

HAKKO 933 SOLDERING IRON 934

Instruction Manual

Thank you for purchasing the HAKKO 933/934 Soldering Iron. This Manual describes the use and maintenance of the HAKKO 933/934. Please thoroughly read this Manual before operating the HAKKO 933/934 Soldering Iron. After reading, please keep it in a safe place for future reference.

Packing List

Please check following items are included in the HAKKO 933/934.	*390°C Temp. Button is inserted into the soldering iron.
Soldering Iron.....1	Instruction Manual.....1
Temp. Button3	
360°C, 390°C, 420°C	

SAFETY INSTRUCTIONS



CAUTION

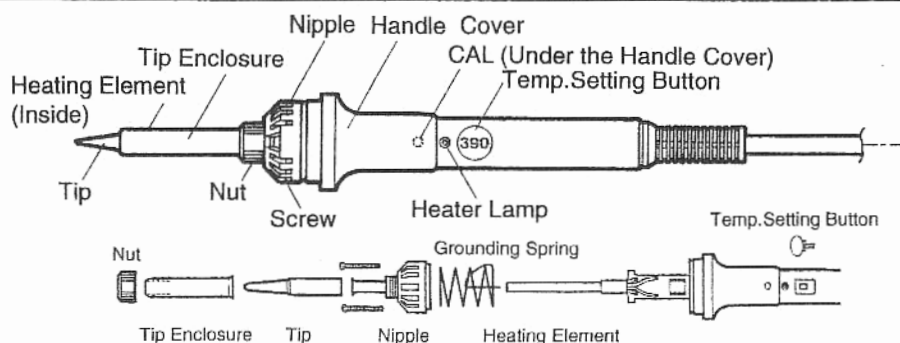
High temperature

- The tip temp. ranges from 300 to 480°C. The area surrounding the tip & solder are extremely hot as well. Careless use may cause severe burns or fire.
- Do not touch the area around the tip.
- Do not use the unit next to the flammable materials. Warn the other people in the area of the danger.
- Remove the power cord from the outlet when the unit is not in use.
- Unplug the power cord before servicing (or storing) and wait until the unit has cooled completely.

Guard against personal injury & electric shock

- Do not use the soldering iron for any purpose other than soldering.
- Unplug the power cord before servicing or changing the temp. button.
- Do not insert your fingers, the tip of a screwdriver, or any other object into the temp. button hole.
- Do not drop or strike the iron or otherwise subject it to excessive shocks, as this may result in breakage.

Parts Name



■ Specifications

Name	HAKKO 933	HAKKO 934
Power Consumption	51W	
Temp. Setting*	360°C • 390°C • 420°C	
Temperature	390 ± 10°C (when shipped from factory)	
Temp. Stability**	± 1°C	
Heating Element	Ceramic	
Sensor	Tungsten Sensor set into Heating Element	
Leak Voltage***	Max. 0.6mV (Difference in potential between tip and ground)	
Tip to Ground*** Resistance	Max. 2Ω	
Length	200mm	210mm
Weight	55g	65g

*Temp. Button 300°C, 330°C, 450°C, 480°C are available as option.

**Tolerance at idling time.

***Grounded type only.

■ Replacement Parts & Options

When ordering replacement parts & options, be sure to select the correct part number for your soldering iron model and voltage.

No.	Name	For
B1773	Grounding Spring	933
B1774	Grounding Spring	934
B1766	Temp. Setting Button 300°C	933, 934
B1767	Temp. Setting Button 330°C	933, 934
B1768	Temp. Setting Button 360°C	933, 934
B1769	Temp. Setting Button 390°C	933, 934
B1770	Temp. Setting Button 420°C	933, 934
B1771	Temp. Setting Button 450°C	933, 934
B1772	Temp. Setting Button 480°C	933, 934
B1764	100 ~ 110V P.W.B.	933, 934
B1866	220 ~ 240V P.W.B.	933, 934
B1762	Handle W/Cover	933, 934
B1782	Nipple	933
B1783	Nipple	934
B1763	Handle Cover	933, 934
A1232	100V, Heating Element	933, 934
A1272	110V, Heating Element	933, 934
A1273	220V, Heating Element	933, 934
A1274	230V, Heating Element	933, 934
A1275	240V, Heating Element	933, 934
B1784	Nut	933
B1794	Nut	934
B1786	Tip Enclosure	933
B1787	Tip Enclosure	934

Setting the temp. and calibrating the unit before use

Before starting work operations, you should set the temperature and calibrate the unit. At the factory, the 390°C temperature button is inserted into soldering iron and calibration is performed.

The unit should be recalibrated whenever changing the temp. button, inserting a tip of a different shape or replacing the heating element.

1. Insert the desired Temp. Button

CAUTION

Temperature buttons should only be inserted while the power is off. Do not insert your fingers, the tip of a screwdriver, or any other object into the temp. button hole.

Also make sure that no solder scraps or metal fragments fall into the hole. Any of these situations may result in electric shock or short-circuits.

After confirming that the power is off, pull out the currently inserted button and insert the desired one.

2. Temp. Calibration

CAUTION

-When calibrating the soldering iron, use a new tip as the temperature of a used tip may be lower than normal due to deterioration.

-Do not set the temperature above 480°C during the CAL adjustment, as this may damage the unit.

-We recommend that you use the HAKKO 191 or HAKKO 192 Soldering Iron Tester to measure the tip temperature.

- ① Pull back the handle cover to expose the CAL adjustment hole.
- ② Insert the plug of the power cord into the outlet.
The heater power lamp will begin blinking when the soldering iron has reached the set temperature.
- ③ While measuring the tip temperature; with a tip thermometer, adjust the CAL using straight-edge(-)screwdriver. Turning the CAL clockwise increase the temperature; turning it counter-clockwise decrease the temperature.

Maintenance

WARNING

-Unplug the power cord before replacing parts or performing maintenance and wait until the unit has cooled completely. Leaving the unit plugged in during maintenance may result in severe burns or electric shock.

1. Replacing the Tip

A. Remove the nut and tip enclosure then replace the tip.

CAUTION

Use a tool to tighten the nut securely. Failure to tighten the nut securely may result in increased ground resistance, heating element breakage or disconnection.

B. Adjust the CAL to calibrate the unit.

C. Before storing the unit, clean the tip and then cover it with fresh solder to prevent oxidation.

2. Replacing the Heating Element

A. Remove the temp. button.

B. Remove the nut and disassemble the tip section.

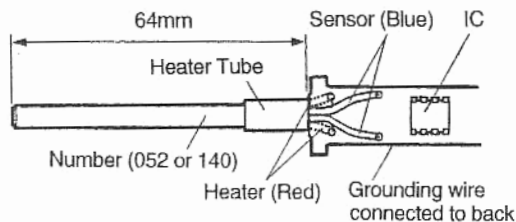
C. Remove the screws and then remove the nipple.

D. Carefully pull out the heating element and P.W.B., then remove the grounding spring.

E. Measure the heater and sensor resistance values. If these values are not within specifications, remove the heating element from the board. Normal values are shown in the table below.

	Color	100/110V	220-240V
Heat Resistance	Red	42-61Ω	112-168Ω
Sensor Resistance	Blue	40-55Ω	

F. Place a new heating element on the board as shown in the figure below and solder it into place. Check the number printed on the new heating element. Errors in replacement may result in failure or accident.



Model	Specification	Number
933/934	100,110V	052
933/934	220-240V	140

CAUTION

Solder the wires so that the solder in the lead hole can be seen from both sides of the board.

Insert the heater lead (RED) from the opposite of IC.

G. Cut away the unneeded portion of the lead wires and then cover the heater terminal with the heater tube.

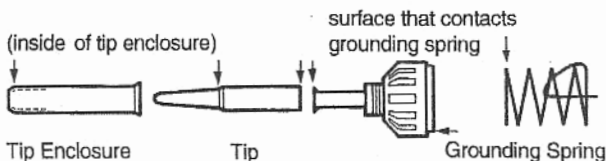
H. Securely insert the grounding spring into the round sleeve on the opposite side from the lead wire.

I. Replace the board along the groove on the grip, making sure that the temperature button socket is facing the right direction.

J. Reassemble by following the disassembly procedure in reverse, and adjust the CAL to calibrate the unit.

3. Cleaning the ground line.

Using sandpaper, remove any oxides and carbides from the sections indicated by the arrows in the figure below. Cleaning must be done periodically for maximum effectiveness.



Troubleshooting

1. Iron does not heat up.

Iron is not properly connected → Connect properly, to power source.

Heater burnout. → Replace heating element.

2. Iron is sometimes hot and sometimes cold.

Short in cord. → Replace cord.

Improper soldering during replacement of heating element → Resolder.

3. Temperature is low for soldering.

Temperature setting is low. → Reset.

Temperature has not been properly calibrated. → Recalibrate.

Nut is not been fastened tightly enough. → Refasten.

Tip is worn. → Replace tip.

4. Iron does not reach set temperature.

Improper CAL adjustment → Recalibrate temperature.

Tip is worn. → Replace tip and then recalibrate temperature.

5. Solder is not affixed properly to soldering point.

Tip temp. setting is too high. → Reduce temperature setting.

Tip is worn. → Replace tip.

6. Tip will not come loose.

Heating element and tip have been fused together. → Replace tip & heating element.

Tip is worn and has expanded. → Replace tip and heating element.

7. Abnormal leak voltage and ground resistance.

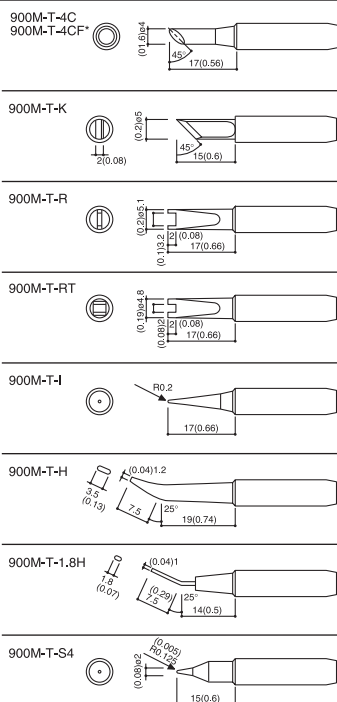
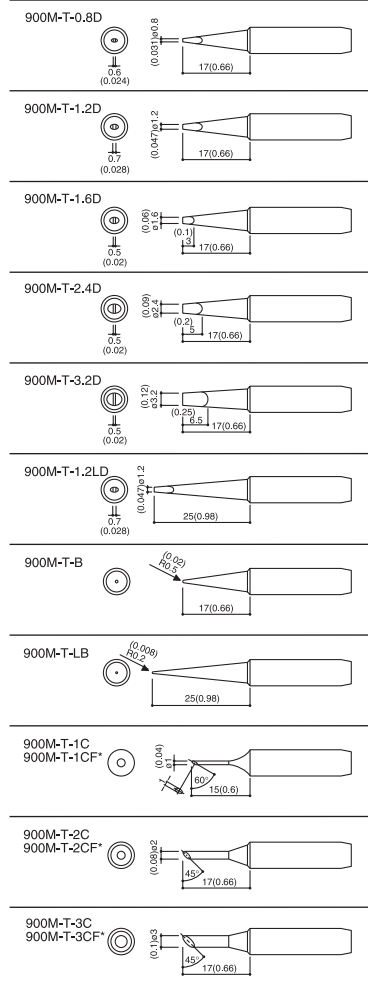
Ground line has not been cleaned properly. → Clean ground line.

Nut is not fastened tightly enough. → Refasten.

Grounding spring has come loose. → Connect, loose.

Tips

HAKKO 933 (Common with 900M)

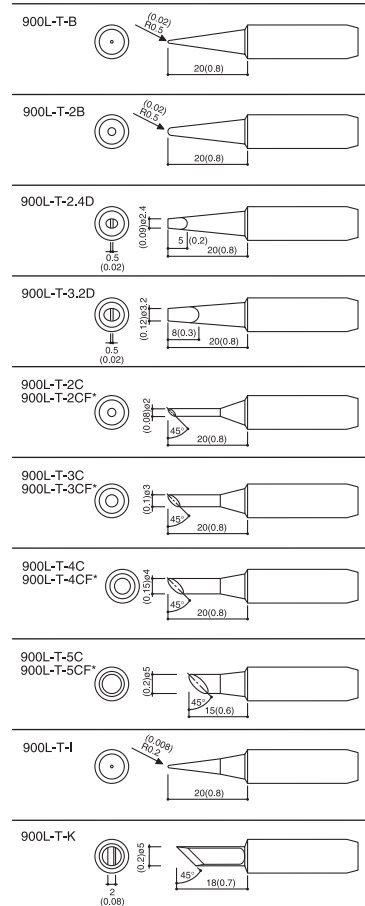


◆900M Tip Out Diam ø6.5

★-These tips are tinned flat only.

HAKKO 934 (Common with 900L)

When you need more powerful soldering capabilities, use the Model 900L soldering iron featuring a larger tip size.



◆900L Tip Out Diam ø8.5

★-These tips are tinned flat only.

中國RoHS: 產品中有毒有害物質或元素的名稱及含量



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	鉛(Pb)	汞(Hg)	鎘(Cd)	六價鉻(Cr(VI))	多溴聯苯(PBB)	多溴二苯醚(PBDE)
螺帽	×	○	○	○	○	○
套頭	×	○	○	○	○	○
插針	×	○	○	○	○	○
溫度設定按鈕	×	○	○	○	○	○
電路板	×	○	○	○	○	○
插頭	×	○	○	○	○	○
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