

Soldering gun

Instruction Manual

Thank you for purchasing the HAKKO FX-8803 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 FX-8803.

Keep this manual readily accessible for reference.

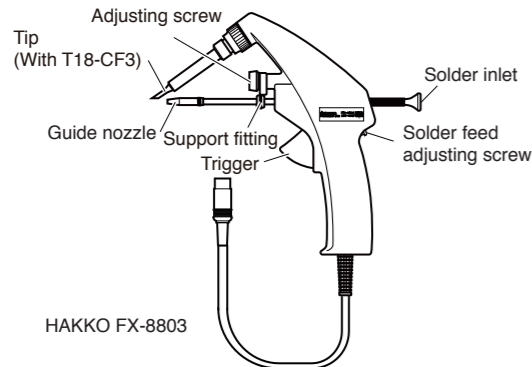
CAUTION

When you use the HAKKO FX-8803 for the first time, note that calibration is required before starting operation. Read the instruction manual for the station used in conjunction with the HAKKO FX-8803 soldering gun. When inserting the solder, push and hold the trigger upward. Insert the solder until end of solder protrude from the guide nozzle.

Please make sure that all items listed below are included in the package.

1. PACKING LIST AND PART NAMES

HAKKO FX-8803 1 Instruction manual.....1



2. SPECIFICATIONS

●HAKKO FX-8803

Power consumption	AC26V 65W
Temperature range	200~480°C
Tip to ground resistance	< 2Ω
Tip to ground potential	< 2mV (TYP. 0.6mV)
Standard tip	T18-CF3
Standard guide nozzle (Solder diameter)	φ1.0
Usable solder diameter	φ0.6, 0.8, 1.0, 1.2, 1.6
Cord assembly	1.1m
Dimensions (w/o cord)	170(W)x180(H)x23(D) mm
Weight (w/o cord)	207g

NOTE:

- *Specifications and design are subject to change without notice.
- *This product is protected against electrostatic discharge.

CAUTION

■ Electrostatic Protection

This product includes such features as electrically conductive plastic parts and grounding of the unit as measures to protect the device to be soldered from the effects of static electricity. Be sure to observe the following instructions:

1. The plastic parts are not insulators, they are conductors. When making repairs or replacing parts, take sufficient care not to expose live electrical parts or damage insulation materials.
2. Be sure to ground the unit during use.

3. COMPATIBLE STATIONS

Use the HAKKO FX-8803 with the HAKKO FX-888/888D soldering station.

4. WARNINGS, CAUTIONS, NOTES AND EXAMPLES

WARNING

Warnings, cautions and notes 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.
- NOTE:** A NOTE indicates a procedure or point that is important to the process being described.

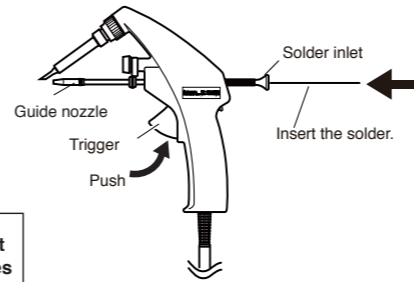
CAUTION

- When power is ON, tip temperature will be between 200°C and 480°C (400 to 900°F).
- To avoid injury or damage to personnel and items in the work area, observe the following :
- Do not touch the tip or 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 HAKKO FX-8803.
 - 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.
- Observe the following precautions to prevent accidents or damage to the unit.
- Do not use the HAKKO FX-8803 for applications other than soldering.
 - Do not strike the gun against hard objects to remove excess solder. This will damage the gun.
 - Do not modify the HAKKO FX-8803.
 - Use only genuine HAKKO replacement parts.
 - Do not allow the HAKKO FX-8803 to become wet, or use it when hands are wet.
 - Remove power and iron cords by holding the plug, not the wires.
 - Since smoke is produced when using the wire stripper, be sure the work area is well ventilated.

5. OPERATION

NOTE:
Make sure the power switch of HAKKO FX-888D station is OFF.

1. Inserting the solder
Push and hold the trigger upward in the direction of the arrow and insert the solder into the solder inlet and pass solder through. Solder will protrude from the guide nozzle.

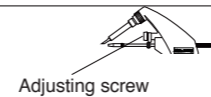


▲ **CAUTION**
The solder may become stuck inside the unit if the trigger is pulled before solder protrudes from the guide nozzle.

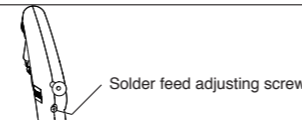
2. Feeding the solder
Put the trigger back into place after inserting the solder. Solder can be fed by pulling the trigger.

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

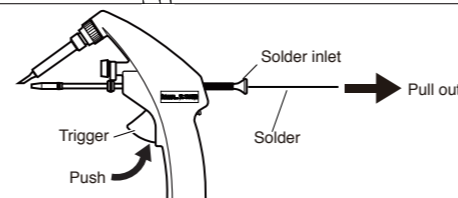
3. Adjusting the guide nozzle.
Adjust the position where the solder touches the tip. Loosen the adjusting screw and move the guide nozzle up or down.



4. Solder feed adjustment
Adjusting the solder feed pitch by turning the solder feed adjusting screw with a screwdriver. Quantity of solder feed will decrease by tightening.



5. Changing to a different solder diameter
When changing to the different solder diameter, push and hold the trigger upward in the direction of the arrow and pull out the solder from the solder inlet. Then, insert the new solder as shown in "1. Inserting solder".



A. Connection

▲ **CAUTION**
● Be sure to turn off the power before connecting or disconnecting the cord assembly for the iron to and from the receptacle to avoid damaging the unit.

Push on the plug until it stops, making sure it is securely connected.



To disconnect, hold the plug.

1. Connect the cord assembly of HAKKO FX-8803 to the receptacle of HAKKO FX-888D.
2. Place the soldering gun into the iron holder(option).
3. Plug the power cord into the power supply.

5. OPERATION

B. Turn on the power switch

Turn on the power for HAKKO FX-888D soldering station. The heater lamp flashes as the tip comes up to the set temperature. The unit is now ready to perform soldering work.

CAUTION

- Place the HAKKO FX-8803 in the iron holder when not in use.
- Turn the power off when not using the station for a long time.

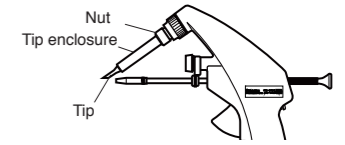
C. Calibration

Before using the HAKKO FX-8803, be sure to calibrate the station. (Refer to the HAKKO FX-888D instruction manual.)

Use the HAKKO FG-100 Thermometer or HAKKO FG-101 Soldering Tester to measure the tip temperature.

D. Replacing the tip

1. Turn the nut counterclockwise, then remove the tip enclosure and tip.



NOTE:
Do not loosen the nipple.

2. Insert the new tip and tip enclosure into the HAKKO FX-8803. Tighten the nut firmly, and fix the tip.

6. MAINTENANCE

Performing proper and periodic maintenance extends product life and contributes to the quality of soldering work. Efficient soldering depends upon the temperature, the quality and quantity of the solder and flux. Apply the following service procedure as dictated by the conditions of the usage.

WARNING

Since the tip can reach a very high temperature, please work carefully. Except where indicated, always turn the power switch OFF and disconnect the power plug before performing any maintenance procedure.

Tip temperature

High temperatures shorten tip life and may cause thermal shock to components. Always use the lowest possible temperature. The excellent thermal recovery characteristics of the HAKKO FX-888D ensures effective soldering at low temperature.

Cleaning

Always clean the tip before use to remove any residual solder or flux adhering to it. Use a cleaning sponge or the HAKKO 599B tip cleaner. Contaminants on the tip may have negative effects, including reduced heat conductivity, which contribute to poor performance.

When not in use

Never allow the unit to idle at a 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 disconnect the power plug as well.

After use

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

●Tip Maintenance

1. Set the temperature to 250°C.
2. When the temperature stabilizes, clean the tip and check the condition of the tip. 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.
4. Turn the power OFF and remove the tip, using the heat resistant pad. Set the tip aside to cool.

CAUTION

Do not file the tip in an attempt to remove the black oxide.

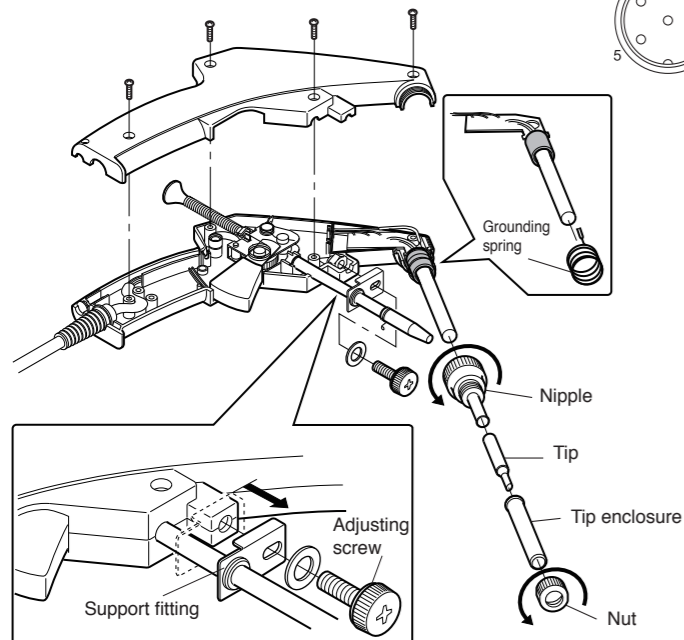
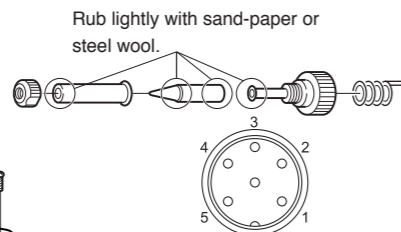
7. CHECK PROCEDURE

Disconnect the plug of the cord assembly and measure the resistance value between the pin of the connecting plug as follows.

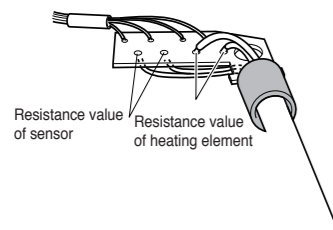
● If the values of "a" and "b" are outside the value in the table, replace the heating element(sensor) and/or cord assembly.

● If the value of "c" is over the value in the table, remove the oxidization film by lightly rubbing with sand-paper or steel wool the points shown in the drawing on the right.

a. Between pins 4 & 5 (heating element)	2.5 ~ 3.5 Ω (at time of room temperature)
b. Between pins 1 & 2 (Sensor)	43 ~ 58 Ω
c. Between pin 3 & tip	2 or less Ω



1. Broken heating element / sensor



1. Remove the adjusting screw and keep the support fitting apart from the housing.
2. Turn the nut counterclockwise and remove the tip enclosure and 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 screws and open the housing.
5. Pull the grounding spring out of the sleeve.

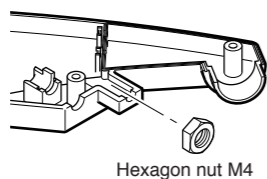
*Measure when the heating element is at room temperature.

1. Heating element resistance (red) 2.5-3.5 Ω
 2. Sensor resistance (blue) 43-58 Ω
- If the resistance value is not normal, replace the heating element.
(Refer to the instructions included with the replacement part.)

After replacement

1. Measure the resistance between pins 4 and 1, 4 and 2, 5 and 1, and 5 and 2.
If it is not ∞, the heating element and sensor are touching. This will damage the circuit board.
2. Measure the resistance "a", "b", and "c" to confirm that the leads are not twisted and that the grounding spring is properly connected.

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



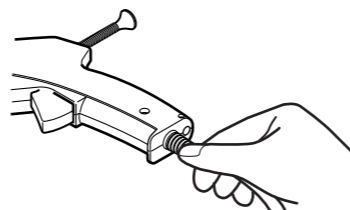
7. CHECK PROCEDURE

2. Broken cord assembly

There are two methods of testing the cord assembly as below.

1. Turn the power on and set the temperature control knob to 480°C. Then, bend the iron cord at various locations along its length, including in the strain relief area.
If the LED heater lamp flashes, then the cord needs to be replaced.

CAUTION
The power lamp starts to flash when the temperature reaches 480°C regardless of the condition of the cord.



2. Check the resistance between the plug pin and the terminal lead.

Pin 1: Red Pin 2: Blue Pin 3: Green
Pin 4: White Pin 5: Black

If it is higher than 0 Ω or ∞, the cord should be replaced.

8. TROUBLE SHOOTING GUIDE

● Solder gets stuck

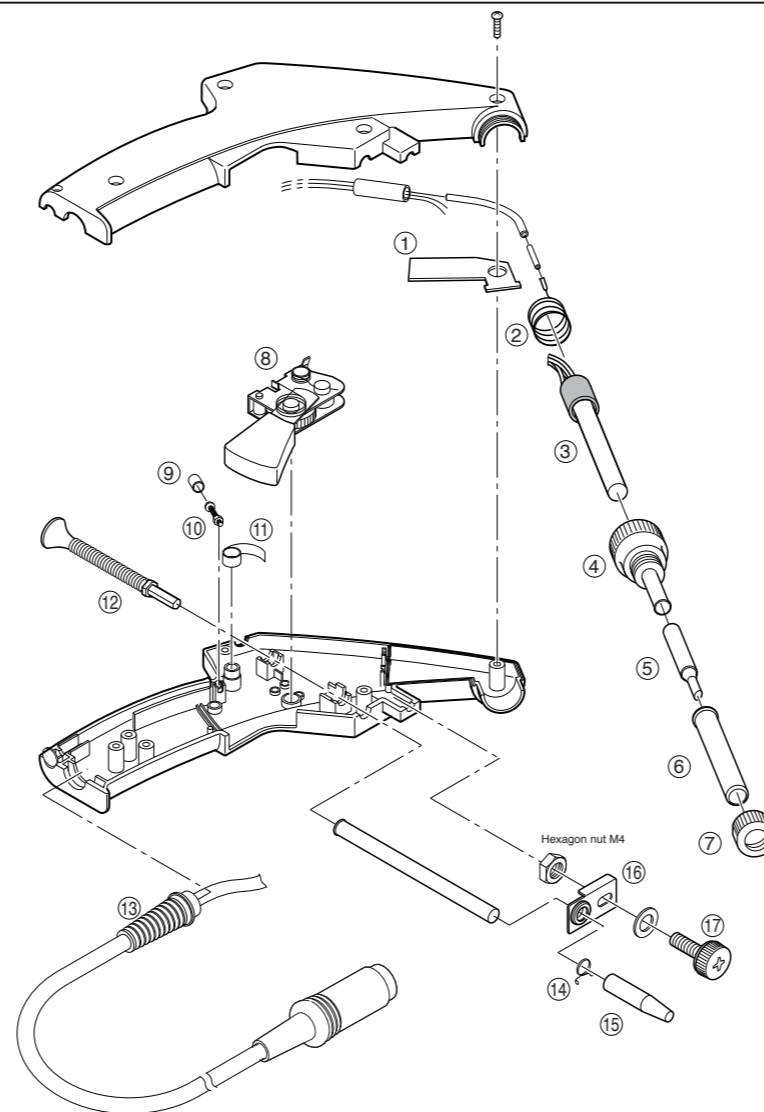
CHECK : Do you pull solder from a reel when using the trigger?

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.

CHECK : Is the solder inserted properly?

ACTION : Refer to "1.Inserting the solder" under "5.OPERATION".

9. PARTS LIST



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● HAKKO FX-8803

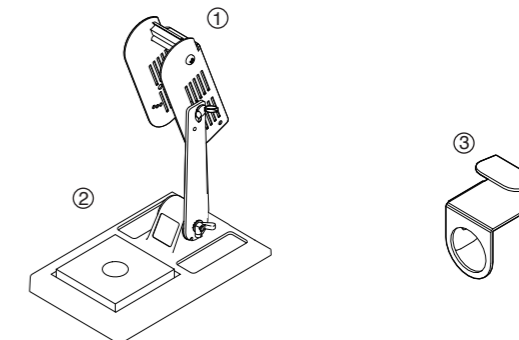
Item No.	Part No.	Part Name	Specifications
①~⑦	FX8803-02	HAKKO FX-8803	26V-65W

● Soldering gun parts

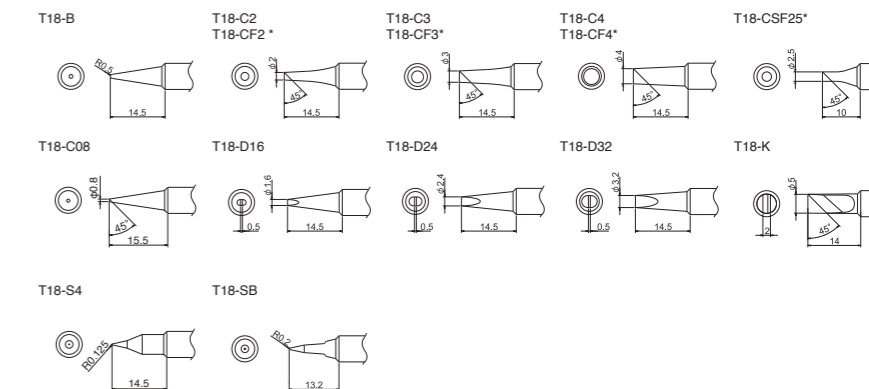
Item No.	Part No.	Part Name	Specifications
①	B2643	Terminal board	
②	B2032	Grounding spring	
③	A1560	Heating element	26V-65W
④	B2022	Nipple	
⑤		Tip	See "10.TIP STYLES"
⑥	B3469	Tip enclosure	
⑦	B1785	Nut	
⑧	B2648	Trigger set	
⑨	B2646	Solder feed adjusting screw guide	
⑩	B2645	Solder feed adjusting screw	
⑪	B2658	Spring for trigger assembly	With nut
⑫	B2657	Solder inlet	
⑬	B3467	Cord bushing	
⑭	B1710	Nozzle securing ring	
⑮	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
⑯	B2649	Support fitting	With grommet
⑰	B2650	Adjusting screw	For guide pipe

● Option

Item No.	Part No.	Part Name	Specifications
①	C1437	Iron holder	With cleaning sponge
②	A1042	Cleaning sponge	
③	B2723	Hook	With screw



10. TIP STYLES



* Tinned on the soldering surface only.