



# HAKKO 957

SOLDERING IRON

## Instruction Manual

Thank you for purchasing the HAKKO 957 soldering iron.

The HAKKO 957 soldering iron is designed to supply hot gas to the soldering area. This can increase soldering efficiency, as the gas pre-heats the work area.

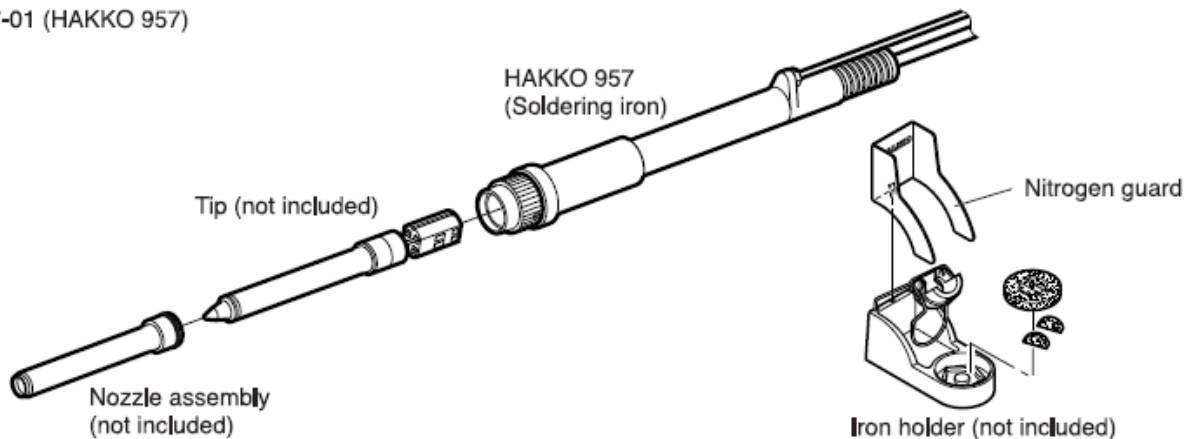
When the heated gas is nitrogen (N<sub>2</sub>), soldering efficiency is further improved as the nitrogen materially reduces the amount of oxygen in the ambient atmosphere. Please read this manual before operating the HAKKO 957. Keep this manual readily accessible for reference.

**CAUTION:** When you use the HAKKO 957 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 957 soldering iron.

### 1. PACKING LIST AND PART NAMES

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

- 957-01 (HAKKO 957)



### 2. SPECIFICATIONS

Model No.	HAKKO 957
Power Consumption	90W (27V)
Tip to Ground Resistance	<2Ω
Tip to Ground Potential	<2mV
Cord	1.2 m (4 ft.)
Length (w/o cord)	215 mm (8.5 in.) with tip T14-D24
Weight (w/o cord)	62 g. (0.14 lb) with nozzle assembly A and T14-D24

\*Specifications and design are subject to change without notice.

### 3. COMPATIBLE STATIONS

This is N<sub>2</sub> soldering iron. Use this product with the following models:

- HAKKO 938 (Soldering station)
- HAKKO FX-780 (N<sub>2</sub> generator)
- HAKKO FX-791 or HAKKO 955 & 955B (N<sub>2</sub> station)


**NOTE:**

If you do not connect the product to HAKKO FX-780 and FX-791, refer to the connection diagram in "5. Operation" as a guide for using the product.

## 4. WARNINGS AND CAUTIONS

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.

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

- Be sure to observe the following for safety.

### CAUTION

When power is ON, tip temperature will be between 200°C and 450°C (392°F to 842°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 sufficient time for cooling off when the unit is not in use.

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

- Do not use the HAKKO 957 for applications other than soldering.
- Do not allow the HAKKO 957 to become wet, or use it with wet hands.
- Do not modify the HAKKO 957.
- Use only genuine HAKKO replacement parts.
- Do not strike the iron against hard objects to remove excess solder. 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.



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### CAUTION

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

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

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## 5. OPERATION

### 1. Iron holder

Mount the nitrogen guard (supplied with the iron holder) on the iron holder.

#### ⚠ CAUTION

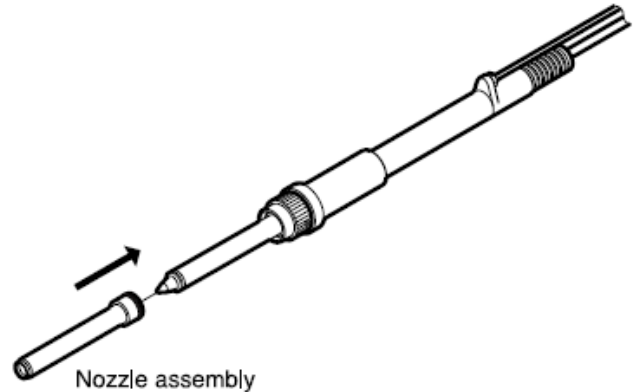
Shut off the gas supply when the HAKKO 957 is left unattended for an extended period.

### 2. Tip and nozzle assembly

Push a compatible nozzle assembly onto the tip until it stops after fitting the tip (See "9. PARTS LIST" for the compatible nozzle assembly.)

#### ⚠ CAUTION

Tighten the nipple to secure the tip. Loose nipple might cause nitrogen gas leakage.



### 3. Connection

#### ⚠ CAUTION

When you connect or disconnect power to the mains or the receptacle, always turn off the power switch on the station to preclude damage to the unit.

1. Connect the power cord to the power receptacle at the back of the station. Connect the connector cord to the receptacle at the front of the station.
2. Place the HAKKO 957 soldering iron on the iron holder.
3. Plug the power cord into a grounded wall socket.

#### ⚠ CAUTION

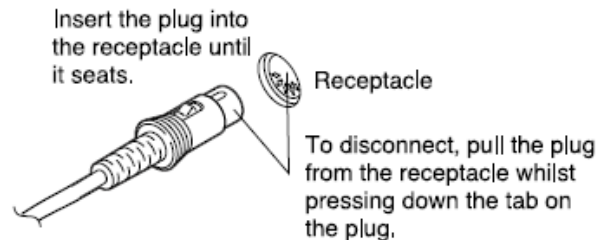
The HAKKO 957 is protected against electrostatic discharge and must be grounded for full efficiency.

4. Insert the tube of the HAKKO 957 to the terminal marked 'OUT' of the HAKKO FX-791. (Refer to the instruction manual for the HAKKO FX-791.) If HAKKO FX-791 is not used, refer to the diagram on the right for connection and use without HAKKO FX-791.

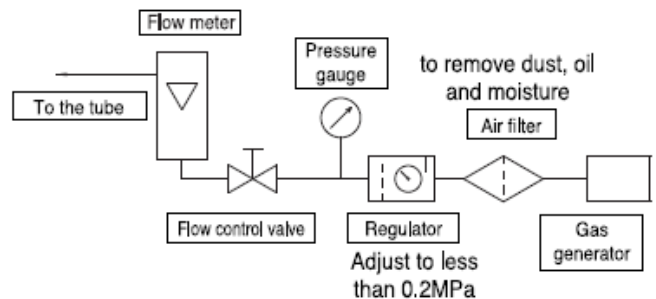
**\*Except use with HAKKO FX-791, the HAKKO 955 or HAKKO 955B is also available to use.**

### 4. Temperature setting

1. Connect the station to the HAKKO 957.  
Set the desired temperature and the heat control begins. (Please refer to the HAKKO 938 instruction manual.)
2. Turn on N<sub>2</sub> gas and adjust the rate of flow to be appropriate.  
Suggested flow rate : 0.5ℓ/min. ~ 1.5ℓ/min.
3. Measure the tip temperature when it is stabilized.  
Input the offset value so that it will become to the measured temperature. (Please refer to the HAKKO 938 instruction manual.)



adjust the value between  
0.5ℓ/min ~ 1.5ℓ/min



**Typical interconnection**

#### ⚠ CAUTION

Ensure that the gas pressure to the HAKKO 957 is less than 0.2MPa (2.0kgf/cm<sup>2</sup>). If the pressure exceeds 0.2MPa, damage may occur.

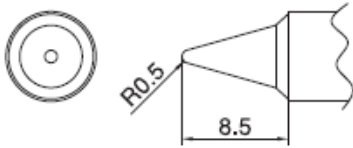
#### ⚠ CAUTION

Tip temperature may not reach the set value if the gas flow rate exceeds the specified limit.

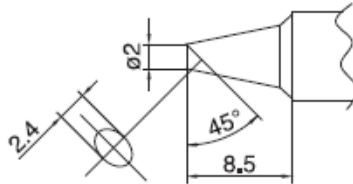
## 6. TIP STYLES

Unit: mm

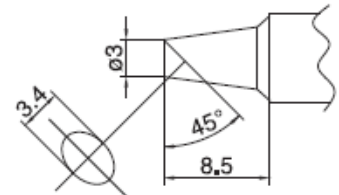
T14-B2 Shape-0.5B



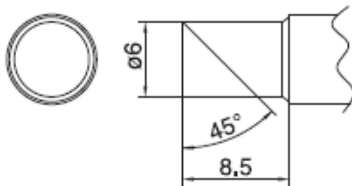
T14-BC2 Shape-2BC



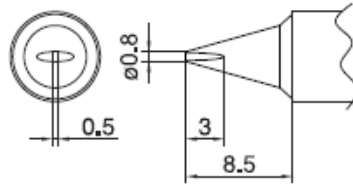
T14-BC3 Shape-3BC



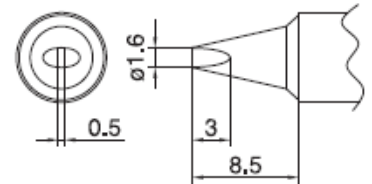
T14-C6 Shape-6C



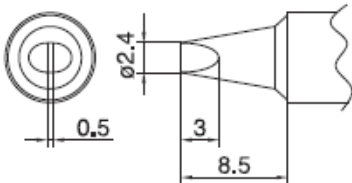
T14-D08 Shape-0.8D



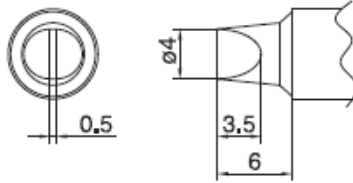
T14-D16 Shape-1.6D



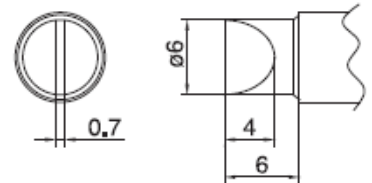
T14-D24 Shape-2.4D



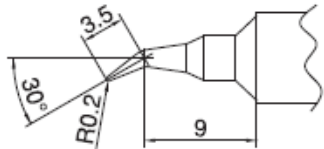
T14-D4 Shape-4D



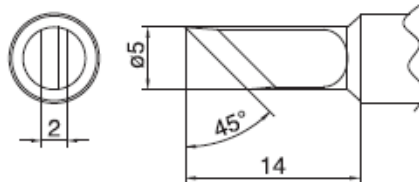
T14-D6 Shape-6D



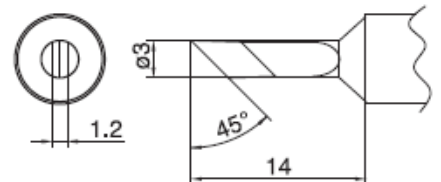
T14-J02 Shape-0.2RSB



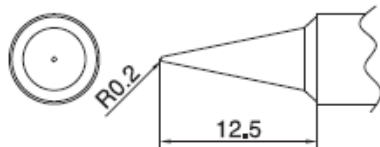
T14-K Shape-K



T14-KU Shape-KU



T14-LB Shape-LB



## 7. GENERAL INFORMATION

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Tip temperature –	High temperatures shorten tip life. Always use the soldering iron at the lowest possible temperature. The excellent thermal recovery characteristics of the FM-2026 ensures effective soldering at low temperature, protecting sensitive components easily damaged by thermal shock.
Cleaning –	Always clean the soldering tip before use to remove any residual solder or flux adhering to it. Use the 599B tip cleaner or a clean moist cleaning sponge. Contaminants on the tip have many deleterious effects, including reduced heat conductivity, which contribute to poor soldering performance.
Interruption –	Do not allow the unit to idle at high temperature for extended periods. A heavy oxide layer on the tip will reduce the heat transfer from the tip..
After use –	Whenever you finish soldering work, always clean the tip and coat it with fresh solder. This guards against oxidation.

## 8. MAINTENANCE

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### Tip maintenance

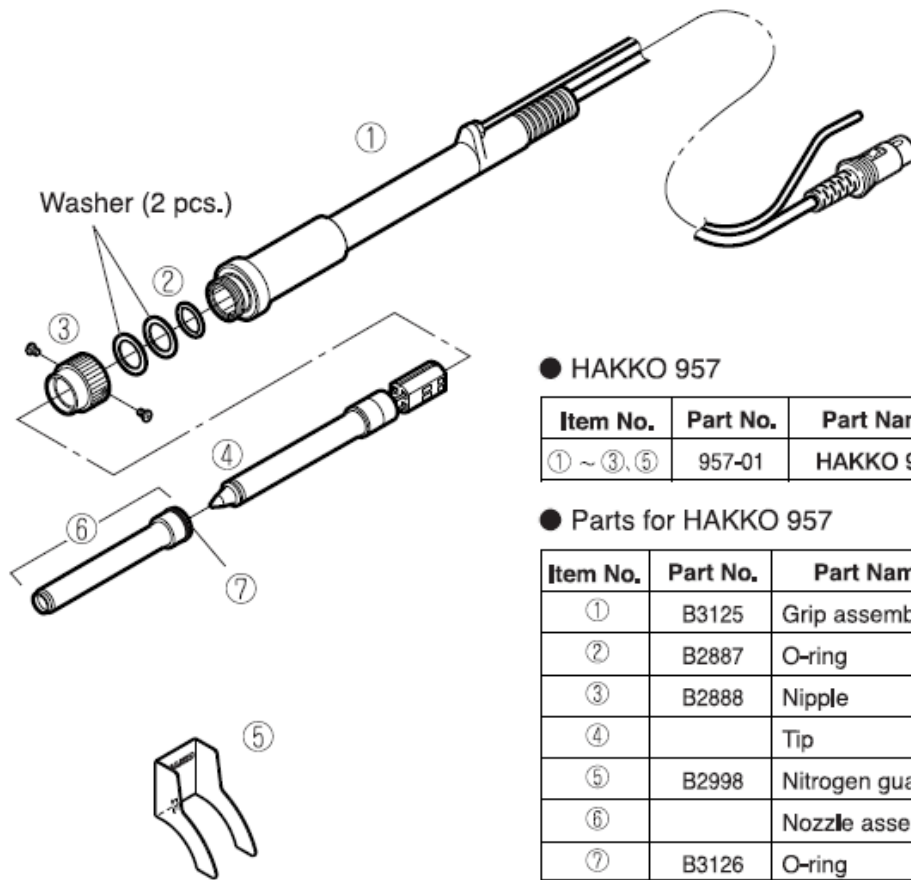
1. Set the temperature to 250°C/482°F.
2. When the temperature stabilizes, clean the tip and check its condition.
3. If the solder plated part of the tip is covered with black oxide, apply fresh solder containing flux and clean the tip again. Repeat until all the oxide is removed, then coat the tip with fresh solder.
4. Turn the power OFF and remove the tip after it cools off. Remaining oxides, such as the yellow discoloration on the tip shaft, can be removed with isopropyl alcohol.
5. Replace the tip with a new one if it is badly deformed or corroded.

<p><b>⚠ CAUTION</b> NEVER file the tip to remove oxides!</p>
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### Maintenance of nozzle assembly

As the unit is used, oxidation will accumulate on the nozzle tip. Remove it periodically by cleaning so that the gas will flow freely.

## 9. PARTS LIST



### ● HAKKO 957

Item No.	Part No.	Part Name	Specifications
① ~ ③, ⑤	957-01	HAKKO 957	27V-90W

### ● Parts for HAKKO 957

Item No.	Part No.	Part Name	Specifications
①	B3125	Grip assembly	With connection cord & tube
②	B2887	O-ring	P-10 Viton
③	B2888	Nipple	With screw
④		Tip	Refer to "6. TIP STYLES"
⑤	B2998	Nitrogen guard	
⑥		Nozzle assembly	With O-ring
⑦	B3126	O-ring	S-9 Viton

### ● Cross reference guid for tipu and nozzle

Tip		Nozzle	
Tip shape	Part No.	Part No.	Part Name
0.5B	T14-B2	B3121	Nozzle assembly A
2BC	T14-BC2		
3BC	T14-BC3		
0.8D	T14-D08		
1.6D	T14-D16		
2.4D	T14-D24		
LB	T14-LB		
0,2RSB	T14-J02	B3122	Nozzle assembly B
KU	T14-KU	B3123	Nozzle assembly C
K	T14-K		
6C	T14-C6	B3124	Nozzle assembly D
6D	T14-D6		
4D	T14-D4		