. In OFF state, press FUN.CHV. key the same time open main power switch on the machine right side, the screen display °C three seconds, °C begin flashing. Press key three times, the left of screen display P00 is flashing.

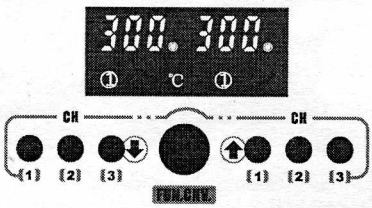
1-2. Like soldering station 2 setting soldering iron sleep time setting state, direct press FUN.CHV. key enter into tweezers/ soldering station 1 auto-off time setting.



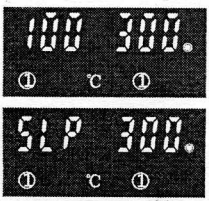
2. Auto-off time set to 10 minutes, press ⬆ key to increase, step by 1 minute.

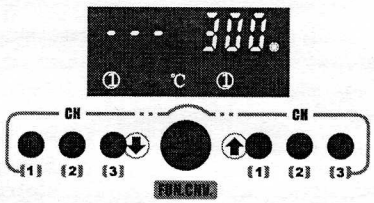


3. If need to change auto-off time to 8 minutes, press ⬇ key to decrease auto-off time. Step by 1 minute



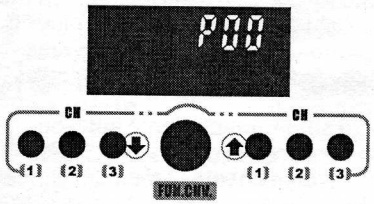
4. After setting, wait for 3 seconds, turn off main power switch, system will auto memory data, complish setting. Re-open machine, the screen display the setting display type and CH1 memory temperature.(If need to continue other function setting, no need to turn off the machine, direct press FUN.CHV. key enter relevant setting interface)





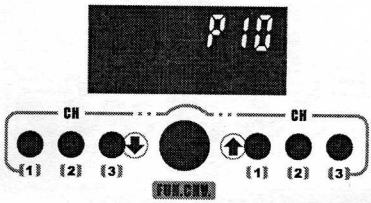
5. After Soldering iron enter into sleep mode, screen display change between 100 and SLP. Program start timing, if not wake up the machine within the setting auto-off time ,the machine will automatic shutdown, screen display - - - prompt turn down soldering iron switch.(auto-off function just be effective when sleep time more than 0)

5. Soldering station 2: Auto-off time setting

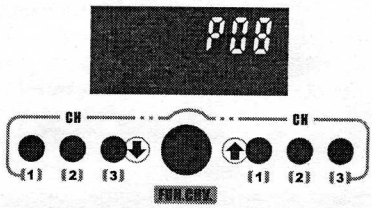


1-1. In OFF state, press FUN.CHV. key the same time open main power switch on the machine right side, the screen display °C three seconds, °C begin flashing. press FUN.CHV. key four times ,the right of screen display P00 is flashing.

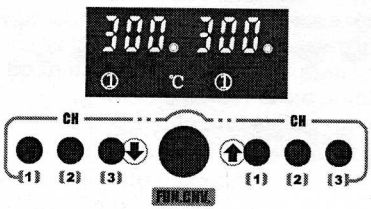
1-2. Like tweezers/ soldering station auto-off time setting state, direct press FUN.CHV. key, enter into soldering station 2 auto-off time setting.



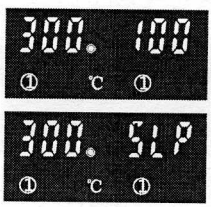
2. Auto-off time set to 10 minutes, press ⬆ key on the right panel to increase, step by 1 minute

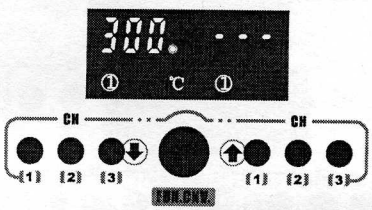


3. If need to change auto-off time to 8 minutes, press ⬇ key to decrease auto-off time .step by 1 minute.



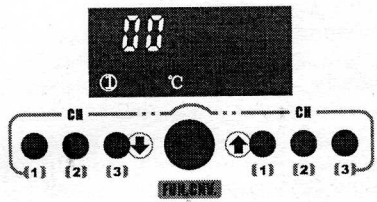
4. After setting, wait for 3 seconds, turn off main power switch, system will auto memory data, complish setting. Re-open machine, the screen display the setting display type and CH1 memory temperature. (If need to continue other function setting,no need to turn off the machine, direct press FUN.CHV. key enter relevant setting interface)





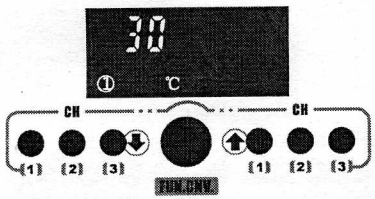
5. After Soldering iron enter into sleep mode, screen display change between 100 and SLP. Program start timing, if not wake up the machine within the setting auto-off time ,the machine will automatic shutdown, screen display - - - prompt turn down soldering iron switch.(Auto-off function just be effective when sleep time more than 0)

6. Tweezers(1)/ soldering station 1: Temperature calibration

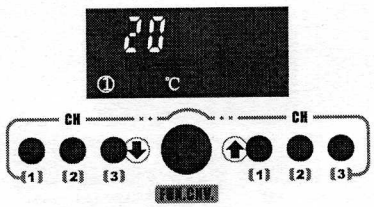


1-1. In OFF state, press FUN.CNV. key the same time open main power switch on the machine right side, the screen display °C three seconds,°C begin flashing.press FUN.CNV. key five times, screen display as figure.

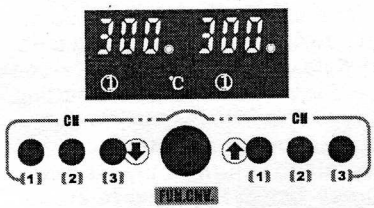
1-2. Like soldering station 2 auto-off time setting state, direct press FUN.CNV. key, enter into tweezers (1)/ soldering station 1 temperature calibration setting.



2. Temperature calibration set to 30°C, press ⬆ to increase, step by 1°C.

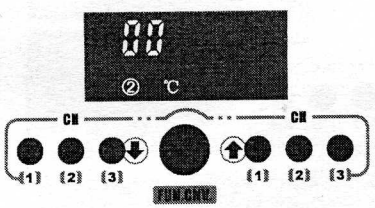


3. If need to change temperature calibration to 20°C, press ⬇ key to decrease. Step by 1 minute. Calibration range:±50°C.



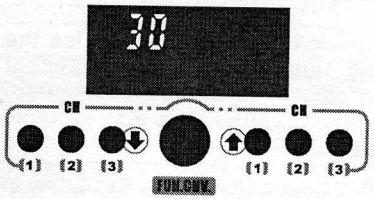
4. After setting, wait for 3 seconds, turn off main power switch, system will auto memory data, complish setting. (If need to continue other function setting, no need to turn off the machine,direct press FUN.CNV. key enter relevant setting interface).

7. Tweezers(2): Temperature calibration (938D+ series without this step)

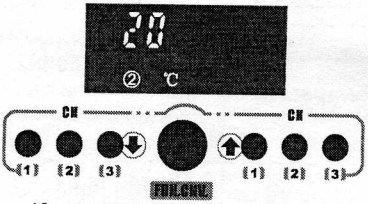


1-1. In OFF state, press FUN.CNV. key the same time open main power switch on the machine right side, the screen display °C three seconds,°C begin flashing. Press FUN.CNV. key six times, screen display as figure.

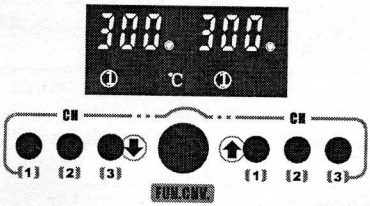
1-2. Like tweezers (1) / soldering sation 1 temperature calibration setting state, direct press FUN.CNV. key, enter into tweezers (2) temperature calibration setting.



2. Temperature calibration set to 30°C, press ⬆ to increase, step by 1°C.

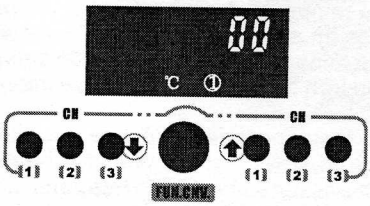


3. If need to change temperature calibration to 20°C, press ⬇ key to decrease. Step by 1 minute. Calibration range:±50°C.

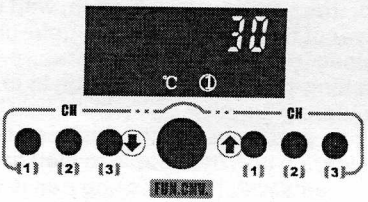


4. After setting, wait for 3 seconds, turn off main power switch, system will auto memory data, complish setting (If need to continue other function setting, no need to turn off the machine, direct press FUN.CNV. key enter relevant setting interface).

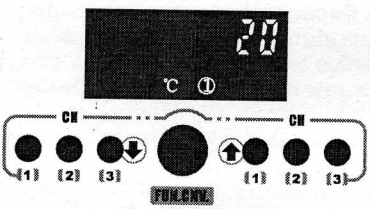
8. Soldering station 2: Temperature calibration



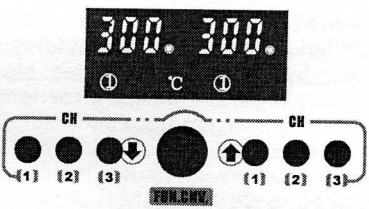
1. In OFF state, press FUN.CNV. key the same time open main power switch on the machine right side, the screen display °C three seconds,°C begin flashing. Press FUN.CNV. key seven times, screen display as figure.



2. Temperature calibration set to 30°C, press FUN.CNV. to increase, step by 1°C.



3. If need to change temperature calibration to 20°C, press ⬇ key to decrease .step by 1 minute. Calibration range:±50°C



4. After setting, wait for 3 seconds, turn off main power switch, system will auto memory data, complish setting (All function setting finished, if press FUN.CNV. key, cycle to 1. °C/°F converse display mode set)

VI. Tip Maintenance And Use

Tip temperature	High soldering temperature can degrade the tip. Use the lowest possible soldering temperature. The excellent thermal recovery characteristics ensure efficient and effective soldering even at low temperatures. This also protects the solder de items from thermal damage.
Cleaning	Clean the tip regularly with a cleaning sponge. As oxides and carbides from the solder and flux can form impurities on the tip. These impurities can result in defective joints or reduce the tips heat conductivity. When using the soldering iron continuously, be sure to loosen the tip and remove all oxides at least once a week. This helps prevent seizure and reduction of the tip temperature.
When not in use	Never leave the soldering iron sitting at high temperature foe long periods of time, as the tip's solder plating will become covered with oxide, which can greatly reduce the tip's heat conductivity.
After use	Wipe the tip clean and coat the tip with fresh solder.

1. When soldering iron is used for the first time, you should pay attention to monitor iron tip warming situation, wait until the temperature just melted tin wire, a layer of tin on the part of the gold-plated iron tip,and then the temperature was raised to the required temperature. Keep in mind when working iron tip should be long-term with a layer of tin to protection iron tip,in order to achieve optimal soldering function.
2. As an oxide layer on the surface of iron tip, resulting in false low temperature soldering iron tip, unable to melt tin and the tin, in fact, at this time the heating elements with the soldering iron is high temperature state. This happens situation not to blind the temperature rises again, the application of clean sponge clear oxides, such as not clear, please turn off the power, soldering iron be dropped to room temperature, with No.0 sandpaper accidentally cleared the oxide, then repeat the operation of the first point iron initial use.
3. Please pay more attention soldering iron in high temperature work back into iron holder, should be adjust temperature button below 250°C stand - by use, stand-by time over 20 minutes, please turn off power. Otherwise the soldering iron in a high temperature for long time. Because between iron holder and soldering iron generate accumulated temperature, lead to heating elements accelerated aging, soldering iron tip derivative oxide, directly weakened soldering, severe will result in the connecting screw nut plastic melt of the handle or heating elements short circuit.
4. If the tip deformation or the occurrence of heavy erosion, to replace the new one. (Note: Do not use knife file remove oxides of soldering iron tip.)
5. Soldering, do not give iron tips too much pressure, this will not change the thermal conductivity, otherwise will lead to iron tip damage.

Note: Tweezers iron mainly used for small component, can not in too high temperature during using, to avoid tips oxidation to influence solder.

VII. Replacement of the Soldering Iron's Tip and Soldering Iron Heating Element

Soldering iron parts replacement

Figure 1

1. Unscrews the nut No.1, and then removes the steel tube No.2 , followed by removing the tip which is going to be replaced.
2. For the replacement of heating core's element can be performed by unscrewing the plastic cap No.4, pulls out gently the heating core, element No.6 along with the circuit board No.7, please carefully remember the connection of spring No.5.
3. The iron core from the circuit board welding , the replacement of the heating core, can be fitted well. Note that the order of the iron core wire connection.

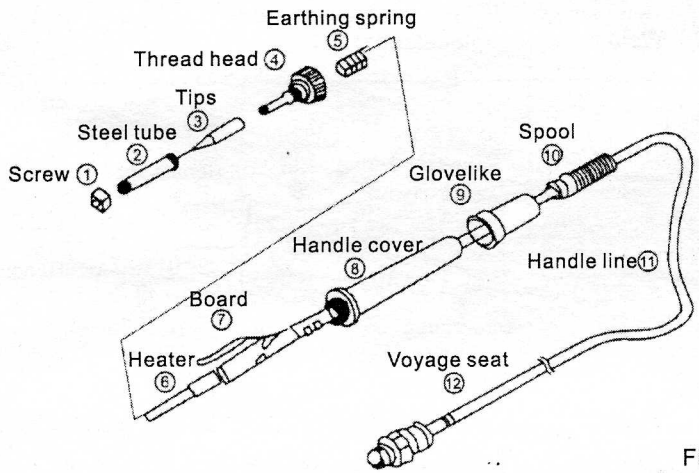


Figure 1

Tweezers soldering iron parts replacement

1. The replacement of the tip (Figure 2)
   Unscrew the nut 1,Remove the (steel tip 2 and 3 is a complete combination), and replaced with new pipe and tip.

2. Replace the heating core (Figure 3 - Figure 4)
   A. Unscrew the nut 1, and then remove the pipe 3 (steel tip 2 and 3 is a complete combination).
   B. Unscrew the screw 7, the handle 11 handle sets out, unscrew the screw nut and nut 9 on the back nine. Remove the spring 10, put away.

C. Unscrew the screw 12, then unscrew the screw head 5, carefully remove the circuit board 15, to pay attention to the ground connection of the spring 16.

D. The iron core heat from the welding circuit board replaced with a new heater, and connect well.

E. According to disassemble Replace in reverse order, being careful not broken cable.

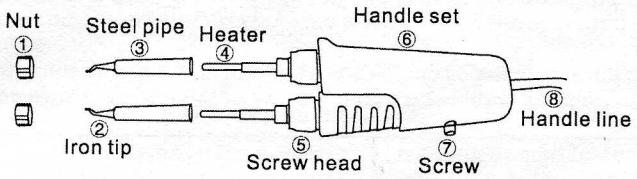


Figure 2 Welding head replacement

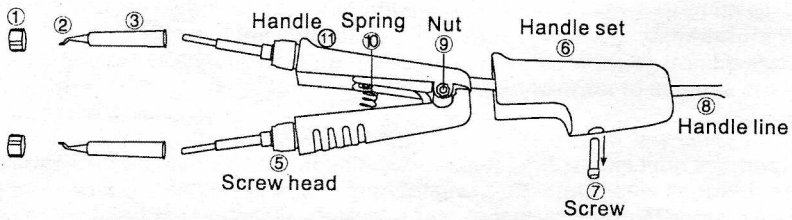


Figure 3

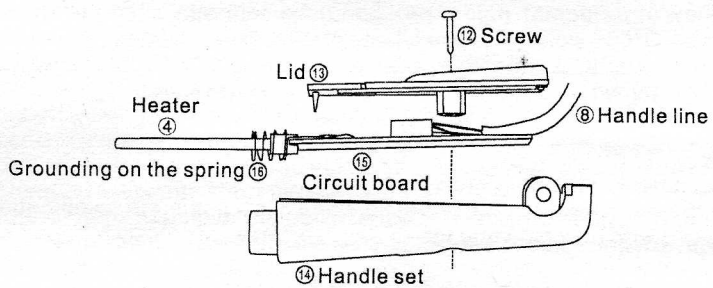
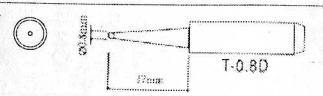
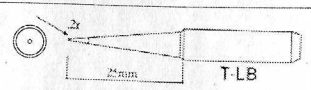
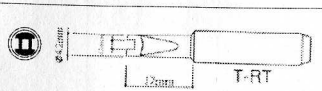
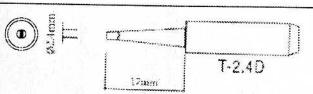
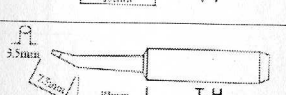
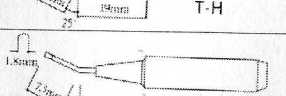


Figure 4 Heater replacement

Attachment: Electric welding machine using welding head model figure

907

900M-T-0.8D 0℃ 	-10℃/-18℉ 	+30℃/+54℉
900M-T-1.2D 0℃ 	0℃ 	0℃
900M-T-1.6D 0℃ 	-10℃/-18℉ 	0℃ 
900M-T-2.4D 0℃ 	0℃ 	0℃
900M-T-3.2D 0℃ 	0℃ 	-10℃/-18℉
900M-T-1.2LD -10℃/-18℉ 	0℃ 	-20℃/-36℉ 
900M-T-SB 0℃ 	0℃ 	-10℃/-18℉ 
900M-T-B 0℃ 	0℃ 	0℃

900M tip OutDiam Φ6.5

Product certification

Model NO.	
Product ID	
Examine	Upon examination products meet technical standards QC PASS
Sales Date	
Date of manufacture	

Warranty Card

Thank you for choosing this type of products, please read the following terms before using:

1. From purchasing date within 7 days, under normal use(Artificial damage),new package, not be disassemble and repaired ,enjoy replacement service.
2. From purchasing date within one year, under normal use, if there are quality problem, not be disassemble and repaired ,enjoy free repair service.
3. For more than warranty, we provide a lifetime warranty service, free of labor costs, charge only spare parts costs.
4. Failure to present warranty card during warranty period, the company will not be a free service.
5. Users need warranty service, please contact your original sales unit.
6. When users need warranty service, please provide warranty card and purchase invoice, or receipt of the certificate of the company seal.
7. Warranty does not include transportation costs and provide on-site service.

Maintenance records

NO.	Date for repair	Cause	Fix date	Repairer

Statement: The company reserves the right to improve and upgrade products, product specifications and design are subject to change without notice.