

# **HAKKO** FM-2029 HOT AIR HANDPIECE

SINGLE HOT AIR

## Instruction Manual

Thank you for purchasing the HAKKO FM-2029 Hot Air Handpiece.  
Please read this manual before operating the HAKKO FM-2029.  
Keep this manual readily accessible for reference.

### CAUTION

**HAKKO FM-2029 can not be operated by itself.  
Read the instruction manual for the HAKKO FM-206  
Rework System used in conjunction with the  
HAKKO FM-2029.**

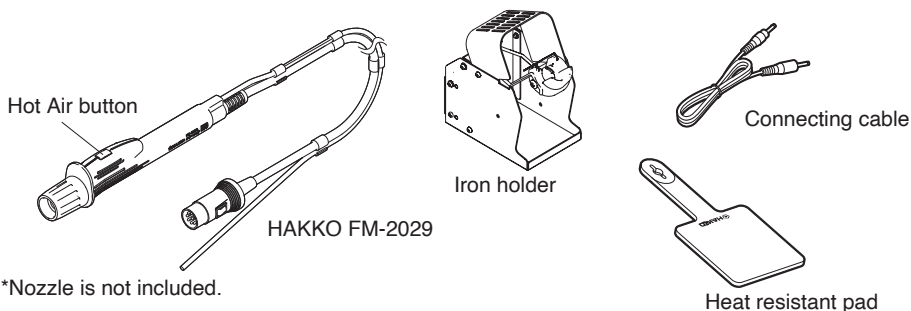
## TABLE OF CONTENTS

1. PACKING LIST AND PART NAMES .....	17
2. SPECIFICATIONS .....	17
3. COMPATIBLE STATIONS .....	17
4. WARNINGS, CAUTIONS, NOTES AND EXAMPLES .....	18
5. INITIAL SETUP .....	19
6. OPERATION .....	20
7. TROUBLE SHOOTING GUIDE .....	21
8. PARTS LIST .....	22
9. NOZZLE STYLES .....	22

# 1. PACKING LIST AND PART NAMES

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

HAKKO FM-2029.....	1	Connecting cable.....	1
Iron holder.....	1	Heat resistant pad.....	1



\*Nozzle is not included.  
\*Use a suitable nozzle.

## 2. SPECIFICATIONS

### ● HAKKO FM-2029

Power Consumption	140W (24V)
Nozzle to Ground Resistance	< 2 Ω
Nozzle to Ground Potential	< 2m V
Length (w/o cord, tube)	232 mm (9.1 in.) with nozzle ø4.0 mm
Weight (w/o cord, tube)	50 g (0.11 lb.) with nozzle ø4.0 mm

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

## 3. COMPATIBLE STATIONS

Use the HAKKO FM-2029 with the HAKKO FM-206 soldering station.

### ⚠ CAUTION

#### ■ Handling precautions for ESD Safe products

This product contains electrostatic countermeasures, so please use the following precautions:

1. Not all plastic parts are insulators, they may be conductive. Be careful not to expose live electrical parts or damage insulating materials when performing repairs or replacing parts.
2. Be sure to ground the product before use.

- 各言語（日本語、英語、中国語、フランス語、ドイツ語、韓国語）の取扱説明書は以下の URL、HAKKO Document Portal からダウンロードしてご覧いただけます。（商品によっては設定の無い言語がありますが、ご了承ください。）
- 各國語言（日語、英語、中文、法語、德語、韓語）的使用說明書可以通過以下網站的 HAKKO Document Portal 下載參閱。（有一部分的產品沒有設定外語對應、請見諒）
- Instruction manual in the language of Japanese, English, Chinese, French, German, and Korean can be downloaded from the HAKKO Document Portal. (Please note that some languages may not be available depending on the product.)

➡ <https://www.hakko.com/english/support/doc/>

日本語

中文

ENGLISH

## 4. WARNINGS, CAUTIONS, NOTES AND EXAMPLES

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 the power is ON, the temperature of the hot air and the nozzle ranges from 100 to 550°C. To avoid injury to personnel or damage to items in the work area, observe the following:**

- Do not touch the metal parts near the nozzle.
- Do not use the product near combustible gasses or flammable materials.
- Do not direct the hot air toward personnel.
- 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 FM-2029.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in safe way and understand the hazards involved.
- Children shall not play with the appliance.
- Cleaning and user maintenance shall not be made by children without supervision.

- Do not strike the handpiece against hard objects. This will damage the handpiece.
- Do not modify the unit.
- Use only genuine HAKKO replacement parts.
- Do not allow the HAKKO FM-2029 to become wet, or use it when hands are wet.
- Since smoke is produced when using the HAKKO FM-2029, be sure the work area is well ventilated.
- While using HAKKO FM-2029, do not do anything which may cause bodily harm or physical damage.

## 5. INITIAL SETUP

### ● Connection

#### **⚠ CAUTION**

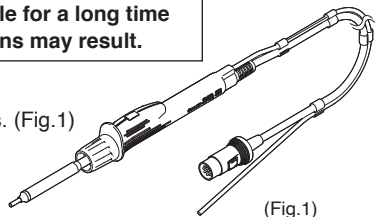
**The nozzle may be hot. Avoid holding the hot nozzle for a long time even if using the heat resistant pad. Otherwise burns may result.**

#### A. Insert the nozzle

1. Insert the nozzle into the HAKKO FM-2029 until it stops. (Fig.1)

#### **NOTE:**

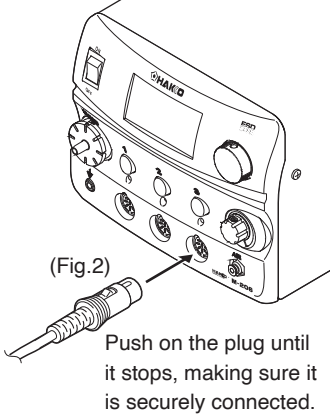
**Do not loosen the nipple.**



## 5. INITIAL SETUP

### B. Connect to HAKKO FM-206

1. Connect the cord assembly of HAKKO FM-2029 to channel 3 connector for HAKKO FM-206. (Fig.2)



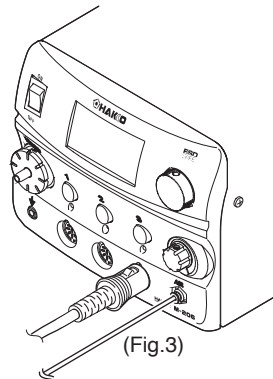
#### ⚠ CAUTION

- When connecting or disconnecting the cord assembly, hold the plug.
- Be sure to turn off the power switch before connecting or disconnecting the cord assembly for the handpiece to and from the receptacle to avoid damaging the unit.

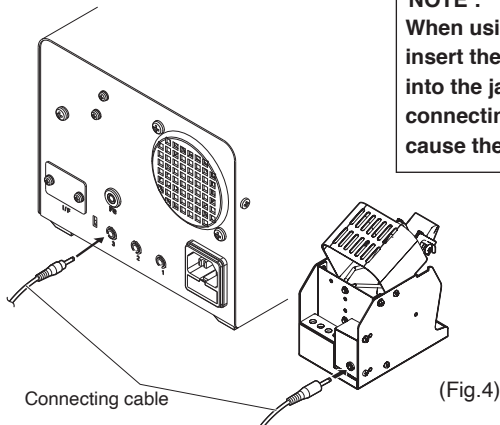
#### NOTE :

- The HAKKO FM-2029 can be connected to channel 3 connector.
- Insert the plug until it stops and try to remove it without pressing the release pin. If it stays in the receptacle, it is properly seated.

2. Connect the tube of the handpiece to HAKKO FM-206. (Fig.3)



3. Insert one end of the connecting cable into the jack at the back of the iron holder and the other end into the jack at the back of the station to connect them. (Fig.4)



#### NOTE :

When using the HAKKO FM-2029, be sure to insert the connecting cable for the iron holder into the jack for channel 3. Inserting the connecting cable into the incorrect jack will cause the system to not function correctly.

## 5. INITIAL SETUP

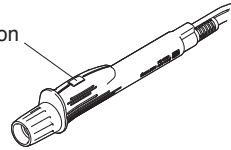
### ⚠ CAUTION

- If the iron holder is not connected to HAKKO FM-206, HAKKO FM-2029 will not start cooling when placed in the iron holder. Iron holder may overheat as a result.
- Be sure to turn off the power before connecting or disconnecting the connecting cable. Securely insert the connecting cable all the way in to the jack.

## 6. OPERATION

1. Adjust the air flow and temperature.  
Refer to instruction manual for HAKKO FM-206.
2. Press the Hot Air button on the handpiece.  
Power to the heater and air flow will start.
3. Operating  
(Refer to “A. Remove component” and “B. Attach component” .)
4. Place the handpiece into the iron holder, or press the Hot Air button on the handpiece.  
Power to the heater will be stopped.  
Hot air will be stopped after cooling automatically for 15 seconds.  
Do not turn the power switch OFF until cooling stops.

Hot Air button



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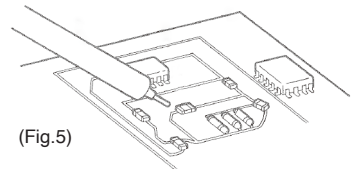
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### ⚠ CAUTION

If the iron holder is not connected to HAKKO FM-206, HAKKO FM-2029 will not start cooling when placed in the iron holder. Iron holder may overheat as a result. If placing the HAKKO FM-2029 into the iron holder for a long time, press the Hot Air button on the handpiece and stop the hot air.

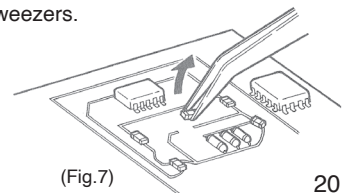
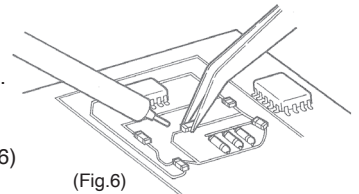
- A. Remove component
- 1 Heating  
Apply the hot air to the component to be removed and melt the solder. (Fig.5)



### ⚠ CAUTION

Be careful not to touch the component with the nozzle.

- 2 Grab the component using tweezers.  
While applying the hot air, grab the component using the tweezers. When grabbing the sides that are not soldered, this will help to prevent the heat from escaping. We recommend SMD tweezers when removing components. (Fig.6)
- 3 Remove the component.  
When the solder has melted, remove the component by lifting the tweezers.
- 4 Remove any remaining solder.  
After removing the component, remove solder with desoldering tool or soldering iron and wick. (Fig.7)



## 6. OPERATION

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### B. Attach component

- 1 Apply the solder paste.  
Apply the proper quality of solder paste and attach the component.
- 2 Preheat the component.
- 3 Solder the component.  
Apply the hot air to the point to be soldered and solder it.

**⚠ CAUTION**

**Soldering using hot air has many advantages, but it sometimes results in inadequate soldering.**

**We recommend all of the conditions for soldering be considered carefully. If you set the air flow too high, the part or the solder may be blown out of place. Reduce the air flow level when soldering parts.**

### 4 Clean

Clean any residual solder or flux from the board with appropriate cleaner.

## 7. TROUBLE SHOOTING GUIDE

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- The unit does not operate when pressing the Hot Air button.

**CHECK** : Is the nozzle inserted properly ?

**ACTION** : Insert the nozzle completely.

**CHECK** : Is the connection cord broken ?

**ACTION** : If the cord assembly is broken, replace the HAKKO FM-2029.

**CHECK** : Is the heater/sensor for nozzle broken ?

**ACTION** : Replace the nozzle with a new one.

- Hot air does not blow from the nozzle.

**CHECK** : Is the o-ring removed from nipple ?

**ACTION** : Attach the o-ring.

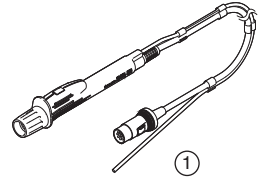
**CHECK** : Is the tube of the handpiece connected to HAKKO FM-206 ?

**ACTION** : Connect the tube to HAKKO FM-206.

## 8. PARTS LIST

### ●HAKKO FM-2029

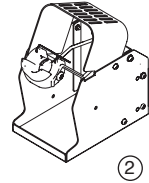
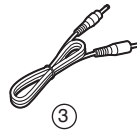
Item No.	Part No.	Part Name	Specifications
① ② ③ ④	FM2029-01	HAKKO FM-2029	24V-140W Conversion kit
①	FM2029-02	HAKKO FM-2029	24V-140W



### ●Iron holder

Item No.	Part No.	Part Name	Specifications
②	C5034	Iron holder	

Item No.	Part No.	Part Name	Specifications
③	B3253	Connecting cable	
④	B2300	Heat resistant pad	

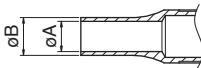


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## 9. NOZZLE STYLES



Part No.	Shape	$\phi A$	$\phi B$
N4-01		2.0mm (0.08 in.)	2.5mm (0.1 in.)
N4-02		4.0mm (0.16 in.)	5.0mm (0.2 in.)
N4-03		6.0mm (0.24 in.)	7.0mm (0.28 in.)
N4-04		8.0mm (0.32 in.)	9.0mm (0.35 in.)



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