

HAKKO 951·952

SOLDERING GUN

Instruction Manual

Thank you for purchasing the Hakko 951/952 soldering gun.
 This soldering gun has a built-in feeding mechanism that enables soldering with one hand.
 Please read this manual before operating the Hakko 951/952.
 Keep this manual readily accessible for reference.

⚠ CAUTION

When using this unit for the first time, be sure to calibrate the tip temperature. Specific information can be found in the instruction manual for your particular Hakko station.
 When inserting solder, be sure to push up the trigger and insert the solder until the end of the solder protrudes from the guide nozzle.

Packing List

Soldering gun

Applicable Models

In order to function, the Hakko 951/952 must be connected to one of the following Hakko stations: Hakko 700, 701, 702, 702B, 926, 927, 928, 936, 937.

Specifications

Name	Hakko 951	Hakko 952
Power consumption	AC 24 V 50 W	
Temperature range	200 C–480 C/392 F–896 F	
Tip to ground resistance	Under 2	
Tip to ground potential	Under 2 mV(TYP. 0.6 mV)	
Heating Element	Ceramic heater	
Standard tip	Shape-3C Pre-tinned surface 55 (No.900M-T-S10)	Shape-B (No.900L-T-B)
Standard guide nozzle (Solder diameter)	ø1.0 mm (0.039 in.)	
Usable solder diameter	ø0.6, 0.8, 1.0, 1.2 1.6 mm (ø0.024, 0.031, 0.039, 0.047, 0.063 in.)	
Cord assembly	1.1 m (3.6 ft.)	
Total length (w/o cord) H W D	180 170 23 mm (7.1 6.7 0.9 in.)	
Weight (w/o cord)	177 g (0.39 lbs.)	187 g (0.41 lbs.)

*Specifications and design are subject to change without notice.

Precautions

⚠ WARNING

Warnings and cautions are placed at critical points in this manual to direct the operator's attention to significant items. They are defined as follows:

⚠ **WARNING:** Failure to comply with a WARNING may result in serious injury or death.

⚠ **CAUTION:** Failure to comply with a CAUTION may result in injury to the operator, or damage to the items involved. Two examples are given below.

⚠ CAUTION

When power is ON, tip temperatures will be between 200 C and 480 C. (392 F to 896 F.) To avoid injury or damage to personnel and items in the work area, observe the following:

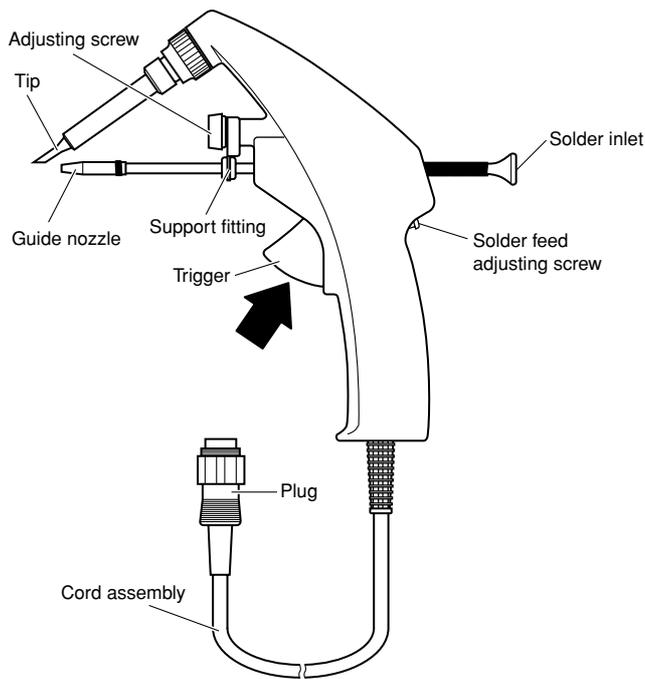
- Do not touch the tip or the metal parts near the tip.
- Do not allow the tip to come close to, or touch, flammable materials. Inform others in the area that the unit is hot and should not be touched.
- Turn the power off when not in use, or left unattended.
- Turn the power off and allow the unit to cool to room temperature when changing parts or storing the Hakko 951/952.

⚠ CAUTION

To prevent accidents or damage to the Hakko 951/952, be sure to observe the following:

- Do not use the unit for applications other than those specifically described in the instruction manual.
- Before using the Hakko 951/952 for the first time, calibrate the tip temperature.
- Do not strike the gun against hard objects to remove excess solder. This will damage the gun.
- Do not modify the Hakko 951/952.
- Use only genuine Hakko replacement parts.
- Do not allow the Hakko 951/952 to become wet, or use it when hands are wet.
- Be sure the work area is well ventilated. Soldering produces smoke.
- Remove power and gun cords by holding the plug – not the wires.

Part Name



Operation

Inserting the solder

Push and hold the trigger upward in the direction of the arrow and pass solder through the solder inlet until it protrudes from the guide nozzle.

CAUTION

The solder may become stuck inside the unit if the trigger is pulled before the solder protrudes from the guide nozzle.

Feeding the solder

Return the trigger to its original position after inserting the solder. Solder can now be fed by pulling the trigger.

CAUTION

Keep the solder loose (without tension) on the solder inlet side at all times while soldering.

Adjusting the guide nozzle

Adjust the position where the solder touches the tip by loosening the adjusting screw and moving the guide nozzle up or down.

Solder feed adjustment

Adjust the solder feed pitch by turning the solder feed adjusting screw with a screwdriver.

The feed pitch decreases as the screw is tightened.
(Range: minimum of 2 mm (0.079 inch) to maximum of 8 mm (0.315 inch))

Changing to a different solder diameter

To change to a different diameter of solder, push and hold the trigger upward in the direction of the arrow and pull the current solder out of the unit via the solder inlet. Then insert the new solder as described under "Inserting solder" above.

Connections

1. Make sure the station power switch is OFF and connect the plug to the receptacle of the station.
2. Place the Hakko 951 or 952 on the iron holder (optional).
3. Plug the power cord into a grounded wall socket.
Be sure the unit is grounded.

Calibration

Be sure to calibrate the tip temperature before using it. (Refer to the instruction manual for the station.)

* Use a Hakko 191 Thermometer or a Hakko 192 Soldering Tester to measure the tip temperature.

Troubleshooting guide

For details, refer to the instruction manual for the station with which the unit will be used.

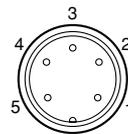
The solder clogs.

ACTION : Do not pull solder from a heavy reel with the trigger. Keep the solder loose (without tension) on the solder inlet side at all times while soldering.

ACTION : Refer to "Inserting the solder" under "Operation."

Checking for breakage of the heating element and cord assembly

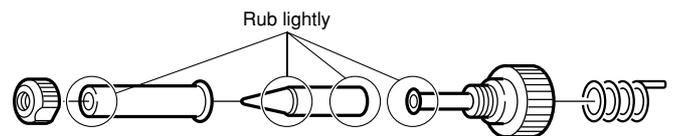
Disconnect the plug and measure the resistance between the connecting plug pins as follows.



a. Between pins 4 & 5 (Heating element)	2.5 – 3.5 (Normal)
b. Between pins 1 & 2 (Sensor)	43 – 58 (Normal)
c. Between pin 3 & tip	under 2

If the values of 'a' and 'b' are outside the above value, replace the heating element (sensor) and /or cord assembly.

If the value 'c' is over the above value, remove the oxidization film by lightly rubbing with sand-paper or steel wool the points shown below.



Broken heating element

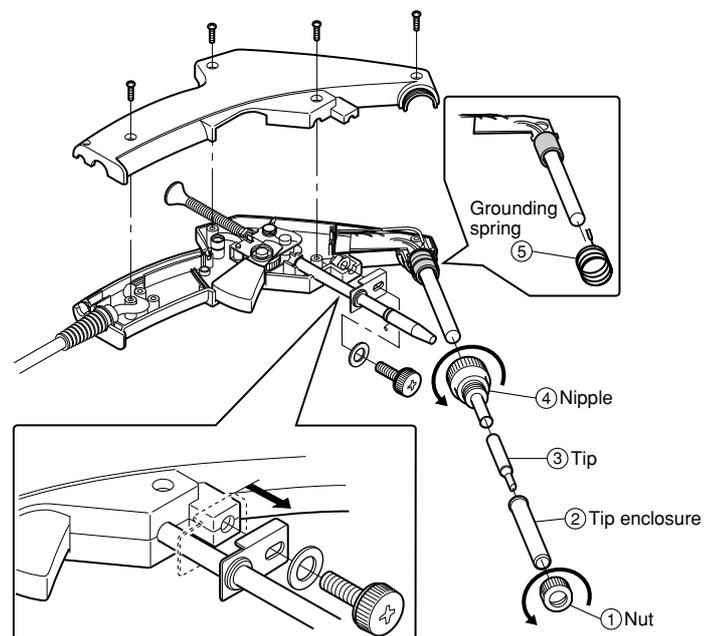
Disassembling the 951/952

1. Remove the adjusting screw and keep the support fitting apart from the housing.
2. Turn the nut counterclockwise and remove the tip enclosure, the tip.

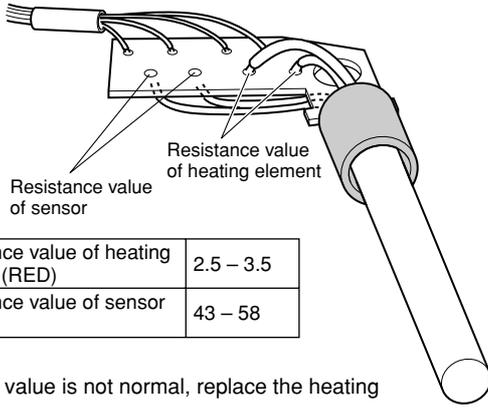
CAUTION

Be sure to remove the nut before removing the nipple. Removing the nipple first could cause the heater leads to twist and cause a short circuit.

3. Turn the nipple counterclockwise and remove it from the gun.
4. Remove the 4 screw securing the housing and open the housing.
5. Pull the grounding spring out of the sleeve.



* Measure when the heating element is at room temperature.



Resistance value of heating element (RED)	2.5 – 3.5
Resistance value of sensor (BLUE)	43 – 58

If the resistance value is not normal, replace the heating element.

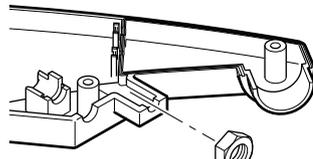
(Refer to the instructions included with the replacement part.)

After replacing the heating element,

1. Measure the resistance value between pins 4 & 1 and 4 & 2, and pins 5 & 1 and 5 & 2. If the resistance value is not infinite for all four measurements, the heating element and sensor leads are touching. This will damage the P.W.B. When reassembling, be sure that the heating element and sensor leads do not touch.
2. Measure the resistance value 'a' 'b' 'c' to confirm that the leads are not twisted and that the grounding spring is properly connected.

CAUTION

When reassembling, match the convex part of the hexagon nut to concave part of the housing.



Hexagon nut M4

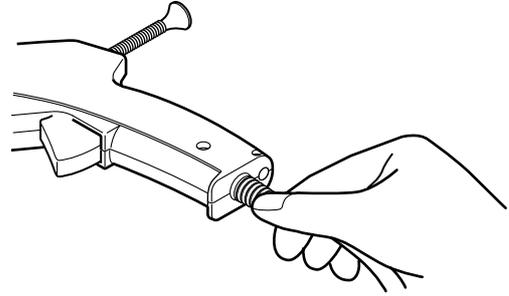
Broken soldering gun cord

There are two methods of testing the soldering gun cord.

CAUTION

The LED heater lamp will flicker even with a normal gun cord if the temperature reaches 480 C (896 F).

1. Turn the unit on and set the temperature to 480 C (896 F). Then wiggle and kink the gun cord at various locations along its length, including strain relief area. If the LED heater lamp flickers, then the cord needs to be replaced.



2. Check the resistance value between the pin of the plug and the wire on the terminal.
 Pin 1: Red Pin 2: Blue Pin 3: Green Pin 4: White Pin 5: Black
 The value should be 0 .
 If it is greater than 0 or is infinite, the cord should be replaced.

Parts list (Tips)

The tip temperature will vary according to the shape of the tip. The preferred method of adjustment uses a tip thermometer. (Refer to the instruction manual for the station.) A less accurate method involves adjusting the temperature settings according to the adjustment value for each tips.

Examples: When using a 900M-T-0.8C tip at 400 C (750 F), the difference between this tip and standard tip is -10 C (-18 F). Set the temperature to 410 C (768 F). Refer to the chart for the correct adjustment values.

951 951 tip out diam. ø6.5mm

900M-T-1.6D 0 C 	900M-T-0.8C -10 C/-18 F 	900M-T-S4 0 C
900M-T-2.4D 0 C 	900M-T-2C/900M-T-2CF* 0 C 	900M-T-S10* 0 C
900M-T-3.2D 0 C 	900M-T-3C/900M-T-3CF* 0 C 	900M-T-S11* 0 C
900M-T-SB 0 C 	900M-T-4C/900M-T-4CF* 0 C 	
900M-T-B/900M-T-BF2* 0 C <small>*BF2 is tinned a distance of 2mm (0.08 in.) from the end of the tip.</small>	900M-T-K +30 C/+54 F 	

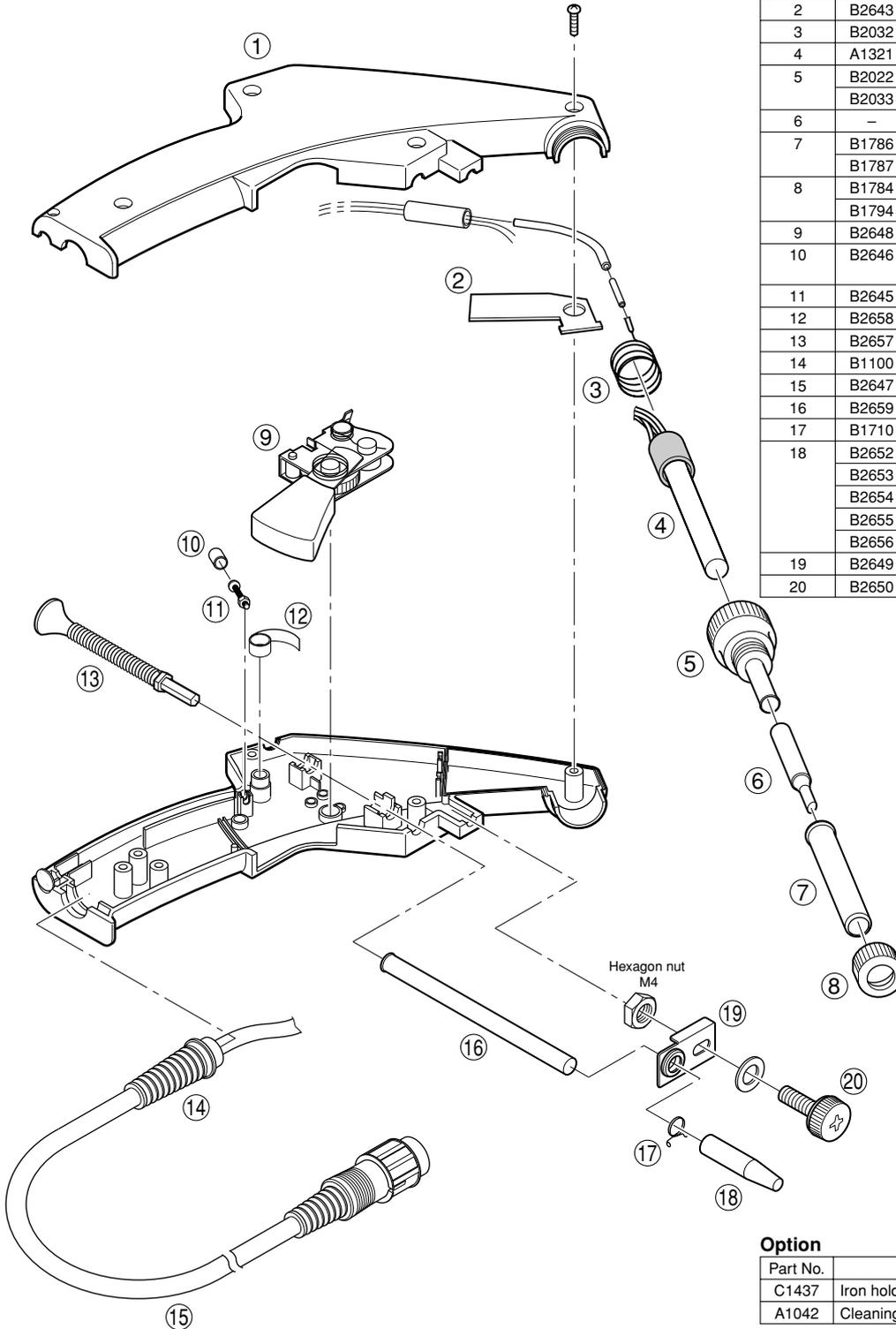
952 • For heavy duty soldering Hakko recommends the 952 gun with heavier tips. 952 tip out diam. ø8.5mm

900L-T-B 0 C 	900L-T-3.2D 0 C 	900L-T-4C/900L-T-4CF* 0 C
900L-T-2B 0 C 	900L-T-2C/900L-T-2CF* -20 C/-36 F 	900L-T-5C/900L-T-5CF* 0 C
900L-T-2.4D 0 C 	900L-T-3C/900L-T-3CF* 0 C 	900L-T-K +20 C/+36 F

CAUTION Use only genuine replacement tips for Hakko 951,952. The tips for Hakko Dash are not available to use. These tips are tinned flat only.

Parts list

Note: Spare or repair parts do not include mounting screws, if they are not listed on the description. Screws must be ordered separately.



Item No.	Part No.	Part Name	Description
1	B2644	Housing	With screws, labels
2	B2643	Terminal board	
3	B2032	Grounding spring	
4	A1321	Heating element	
5	B2022	Nipple	For 951
	B2033	Nipple	For 952
6	-	Soldering tip	See page 3
7	B1786	Tip enclosure	For 951
	B1787	Tip enclosure	For 952
8	B1784	Nut	For 951
	B1794	Nut	For 952
9	B2648	Trigger set	
10	B2646	Solder feed adjusting screw	
11	B2645	Solder feed adjusting screw	With nut
12	B2658	Spring for trigger asse'y	
13	B2657	Solder inlet	
14	B1100	Cord bushing	
15	B2647	Cord asse'y	
16	B2659	Guide pipe	
17	B1710	Nozzle securing ring	
18	B2652	Guide nozzle / 0.6mm ESD	
	B2653	Guide nozzle / 0.8mm ESD	
	B2654	Guide nozzle / 1.0mm ESD	
	B2655	Guide nozzle / 1.2mm ESD	
	B2656	Guide nozzle / 1.6mm ESD	
19	B2649	Support fitting	With grommet
20	B2650	Adjusting screw	For guide pipe

Option

Part No.	Part Name	Description
C1437	Iron holder	
A1042	Cleaning sponge	

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