



American Hakko Products, Inc.

# PRODUCT BULLETIN

**Bulletin No:** PB348

**Issue Date:** 7-30-2014

**Available:** 8-5-2014

**Product Description:**

HAKKO FR-872 4-Bank IR Preheater

**Part No:**

FR872-03


**Specification:**



Preheater Specifications	
Model	FR-872
Part No.	FR872-03
Input Voltage	120VAC 60Hz
Power Consumption	1500W
Heater Area (W x D)	286 x 350 mm (11.3 x 13.8 in.)
Effective Heating Area (W x D)	224 x 266 mm (8.8 x 10.5 in.)
Heating Zones	4
Maximum Board Depth	430mm (16.9 in.)
Operating Modes	External T/C Control – Manual External T/C Control – Automatic % of Power – Manual % of Power - Automatic
External T/C Range	50 – 200°C (122 – 392°F)
External T/C Accuracy & Stability	±5°C / ±9°F
Power Range	0 – 100% (Div of 1%)
Thermocouple Inputs	1 – Type K
Heater Control	Microprocessor – PID Control
Heater Type	High Efficiency Carbon Filament
Heater Lamp MTBF	2100 hours



## American Hakko Products, Inc.

Preheater Specifications (continued)	
External Connections <sup>1</sup>	1 – Integration w/ FM-206 or FR-803B
Dimensions (W x H x D)	360 x 97 x 535 mm (14.2 x 3.8 x 21.1 in.)
Weight	5.6 kg (12.4 lb.)
Safety Approval	

<sup>1</sup> – Integration requires connection cable (PN: B3657 for FR-803B; PN: B3686 for FM-206) – Not Included

Contents	
Part Number	Description
FR872-03	FR-872 4-Bank IR Preheater
A5003	High Efficiency Carbon Filament IR Heater (Spare)
B3516	Thermocouple
B5042	Power Cord
--	Instruction Manual

### **Comments:**

The new HAKKO FR-872 4-Bank IR Preheater provides a fast and efficient method of preheating large and small PCB assemblies while still on the workbench but in a very controlled fashion. This preheater uses a new high efficiency carbon filament IR heating lamp that nearly eliminates the visible spectrum while maintaining a very high output in the infrared spectrum with minimal shadowing, allowing for a very even preheating of the PCB.

The HAKKO FR-872 has the same operation as the smaller HAKKO FR-870 but has 4 switchable zones of preheating compared to just 2 and both manual and automatic modes of operation using either a thermocouple for closed-loop feedback of the PCB heating, or using power settings of the heaters.

A new feature that has been added for the HAKKO FR-872 is the Ramp Control. This new feature allows you to control the ramp rate of the PCB when using either of the thermocouple modes of temperature control. The feature allows you to select ramp rates of 1, 2, or 3 degrees Celsius per second. Settings of the preheater can be locked out using a password to prevent inadvertent changes that could affect the process.

As with the HAKKO FR-870, the new HAKKO FR-872 allows for automatic operation following a 3-heating zone profile that can be programmed into the system. A total of 10 profiles can be stored for each mode of operation, for a total of 20 possible profiles. The HAKKO FR-872 also integrates for start/stop operation to work in conjunction with the hot air rework profiles programmable into the HAKKO FM-206 or HAKKO FR-803B (integration requires an optional connection cable that is not included).

For more information please visit us at [www.HakkoUSA.com](http://www.HakkoUSA.com)