57200

SOLDERING STATION

Operation and Maintenance Manual

High Frequency Heater
Resume Temperature Quickly

●

Thank you for purchasing our Soldering Station.

Please read this manual before operating the station.

Store the manual in a safe, easily accessible place for future reference.

●

Table of Contents

Packing List

Please check the contents of the station package and confirm that all the items listed below are included.

Soldering Station 1
Soldering Iron 1
Iron Holder(With Cleaning Sponge)..... 1
Instruction Manual 1
Tip or Tip Enclosure removal Pad 1
Grounding Cord 1

Precautions

In this instruction manual, "warning"、"caution" and "Note" are defined as follows.

⚠ WARNING

⚠ WARNING: Misuse may potentially cause death of, or serious injury to, the user.

⚠ CAUTION : Misuse may potentially cause injury to the user or physical damage to the objects involved.
For your own safety, be sure to comply with these precautions.

NOTE: A NOTE indicates a procedure or point that is important to the process being described.

⚠ CAUTION

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

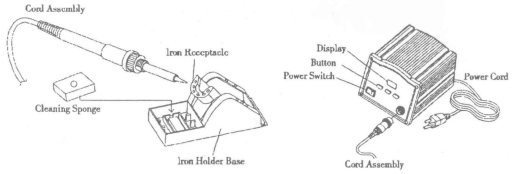
- Please avoid an abuse of the equipment, use the appliance only in the described manner!
- Do not touch the metallic parts near the Tip.
- Do not use the product near flammable items.
- Advise other people in the work area that the unit can reach a very high temperature and should be considered potentially dangerous.
- Turn the power off while taking breaks and when finished using the unit.
- Before replacing parts or storing the unit, turn the power off and allow the unit to cool to room temperature.

⚠ CAUTION

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 the equipment)
- Don't use or stop the use if the appliance 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 applications other than soldering.
- Do not rap the soldering iron against the work bench to shake off residual solder, or otherwise subject the iron to severe shocks.
- Do not modify the unit.
- Use only genuine replacement parts.
- Do not wet the unit or use and disconnect the unit when your hands are wet and without to force 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.
- Children don't recognize the risks of electrical appliances . Therefore use or keep the appliance only under supervision of adults and out of the reach from children.

Names of Parts

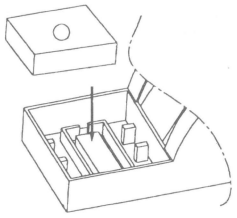


Setting up &Operating the soldering station

⚠CAUTION: The sponge is compressed. It will swell when moistened with water.
Before using the unit, dampen the sponge with the water and squeeze it dry.
Failure to do so may result in damage to the soldering tip.

A. Iron Holder

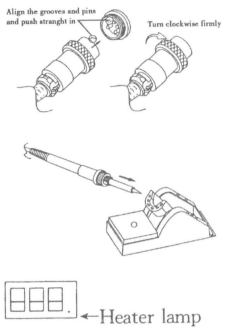
1. Small Cleaning Sponge
   Dampen the small cleaning sponge with water and then squeeze it dry.
   Place it in one of the openings of the iron holder base.
2. Add water to approximately the level as shown. The small sponge will absorb water to keep the larger sponge above it wet at all times.
   * The large sponge may be used alone (without small sponge & water).
3. Dampen the large cleaning sponge and place it on the iron holder base.



⚠CAUTION: Be sure to turn off the power switch before connecting or disconnecting the soldering iron. Failure to do so may damage the soldering station.

B. Connections

1. Connect the cord assembly to the receptacle.
2. Place the soldering iron in the iron holder.
3. Plug the power cord into a power supply. Be sure to ground the unit.
4. Turn the power switch on.
   The temperature is preset at 300℃ or 350℃ at the factory.
   The heater lamp flickers when the temperature has stabilized.
5. Press the * button to display the preset temperature. It will be displayed for two seconds.



C. Setting the Temperature

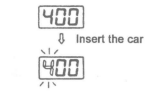
Set Temperature Normally.

⚠CAUTION: Make sure the temperature of the station can be adjusted(password is OK or the password is initial). While setting the temperature normally, the heating element is off.

If the " * " button is pressed for less than one second, the present temperature setting will be shown for two seconds and then the display will return to showing the tip temperature.

Example: 400°C to 350°C

1.



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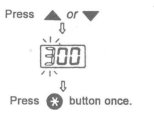

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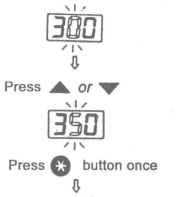
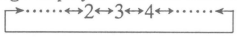
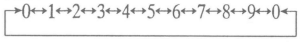


4.

1. Push the " * " button and hold it down for at least one seeond. The left – most digit (the 100's digit) in the display will flash. This indicates that the station is in temperarure setting mode and that the 100's digit can be adjusted.
2. Select the desired value for 100's digit.
   Using the "▲" or "▼" button will change displayed value as follows.
   

   Press the " * " button when the desired value is displayed.
   This will cause the middle digit (the 10's digit) in the display begin flashing.
3. Select the desired value for the 10's digit.
   Using the "▲" or "▼" buttons will change the displayed value as shown below.
   

   Press the " * " button.
   The right (the 1's digit) will then begin flashing to indicate that the 1's digit can be set.
4. Select the desired value for the 1's digit.
   Using the "▲" or "▼" buttons will change the displayed value as shown above for the 10's place selection.
   Press the " * " button.
   Here, pressing the " * " button···

a) enters the temperature setting into the internal memory.
b) displays the temperature setting, and
c) starts heater control.

Note: If you turn off the power switch during the temperature setting, setting value will not be stored in the memory.

If a temperature value outside of this range is selected, the display will return to flashing the 100's place. If this happens, reenter a correct temperature value.

Set temperature on – line

In the work, if it is necessary to set temperature quickly and the heat elements can not cut off, the way may be selected.

Temperature raising:

Don't press " * " knob and press "▲" knob directly. If so, the setting temperature will raise 1℃ and the display window will display the set temperature. When loose the "▲" knob, the display window will relay the set temperature about 2 seconds. If within 2 seconds of time, press the "▲" knob again, the setting temperature will raise 1 ℃ again. If press the "▲" knob and not loose at least 1 second, the setting temperature will raise rapidly. Till the needed temperature reaches, then loose the "▲" knob.

Temperature dropping:

Don't press " * " knob and press "▼" knob directly. If so, the setting temperature will drop 1℃ and the display window will display the set temperature. When loose the "▼" knob, the display window will relay the set temperature about 2 seconds. If 2 seconds later, press the "▼" knob again, the setting temperature will drop 1℃ again. If press the "▼" knob and not loose at least 1 second, the setting temperature will drop rapidly. Till the needed temperature reaches, then loose the "▼" knob.

Parameters

The station has the following parameters. Parameters settings can be adjusted:
Setting the password.
The initial password in station's memory is"000". The setting temperature is admitted in this state. If need to restrict the setting temperature, the password must be changed.

Enter into Setting the Password

1. Turn off the power switch. Press and hold the"▲" and "▼"buttons simultaneously, then turn on the power switch.
2. Continue holding down the "▲" and "▼" buttons until the display shows"C".
3. When the display shows"C", the station is in parameter－input mode.

Input Previously Password

4. Press the " * " buttons, the display shows [－－－], and the left － most digit (the 100's digit) in the display will flash. This indicates the station is in password setting mode and the 100's digit can be adjusted. Using the"▲"or "▼"button will change displayed Value. Set the password Value in the same manner described in " set temperature normally".
After selected the password of three digit, press" * "button.

The imput Password is error

5. If the display window shows the present setting temperature, two senconds later, the station is in normal work state. This indicates the password of input is error, and the setting temperature can't do.

The Password of input is correct

6. If the display window shows [□ ⊦], this indicates the password of input is correct. After display about 4 seconds, the station comes into normal work state, and the setting temperature will be admitted.

Input New Password

7. When display window is showing [□ ⊦], Press" * " button, and shows [－－－], It indicates it comes into inputting new password state. Pressing "▲" or "▼" button will change displayed Value. See"set temperature normally".

Repeat the New Password

8. When three digits are selected, press" * "button, the display window shows [－－－] again. Now must input the new password. Repeat the same way.

9. If the password is same as last time, the changed password is OK. The new password is stored into the internal memory.
10. If the password is not same as last time, and the display Window shows [- - -], the station will need to rewrite new password. (see the last 8 – 9 step). The change password is finshed untill the lately two passwords are equal.

* Note: The word of password is 0 to 9, ten words. If not, the changed password is unsuccessful.

Working Mode Setting

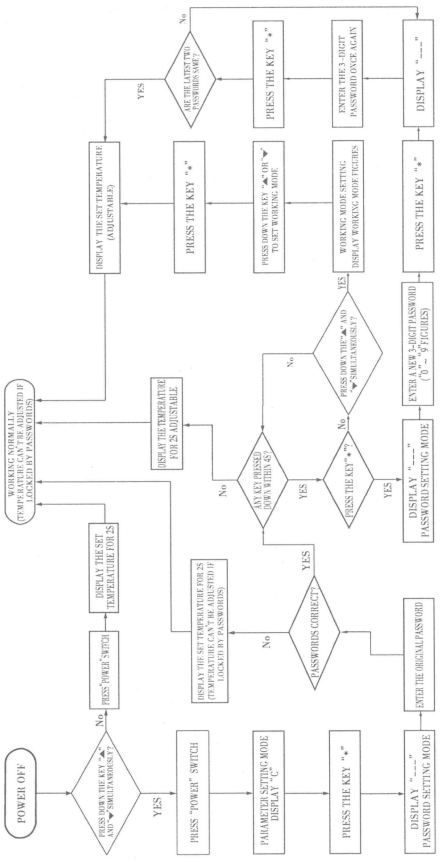
If the display Window shows [□ ⊦], press and hold the "▲"and"▼" buttons simultaneously, the display shows [X], This indicates the unit comes into working mode setting state, Pressing "▲"or"▼" button will change displayed valve as shown below:

→0↔1↔2↔3↔4↔5↔6↔7←
→7.↔6.↔5.↔4.↔3.↔2.↔1.↔0.←

After selecting the working mode press "＊"down. The working mode is stored into the internal memory.
Please refer to the "Working Mode Table" for the meaning of the digit displayed.

Note: "X" represents the original working mode digit.

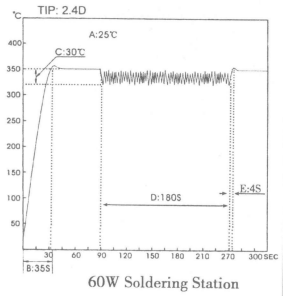
⚠ **Warning: The heater and soldering tips will be seriously oxidized or damaged if working with a high temperature, So please chose the working mode carefuly and try to operate with lower temperatme if possible.**



WORKING MODES TABLE

WORKING MODE	HANDLE MODE	TEMPERATURE RANGE	AVAILABLE FOR HIGH FREQUENCY MAIN UNIT	AUTO SLEEPING AND SWITCHING OFF
0	High frequency soldering iron	200℃ – 420℃	60W Station	Yes
1	High frequency soldering iron	200℃ – 420℃	90W Station	Yes
2	High frequency special very large type of soldering tip	200℃ – 420℃	60,90W Station	Yes
3	High frequency tweezers stripper iron	50℃ – 600℃	60,90W Station	Yes
4	High frequency soldering iron	50℃ – 420℃	60W Station	Yes
5	High frequency soldering iron	50℃ – 420℃	90W Station	Yes
6	High frequency soldering iron	200℃ – 480℃	60W Station	Yes
7	High frequency soldering iron	200℃ – 480℃	90W Station	Yes
0.	High frequency soldering iron	200℃ – 420℃	60W Station	No
1.	High frequency soldering iron	200℃ – 420℃	90W Station	No
2.	High frequency tweezers or using special very large type of soldering tip	200℃ – 420℃	60,90W Station	No
3.	High frequency tweezers stripper	50℃ – 600℃	60,90W Station	No
4.	High frequency soldering	50℃ – 420℃	60W Station	No
5.	High frequency soldering	50℃ – 420℃	90W Station	No
6.	High frequency soldering iron	200℃ – 480℃	60W Station	No
7.	High frequency soldering iron	200℃ – 480℃	90W Station	No

Temperature rising and heat recovery curve



60W Soldering Station

TEST CONDITIONS
PCB: Copper Plate
Soldering Point: 1.6×ø5mm
Period: Solder every 3 Seconds

ILLUSTRATION
A: Room temperature
B: Time of temperature rising
C: Temperature drop
D: Working time
E: Heat recovery time

Sleeping

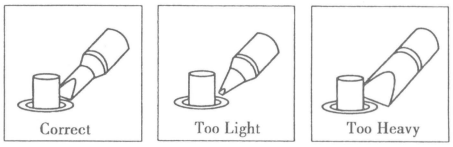
If sleeping and working mode are selected, and the soldering iron is not used for 20 minutes, the power to the heating element will be decreased, and the display show [- - -], This state is sleeping mode. When the station is in sleeping mode, the tip temperature will decrease to 200℃ (if the set temperature is more than or equal to 200℃) or 50℃ (if the set temperature is less than 200℃) and remain the temperature until resuming the station.

To resume soldering, there are below ways:
1. Cycle the power switch OFF, then ON.
2. Hit any button.
3. Take up the iron – handpiece.

If the soldering station is not resumed more than 40 minutes after it comes tosleep, the power supply will be shut off automatically, And the display window will not show anything.

To Select The Correct Tip For A Solder Application

1. Pick 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. Pick a tip that allows good access to the solder joint. Shorter tip lengths allow more precise control. Longer or angled tips may be needed for soldering densely populated boards.



Tip Care and Use

• Tip Temperature

High soldering temperatures 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 soldered 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 tip's 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 for long periods of time, as the tip's solder plating will become cov ered with oxide, which can greatly reduce the tip's heat conductivity.

• After Use———

Wipe the tip clean and coat the tip with fresh solder.
This helps prevent tip oxidation.

Maintenance

Inspect and Clean the Tip

⚠ Caution: Never file the tip to remove oxide

1. Set the temperature to 250°C
2. When the temperature stabilizes, clean the tip with the cleaning sponge and check the condition of the tip.
3. If there is black oxide on the sloder – plated portion of the tip, apply new solder (containing flux) and wipe the tip on the cleaning sponge. Repeat until the oxide is completely removed. Coat with new solder. The solder protects the tip from oxidation and prolongs the life of the tip.

4. If the tip is deformed or heavily eroded, replace it with a new one.

Why A "Detinned" Tip Fails To Work

A detinned tip is one not wetted with solder. This exposes the plating to oxidation and degrades the heat transfer efficiency of the tip. Detinning is caused by:

a. Failure to keep the tip covered with fresh solder during idling periods.
b. High tip temperatures.
c. Lack of sufficient flux in soldering operations.
d. Wiping the tip on dirty or dry sponges and rags. (Always use a clean, wet, industrial grade, sulfur-free sponge.)
e. Impurities in the solder, iron plating, or on the surfaces to be soldered.

To Restore A Detinned Tip

1. Remove the tip from the solder handle and allow the tip to cool down.
2. Remove scale and oxides from the tinned area of the tip with 80-grit abrasive polyurethane foam stock or a 100-grit emery cloth.
3. Wrap rosin core solder (0.031" diameter or larger) around the newly exposed iron surface, insert the tip into the handle, and turn on the system.

NOTE: Detinned tips are preventable with proper daily care!

Extending Tip LIfe

1. Tin the tip before and after each use. This protects the tip from oxidizing, prolonging tip life.

2. At the lowest temperature that will do the job. Lower temperatures decrease tip oxidation and are easier on the components being joined.
3. Use fine point tips only when necessary. The plating on fine precision tips is less durable than the plating on blunter tips.
4. Do not use the tip as a prying tool. Bending the tip can cause the plating to crack, shortening tip life.
5. Use the minimum activation flux necessary to do the job. Higher activation flux is more corrosive to the tip plating.
6. Extend tip life by switching the system off when not in use.
7. Don't apply pressure to the tip. More pressure does not equal more heat. To improve heat transfer, use solder to form a thermal bridge between the tip and the solder joint.

Calibrating the Iron Temperature

The soldering Iron should be recalibrated after changing the iron, or replacing the heating element or tip.

Method of recalibrating temperature: Use the thermometer to calibrate.

1. Set the unit's temperature to a certain value.
2. When the temperature stabilizes, measure the tip's temperature with thermometer and write down the reading.
3. Press" * "button not loose and press the " ▲" and" ▼" buttons simultaneously, the soldering station enters into calibration mode.
4. At the moment, the 100's digit of LED display temperature is flashing. Press the " ▲" and" ▼" buttons to select the value and press the" * "button to select the digit. Press" * "button after inputting the reading. Here, the calibration operation has been finished .
5. If the temperature still has deflection, you can repeat calibration in accordance with above steps.

* We recommend to use the 191/192 thermometer for measuring the tip temperature.
* If the unit is locked by password, it will not be able to calibrate and you must input the right password.

Error Messages

Various error messages will be displayed when there is a problem with the unit. If the following message is displayed, see the trouble shooting guide.

S – E Sensor Error	If there is a possibility of a failure in the sensor or anywhere in the sensor circuit, S – E will be displayed and power to the soldering iron will be cut off.
Flash of the Temperature Display **Note**	If power is being sent to soldering iron and the tip temperature goes below the setting temperature about 80℃, the temperature display will flash. This remind you notice to solder.
H – E **Heater Error**	If power can't be sent to soldering iron the display windows will show H – E, This indicates the possibility of a heater malfunction.

Trouble Shooting Guide

⚠WARNING: * Disconnect the power plug before servicing.
Failure to do so may result in electric shock.

* If the power cord is damaged, it must be replaced by the manufacturer, its service agent or similarity qualified person in order to avoid personal injury or damage to the unit.

Problem 1. The unit does not operate	Check 1. Is the fuse blown? • Determine why the fuse blew and eliminate the cause, then replace the fuse. a. Is the inside of the iron short – circuited? b. Is the grounding wire touching the heating element? c. Is the heating element lead twisted and short – circuited? Check 2. Is the power cord broken? • Replace with new one.
Problem2. The tip does not heat up. Sensor Error [S–E] is displayed.	Check 3. Is the Soldering iron cord broken? • See how to check the breakage of cord assembly. • Check 4. Is the sensor element broken? • See how to check the breakage of heating and sensor element.
Problem 3. The tip heats up intermittently	Check 3 Check 4
Problem 4. Solder will not wet the tip	Check 5. Is the tip temperature too high? • Set an appropriate temperature. Check 6. Is the tip cleaned? • See"Tip Care and Use".
Problem 5. The tip temperature is too low.	Check 7. Is the tip coated with oxide? • See "Inspect and clean the tip". Check 8. Is the iron calibrated correctly? • Please recalibrate.

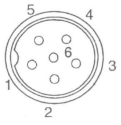
Problem 6. Heater error [H–E] is displayed.	Check 9. Is the soldering Iron cord broken? • See how to check the breakage of cord assembly. Check 10. Is the heating element broken? • See how to check the breakage of heating and sensor element. Check 11. Is there a tip on the iron? • Assemble a tip on the iron.
Problem 7. Temperature Value are displayed frequently	Check 12. Is the soldering iron cord broken? • See how to check the breakage of heating and sensor element. Check 13. Is the item to be soldered too big? • Use a higher out power iron or ignore.
Problem 8. Can't set the temperature	Check 14. Locked the button on the panel. • Enter into setting the password. If you have forgot the password: Disassemble the Front parel (see partlist – station), plug the power into a power supply, turn the power switch on. Press the "D – S" button on inside PWB(see parts list). The password will be resume to "000". Assembly it in the reverse order of dissassembly.

Problem 9. Soldering iron heats up contiually, with the indicator always lightening.	Check 15. Is the sensor (with polarity) connected oppositely? • Resolder the sensor wire. Check 16. Is the sensor short – circuited? • Replace the sensor.

Checking for Breakage of the Heating Element and sensor Element and Cord Assembly

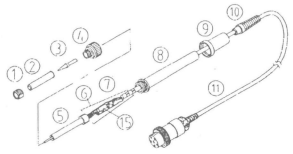
Disconnect the plug and measure the resistance value between the connecting plug pins as follows.
If the values of 'a' and 'b' are outside the above value, replace the heating element (sensor) and/or cord assembly. Refer to procedures 1 and 2 .
If the value of 'c' is over the value in the following table, remove the oxidization film amomg the tip, tip enclosure and the nut lightly with the sand – paper or steel wool.

a.	Between pins 4 & 5 (Heating Element)	under 4Ω (Normal)
b.	Between pins 1 & 2 (Sensor)	under 10Ω (Normal)
c.	Between pins 3 & Tip	Under 2Ω

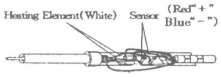


1. Broken Heating and Sensor Element

Disassembling the handle



1. Turn the nut (1) counterclockwise and remove the tip enclosure (2), the tip (3).
2. Turn the nipple (4) counterclockwise and remove it from the iron.
3. Pull both the heating element (5) and the cord assembly (11) out of the handle (8). (Toward the tip of the iron).
4. Do not use metal tools such as pliers to remove tip or Tip enclosure from – the handle.



Measure when the heating element is at room temperature

1. Resistance value of heating element (White) under 4Ω.
2. Resistance value of sensor (Red and Blue) under 10Ω.

If the resistance value is not normal, replace the heating element (Refer to the instructions included with the replacement part.)

Measure when the heating element is at room temperature.

1. Measure the resistance value between
   1) pins 4 & 1 or 2
   2) pins 5 & 1 or 2. 3) pins 6 & 1 or 2. 4) pins 6 & 4 or 5. If it is not ∞, the heating element and sensor are touching. This will damage the P. W. B.
2. Measure the resistance value 'a', 'b', and 'c' to confirm that the leads are not twisted and that the grounding wire is properly connected.

3. To confirm that the clasp (6) is clasped with heating element(5).

2. Broken Soldering Iron Cord

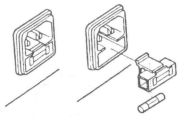
There are two methods of Testing the soldering iron cord.

1. Turn the unit ON and set the temperature control knob to highest. Then wiggle and kink the iron cord at various locations along its length, including in the strain relief area. If the LED heater lamp flickers, then the cord needs to be replaced.

2. Check the resistance between the pin of the plug and the wire on the terminal.

Pin 1: Blue Pin 2: Red Pin 3: Green Pin 4: Shielded Conductor Pin 5: White Pin6: White, The value should be 0. If it is greater than 0 or is ∞, the cord should be replaced.

3. Replacing the fuse



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

Specification

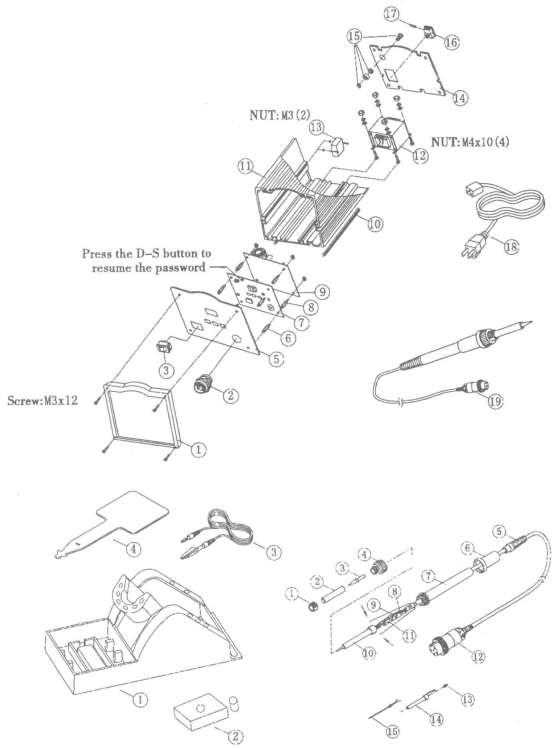
Item	QUICK203H 90W	
Power Consumption	60W	90W
Output Voltage/Frequency	36V,400KHz	
Range of temperature	Decide by working mode	
Max Ambient Temperatune	40℃	
Temperature Stability	±2℃/Without air flow and no load	
Housing Material	Aluminum	
Outer Dimension	160(L)×130(W)×100(H)mm	
Weight(Cord not included)	2000g	2600g

Soldering Iron

Power consumption	36VAC−50W	36VAC−80W
Tip to Ground Resistance	<2Ω(DC)	
Tip to Ground Potential	<2mV(True RMS)	
Heating Element	High Frequency Winding	
Power Cord Assembly	1.2m	
Length Cord	190mm	
Weight	105g	

- The tip temperature was measured using 191 thermometer.
- Specifications and design subject will be changed without notice.

Parts List(Station/Iron Holder/Iron)



Item No.	Part No.	Part Name	Description
1	42009	Carapace	Black
2	12012	Recptacle	6 Pins
3	12021	Power Switch	Red
5		Panel	
6		Tapped Spacer	Cu
7	47040	Control P. W. B	
8		Tapped Spacer	Cu
9	47026	Driving P. W. B	60W
	47110	Driving P. W. B	90W
* 10		Rubber Stopper	
11	43009	Enclosure	Aluminum
12	18008. 100	Transformer	60W – 100V – 36V
	18008. 110	Transformer	60W – 110V – 36V
	18008. 200	Transformer	60W – 220V – 36V
	18008. 230	Transformer	60W – 230V – 36V
	18069. 100	Transformer	90W – 100V – 36V
	18069. 110	Transformer	90W – 110V – 36V
	18069. 200	Transformer	90W – 220V – 36V
	18069. 230	Transformer	90W – 230V – 36V
13	12014	Filter	
14	43011	Rear Panel	
15	12013	Ground connector	
16	12019	Socket	
17		Fuse/1A	220 ~ 240V
		Fuse/2A	100V ~ 120V
18	11002	Power Cord	3 Wired Cor&Chinese Plug
	11003	Power Cord	3 Wired Cor&American Plug
	11005	Power Cord	3 Wired Cor&European Plug
19		Handle	Assembly(Without vibrator)

Accessory:

Item No.	Part No.	Part Name	Description
1	47031	Iron Holder	
2	20002	Cleaning Sponge	
3	47030	Grounding Cord	
4	45007	Tip or Tip Enclosure Removed Pad	

The Assembly Handle:

Item No.	Part No.	Part Name	Description
1	44058	NUT	
2	44057	Tip Enclosure	
3		Soldering Tip	Refer to the Last Page
4	42079	Nip	
5	42042	Cord Board	
6	45020	Handle Cover	
7		Handle	
8	13006	Terminal Board	
9	14009	Clasp	
10	47027	Heater Combination	
11	12022	Vibrator	
12	12045	Pin 6 Conector(metal)	
13	14015	Spring	
14	47062	Heating Element	
15	47063	Sensor Element	

* Option

Tips