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Hakko FR830-02

Hakko FR830-02 Compact Preheater (470W) Instruction Manual

Model: FR830-02

1. INTRODUCTION

The Hakko FR830-02 is a compact and efficient hot air preheater designed for printed circuit boards (PCBs). It provides consistent heat through closed-loop temperature control, allowing for precise preheating temperatures between 302°F and 572°F (150°C and 300°C). This manual provides essential information for the safe and effective operation and maintenance of your FR830-02 preheater.



Figure 1: Hakko FR830-02 Compact Preheater. This image shows the main unit of the preheater, typically a rectangular

device with controls on the front panel and an air outlet.

2. SAFETY INFORMATION

Read all safety warnings and instructions before using this product. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- **Electrical Safety:** Ensure the unit is connected to a properly grounded power outlet. Do not operate with damaged cords or plugs. Disconnect power before performing any maintenance.
- **Heat Hazard:** The preheater generates high temperatures. Avoid direct contact with the hot air outlet and heated surfaces. Allow the unit to cool completely before handling or storing.
- **Ventilation:** Operate the unit in a well-ventilated area to dissipate fumes and heat.
- **Flammable Materials:** Keep flammable materials away from the preheater during operation.
- **Children and Unauthorized Personnel:** Keep the unit out of reach of children and ensure only trained personnel operate the device.
- **Intended Use:** Use the FR830-02 only for its intended purpose of preheating printed circuit boards.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- Hakko FR830-02 Compact Preheater Unit
- Power Cord
- Instruction Manual (this document)

Note: Optional accessories such as the hand switch (B2763), foot switch (B1649), extension pipe (B3263), and connecting cable (B3685) are sold separately and are not included in the standard package.

4. SETUP

1. **Placement:** Place the FR830-02 on a stable, heat-resistant, and level surface in a well-ventilated area. Ensure adequate clearance around the unit for proper airflow.
2. **Power Connection:** Connect the power cord to the unit's power inlet and then to a grounded electrical outlet.
3. **Optional Accessories:** If using optional accessories like the hand switch, foot switch, or connecting cable for the Hakko FM-206, refer to their respective manuals for connection instructions. The extension pipe (B3263) can be attached to the air outlet to focus discharged air.

5. OPERATING INSTRUCTIONS

The Hakko FR830-02 features user-friendly controls for setting temperature and managing operation.

1. **Power On:** Turn on the main power switch, usually located on the front or rear panel of the unit.
2. **Set Temperature:** Use the temperature control dial or buttons to select the desired preheating temperature. The FR830-02 operates within a range of 302°F to 572°F (150°C to 300°C). The unit will automatically regulate the temperature using its closed-loop control system.
3. **Preheating Operation:**
 - Place the printed circuit board (PCB) to be preheated above the hot air outlet. Ensure the PCB is securely positioned and not directly touching the outlet.

- Initiate preheating. This can be done via a start button on the unit, or through an optional hand switch (B2763) or foot switch (B1649) if connected.
 - Monitor the preheating process. The unit will maintain the set temperature.
 - To stop preheating, press the stop button on the unit or activate the optional switch.
4. **Using Optional Extension Pipe (B3263):** Attach the extension pipe to the hot air outlet to concentrate the airflow to a smaller area on the PCB.
 5. **Connecting with Hakko FM-206:** If using the optional connecting cable (B3685), the Hakko FM-206 can be synchronized with the FR830-02 for integrated operation. Refer to the FM-206 manual for specific instructions on this connection.
 6. **Power Off:** After use, turn off the main power switch. Allow the unit to cool down before unplugging or storing.

6. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your FR830-02 preheater.

- **Cleaning:** Ensure the unit is powered off and completely cool before cleaning. Wipe the exterior with a soft, damp cloth. Do not use abrasive cleaners or solvents.
- **Air Inlet/Outlet:** Periodically check the air inlet and outlet for any obstructions (dust, debris) and gently clean if necessary to maintain proper airflow.
- **Storage:** Store the unit in a clean, dry environment when not in use.

7. TROUBLESHOOTING

Refer to the following table for common issues and their solutions:

Problem	Possible Cause	Solution
Unit does not power on.	No power supply; power cord disconnected; main switch off.	Check power cord connection; ensure outlet is functional; turn on main power switch.
Temperature not reaching set value.	Incorrect temperature setting; obstructed air inlet/outlet; unit malfunction.	Verify temperature setting; clear any obstructions; if problem persists, contact support.
No hot air output.	Heater element failure; fan malfunction.	Power off and unplug the unit. Do not attempt repairs. Contact qualified service personnel or manufacturer support.

For issues not listed here, or if troubleshooting steps do not resolve the problem, please contact Hakko customer support.

8. SPECIFICATIONS

- **Model:** FR830-02
- **Power:** 470W
- **Airflow:** 6.35 cu.ft/min (0.15 cu.m/min)
- **Hot Air Temperature Range:** 302 - 572 °F (150 - 300 °C)

- **Dimensions (W x H x D):** Approximately 5.5 x 3 x 7.3 inches (140 x 75 x 185 mm)
- **Item Weight:** 2.62 pounds
- **Manufacturer:** AMERICAN HAKKO PRODUCTS, INC
- **UPC:** 641328057200

9. WARRANTY AND SUPPORT

The Hakko FR830-02 Compact Preheater is covered by a manufacturer's warranty. Please refer to the warranty card included with your purchase for specific terms and conditions, including warranty period and coverage details.

For technical assistance, spare parts, or warranty claims, please contact Hakko customer support directly. Contact information can typically be found on the manufacturer's official website or on the product packaging.

Manufacturer: AMERICAN HAKKO PRODUCTS, INC