

## Hakko FR-301

# Hakko FR-301 Portable Desoldering Tool

## INSTRUCTION MANUAL

### 1. Introduction

This manual provides detailed instructions for the safe and effective use of the Hakko FR-301 Portable Desoldering Tool. Please read this manual thoroughly before operating the tool and keep it for future reference. The Hakko FR-301 is a high-performance, self-contained desoldering tool designed for efficient removal of solder from printed circuit boards and electronic components.



An image showing the Hakko FR-301 Portable Desoldering Tool, a blue and yellow handheld device with a metal desoldering tip and a transparent solder collection chamber. The tool features a 'VACUUM' button on the handle and power settings indicated on the side.

## 2. Safety Information

**WARNING: Failure to follow these safety instructions may result in electric shock, fire, or serious injury.**

- Always wear appropriate eye protection when operating the desoldering tool.
- Ensure the work area is well-ventilated to avoid inhaling solder fumes.
- Do not touch the desoldering tip or nozzle when the tool is hot. Allow it to cool completely before handling.
- Keep the tool away from flammable materials.
- Do not operate the tool with a damaged power cord or plug.
- Unplug the tool from the power outlet when not in use or before performing maintenance.
- This tool is for industrial use. Use only as intended.

## 3. Setup

1. **Unpacking:** Carefully remove all components from the packaging. Verify that all included components are present: the FR-301 unit, simple iron holder, carrying case, and various nozzles.
2. **Nozzle Installation:** Select the appropriate nozzle for your application. Ensure the nozzle is clean and free of debris. Securely attach the nozzle to the heating element.
3. **Power Connection:** Connect the power cord to a suitable grounded electrical outlet. The tool operates on standard AC power.
4. **Placement:** Place the desoldering tool in its simple iron holder when not actively in use to prevent accidental burns or damage.

## 4. Operating Instructions

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### 4.1 Powering On and Temperature Setting

1. Plug the tool into a power outlet.
2. Locate the power switch on the side of the handle. Switch it to the 'ON' position. The tool will begin to heat up.
3. Adjust the temperature using the temperature control dial. The available temperature settings are:
  - 1: 350°C (660°F)
  - 2: 380°C (716°F)
  - 3: 410°C (770°F)
  - 4: 440°C (824°F)
  - 5: 470°C (878°F)
4. Allow the tool to reach the set temperature before use. This usually takes a few minutes.

### 4.2 Desoldering Process

1. Place the hot nozzle directly over the solder joint you wish to desolder, ensuring good contact.
2. Allow the solder to melt.
3. Press and hold the 'VACUUM' button located on the handle. The vacuum pump will activate, sucking the molten solder into the collection chamber.
4. Once the solder is removed, release the 'VACUUM' button and lift the tool from the joint.
5. Repeat the process for all necessary solder joints.

## 5. Maintenance

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### 5.1 Cleaning the Nozzle

Regular cleaning of the nozzle is crucial for optimal performance.

1. Ensure the tool is unplugged and completely cool.
2. Remove the nozzle from the tool.
3. Use a cleaning pin or brush to remove any accumulated solder or flux residue from the nozzle's interior and exterior.
4. Reattach the clean nozzle securely.

### 5.2 Emptying the Solder Collection Chamber

The transparent collection chamber should be emptied regularly to maintain vacuum efficiency.

1. Ensure the tool is unplugged and completely cool.
2. Locate the collection chamber, typically a transparent tube near the front of the tool.
3. Carefully detach the chamber according to the tool's design (refer to diagrams if available).
4. Dispose of the collected solder safely.
5. Clean the chamber and its filter (if applicable) with a suitable brush or compressed air.
6. Reassemble the chamber securely.

### 5.3 Filter Replacement

The internal filter prevents solder particles from entering the pump. Replace it periodically.

1. Refer to the tool's specific design for filter access.
2. Remove the old filter and replace it with a new, genuine Hakko replacement filter.
3. Ensure the filter is correctly seated before reassembling the tool.

## 6. Troubleshooting

Problem	Possible Cause	Solution
No power	Tool unplugged, power switch off, faulty outlet	Check power connection, turn on switch, test outlet
Poor vacuum suction	Clogged nozzle, full collection chamber, dirty filter, air leak	Clean nozzle, empty chamber, replace filter, check for loose connections
Tool not heating	Faulty heating element, incorrect temperature setting	Check temperature dial, contact support if element is faulty
Solder not melting	Insufficient temperature, poor contact with joint	Increase temperature, ensure full contact with solder joint

## 7. Specifications

Feature	Detail
Model Number	FR-301
Brand	Hakko
Power Source	Corded Electric
Wattage	98 watts
Item Weight	3 Pounds (1.36 kg)
Material	Copper (for certain components)
Included Components	Simple iron holder, carrying case, various nozzles
Specific Uses	Industrial Use

## 8. Warranty Information






The Hakko FR-301 Portable Desoldering Tool comes with a manufacturer's warranty against defects in materials and workmanship. The specific terms and duration of the warranty may vary by region. Please retain your proof of purchase for warranty claims. For detailed warranty information, refer to the warranty card included with your product or visit the official Hakko website.

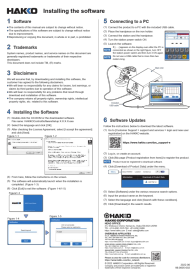
## 9. Support

For technical assistance, replacement parts, or service inquiries regarding your Hakko FR-301, please contact Hakko customer support. Contact information can typically be found on the Hakko official website or on the product packaging. When contacting support, please have your product model number (FR-301) and purchase details ready.

**Online Resources:** [Visit the official Hakko website](#) for additional resources, FAQs, and product updates.

## Related Documents - FR-301

	<p><a href="#">HAKKO 851 SMD Rework System Instruction Manual</a></p> <p>Comprehensive instruction manual for the HAKKO 851 SMD Rework System, covering specifications, safety warnings, operating procedures for soldering and desoldering, heating element replacement, parts lists, and temperature distribution charts.</p>
	<p><a href="#">HAKKO 456 Soldering Iron Service Manual and Replacement Guide</a></p> <p>Detailed instructions for disassembling, replacing the heating element, and reassembling the HAKKO 456 soldering iron, including safety warnings and specifications for HAKKO 455 and 456 models.</p>
	<p><a href="#">HAKKO 999-252 Wireless Remote Control Instruction Manual</a></p> <p>Instruction manual for the HAKKO 999-252 Wireless Remote Control system, detailing setup, usage, battery replacement, and specifications for controlling the HAKKO FA-430 Fume Extraction System.</p>
	<p><a href="#">HAKKO FX-301B Soldering Station Instruction Manual</a></p> <p>Comprehensive instruction manual for the HAKKO FX-301B soldering station, covering specifications, safety instructions, operation, maintenance, and troubleshooting.</p>
	<p><a href="#">HAKKO HJ4000 Split Vision Fixture Instruction Manual</a></p> <p>Comprehensive instruction manual for the HAKKO HJ4000 Split Vision Fixture, detailing setup, operation, optics adjustment, maintenance, and support for precise electronic component rework.</p>



## [HAKKO FX-805 Control Software Installation and Operation Guide](#)

This guide provides detailed instructions for installing and operating the HAKKO FX-805 Control Software. It covers software installation steps, connecting the FX-805 station to a PC, software updates, and a comprehensive overview of the software's features including temperature control, calibration, and parameter settings.