CSI

2901
Soldering Station

INSTRUCTION MANUAL

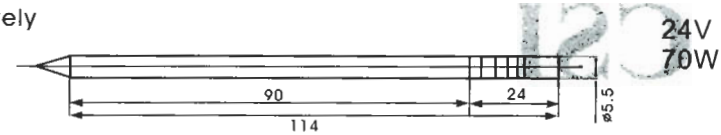
Thank you for purchasing model 2901 Soldering station.
Please read manual before using the unit.
Keep manual in an accessible place for future reference.

FEATURES:

- Provides higher thermal recovery performance than conventional soldering irons.
- Soldering iron tip cartridges designed to slip in and out easily.
- 70 watts of immediate heat with unique ceramic heating element and tip configuration.
- Fast recovery, minimal heat loss, ideal for continuous production soldering and lead free solder use.
- Ergonomic, efficient and economic station anticipating future demands.

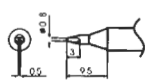
SOLDERING IRON TIPS WITH HEATING ELEMENT

Sold Separately

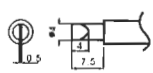


Bevel Type

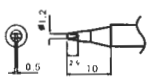
LF-08D



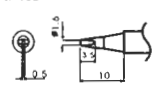
LF-4D



LF-12D



LF-16D



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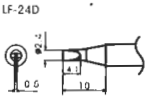

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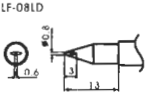
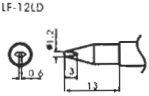
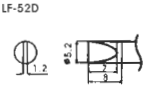


LF-12LD

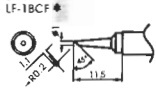


LF-52D

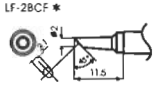


Chisel Type

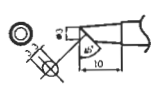
LF-1BC
LF-1BCF ✱



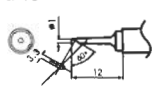
LF-2BC
LF-2BCF ✱



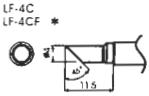
LF-3BC



LF-1C

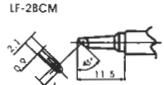


LF-4C
LF-4CF ✱

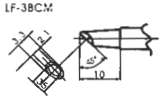


Flow Type

LF-2BCM

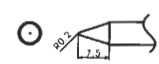


LF-3BCM

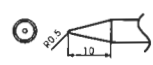


Conical Type

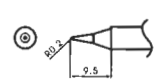
LF-B



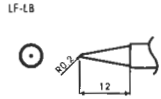
LF-2B



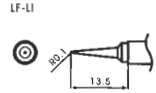
LF-I



LF-LB

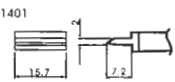


LF-LI



Tunnel Type

LF-1401



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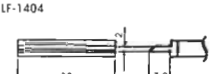
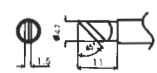
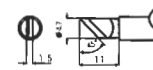


Blade Type

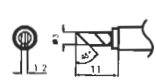
LF-K



LF-KL

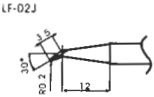


LF-KU



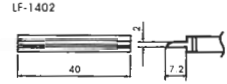
Sharp-Bent Type

LF-02J



LF-1403

LF-1402



✱ These tips are tinned on the soldering surface only.

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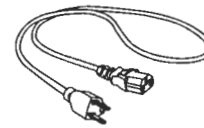
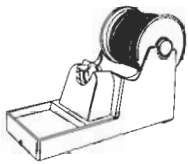
PACKAGE INCLUSION

2901 Soldering Station

B010 Soldering Iron



Power Cord



2630 Soldering Iron Holder

Soldering Iron Tip w/ Heating Element (LF-2B)

30150J Heat Resistant Pad

SAFETY PRECAUTIONS

⚠ CAUTION

When power is ON, tip temperatures will be between 200 and 480° C. To avoid injury or damage to personnel and items in the work area, observe the following:

- Do not touch the tip or the metal parts near the tip.
- Do not allow the tip to come close to, or touch flammable materials.
- Inform others in the area that the unit is hot and should not be touched.
- Turn the power off when not in use or left unattended.
- Turn the power off when changing parts or storing the station.

To prevent accidents or damage to the station, be sure to observe the following:

- Do not use the station for applications other than soldering.
- Do not allow the station to become wet or use it when hands are wet.
- Do not strike the iron against hard objects to remove excess solder as this will damage the iron.
- Remove power and iron cords by holding the plug — not the wires.
- Be sure the work area is well ventilated. Soldering produces smoke.

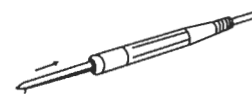
SPECIFICATIONS

Power Input :	110 V or 220V
Power Consumption :	70 W
Soldering Iron Output Voltage :	24 V
Solder Iron Temperature Range :	200 - 480 °C (480-895°F)
Tip to Ground Resistance :	< 2 Ω
Tip to Ground Potential :	< 2mV
Dimension :	110 (w) x 90 (h) x 155 (d) mm
Weight :	3 Kg

ASSEMBLY AND PREPARATION

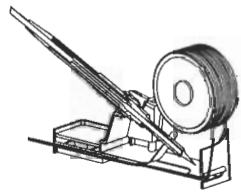
A.Hand piece

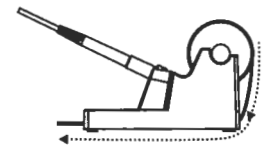
Insert the tip fully into the hand piece.



B. Soldering Iron

1. Install solder wire to the solder iron holder.





Solder wire flow direction

2.Attach the soldering iron to the 5-pin output at the bottom right area of the station.

3. Place soldering iron to the soldering iron stand as shown in the figure above.

⚠ Dampen the sponge with water and squeeze dry before using. The tips maybe damaged when used with dry sponge.

C. Soldering Station

1. Insert the power cord into the receptacle at the back of the station.

2. Adjust required voltage from the red switch at the back of the station.

3.Plug the power cord into a grounded wall socket. The station is protected against electrostatic discharge and must be grounded for full efficiency.

⚠ Be sure the power switch is OFF before connecting or disconnecting the power cord. Failure to do so may result in damage to the circuit board.

CONTROLS, INDICATOR & BUZZER

A. Controls

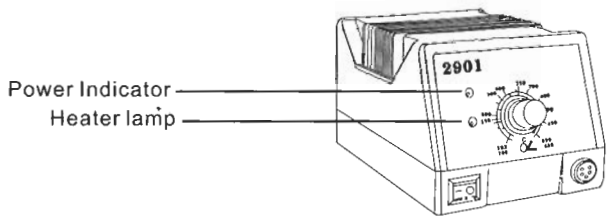
The front panel of the soldering station has a control knob to set the temperature.

B. Light Indicators

There are two indicators on the left side of the panel. The top one is the power indicator and the bottom one is the heater lamp.

The power indicator will light when current is being supplied to the station.

The heater lamp blinks on and off when the tip temperature is reaching the set temperature. When the set temperature has been reached the light will be off.



C. Buzzer

An audible buzzer is provided to alert the operator when:

- The station has reached the set temperature.
- A failure has occurred in the sensor or heater (including the sensor circuit). The buzzer will sound continuously.

⚠ The soldering station is preset at 200°C. The soldering iron temperature will rise to the temperature set on the knob when the station is turned on. Always be careful on handling the soldering iron because the temperature rises quickly.

OPERATION

A. Changing the temperature setting

1. Turn the power ON.

2. Adjust the control knob to set the desired temperature from 200 -480°C. (480-895°F)

⚠ Tip temperature rises quickly to desired setting. A beep sound will be heard when desired temperature has been reached. Temperature drop is dependent on the surrounding environment and takes time to cool down.

B. Replacing the tip

1. Always turn the power OFF when removing or inserting a tip.

2. When the tip is hot, hold it with the heat resistant pad and pull it out.

3. Insert the new tip fully into the handle. If the tip is not fully inserted, beeping sound will be heard when power is turned on.

C. Calibrating the iron temperature

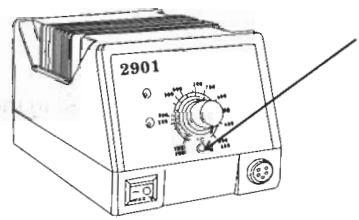
This method requires measuring the tip temperature with a tip thermometer and is recommended for the most accurate process control.

1. Measure the tip temperature through an external thermometer.

NOTE: Allow the tip temperature to become stable.

2. Set the temperature control knob to 400°C(750°F)

3. When the temperature stabilizes, insert a straight edge (-) screwdriver or small plus (+) screwdriver to the small hole below the control knob.



4. Turn the screw counterclockwise to increase the temperature and clockwise to reduce the temperature. Slowly adjust until the temperature offsets.

MAINTENANCE

A. Tip Maintenance

1. Tip Temperature

High temperature shortens tip life and may cause thermal shock to components. Always use the lowest possible temperature when soldering. The excellent thermal recovery characteristics of the 2901 station ensures effective soldering at low temperature.

2. Cleaning

Always clean the soldering tip before use to remove any residual solder or flux adhering to it. Use a clean and moist cleaning sponge. Contaminants on the tip have many detrimental effects including reduced heat conductivity which contribute to poor soldering performance.

3. After use

Always clean the tip and coat it with fresh solder after use. This guards against oxidation.

4. When the unit is not being used

Never allow the unit to stay idle at high temperature for extended periods. This will allow the tip to become oxidized. Turn the power switch OFF if it is to be out of service for several hours. It is advisable to pull the power plug as well.

5. Inspecting and cleaning the tip

This procedure, if followed daily will materially add to tip life.

1. Set the temperature to 250°C.

2. When the temperature stabilizes, clean the tip and check its condition. If the tip is badly worn or deformed, replace it.

3. If the solder plated part of the tip is covered with black oxide, apply fresh solder containing flux and clean the tip again. Repeat until all the oxide is removed then coat the tip with fresh solder.

⚠ Never file the tip to remove oxide.

4. Turn the power OFF and remove the tip using the heat resistant pad. Set the tip aside to cool.

5. Remaining oxides such as the yellow discoloration on the tip shaft can be removed with isopropyl alcohol.

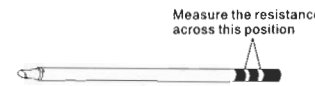
MAINTENANCE

B. Checking Procedure

⚠ Unless otherwise directed, carry out these procedures with the power switch OFF and the power cord UNPLUGGED.

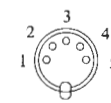
- Check for a broken heater

Verify the electrical integrity of the heater and sensor. Measure the resistance of the heater and sensor while at room temperature. It should be 7.5-12Ω. If the resistance exceeds these limits, replace the tip.



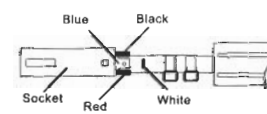
- Check the grounding line

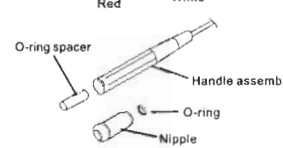
1. Unplug the soldering iron cord from the station.
2. Measure the resistance value between Pin 3 and the soldering iron tip.
3. If the value exceeds 2Ω (at room temperature), perform tip maintenance. If the value still does not decrease, check the connection cord for breakage.



- Checking the connection cord for breakage.

1. Remove the soldering tip and the nipple.
2. Push the socket out from inside the handle assembly.
3. Measure the resistance values between the connector and the lead wires at the socket as follows:
   Pin 1- Red (+)
   Pin 3- Blue (ground)
   Pin 5- Black (-)
   If any value exceeds 0Ω or is ∞, replace the handle assembly.



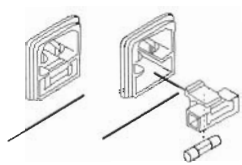


⚠ Do not loose the O-ring located inside the nipple. When reassembling, match the convex part of the handle assembly with the concave parts of the O-ring spacer and socket.

MAINTENANCE

- Check the grounding

1. Unplug the power cord from the power receptacle.
2. Remove the fuse holder.
3. Replace the fuse.
4. Put the fuse holder back in place.



TROUBLESHOOTING GUIDE

⚠ Before checking the inside part of the station or replacing parts, be sure to disconnect the power plug. Failure to do so may result in electric shock.

• The unit does not operate when the power switch is turned on.	**CHECK:** Is the power cord and/or the connection plug disconnected? **ACTION:** Connect it. **CHECK:** Is the fuse blown? **ACTION:** Investigate why the fuse blew and then replace the fuse. If the cause can not be determined, replace the fuse. If the fuse blows again, send the unit for repair.
• The tip does not heat up.	**CHECK:** Is the power cord and/or the connection plug connected? **ACTION:** Connect it. **CHECK:** Is the tip inserted properly? **ACTION:** Insert the tip completely. **CHECK:** Is the connection cord and/or the heater/sensor broken? **ACTION:** See the appropriate section of this manual regarding how to check the connection cord and/or the heater/sensor for breakage.
• Solder does not wet the tip.	**CHECK:** Is the tip temperature too high? **ACTION:** Set appropriate temperature. **CHECK:** Is the tip contaminated with oxide? **ACTION:** Remove the oxide (see Tip maintenance on p.8)
• The tip temperature is too high.	**CHECK:** Is the connection cord broken? **ACTION:** See "Checking the connection cord for breakage" on p.9 **CHECK:** Is there a temperature offset? **ACTION:** Calibrate.
• The tip temperature too low	**CHECK:** Is the tip contaminated with oxide? **ACTION:** Remove the oxide (see Tip maintenance on p.8) **CHECK:** Is there a temperature offset? **ACTION:** Calibrate.

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