

Products

Desoldering / Rework/SMD rework system /Jig

HAKKO FR-811 SMD REWORK STATION **ESD SAFE**



LEAD
FREE

ESD
SAFE

RoHS

Possible to make full-scale thermal profiles with 6-zone hot air and a bottom heater.

Possible to measure and record temperature of components and PWB with type K thermocouple.

The dedicated software to link a station and a computer for easy and quick settings.

Easy data transfer through an USB cable

Available in:

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Engineering documents

Features

Packing List /
Specifications

Soldering Tip /
Nozzle

Replacement Parts /
Option

Maintenance

Features

Introducing a high-spec hot air rework station
with excellent cost performance

Operate on a computer with the dedicated software

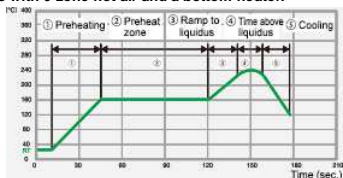


The functions needed for SMD rework are in a compact body

A low cost SMD rework can be assembled with FR-811, dedicated software and options.

- **Possible to make full-scale thermal profiles with 6-zone hot air and a bottom heater.**

A basic thermal profile is composed of the 5 parts shown above. FR-811 can provide 6 zones in which temperature, time, and air flow are controlled. Therefore FR-811 can make a full-scale thermal profile which is close to reflow profiles made by a reflow oven.



- **Record thermal data**

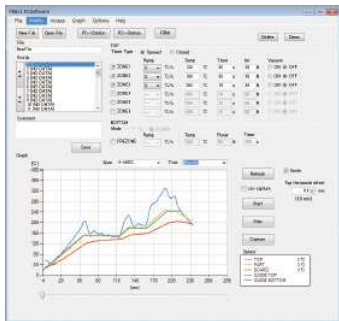
By connecting a thermocouple included with FR-811, the temperature of the component or circuit board can be measured and recorded. In addition, if "TC LINK" is set, the heater output can be automatically controlled so that the temperature of the thermocouple attached to the component or circuit board follows the set profile.



- **Operation on a PC for various settings**

By connecting FR-811 and a computer with a USB cable and using the dedicated software which comes as standard, a set thermal profile and actual temperature change can be shown in a graph in real time. Also, change of thermal profile and fine adjustment in a profile can be made on a computer operation. (After making changes, it is necessary to resend the data to FR-811.)

In addition, the set values and graph can be saved in csv format.



[*Click here to enlarge](#)

• Linked operation with bottom heater

FR-811 can control on/off timing and output of the bottom heater, which is available optionally.



High power and large volume hot air for quick removal of components

A tool that can provide powerful hot airflow for repairing high heat capacity circuit boards that require high blow volume and high output, and sufficient hot airflow for appropriate blow volume and high output for high-density mounting substrates.

Hottest
in hot air series

Temperature range

50 to 600 °C

5 times
maximum airflow^{*1}

Air flow

5 to 115 L/min.^{*2}

^{*1} Compared to HAKKO previous model
^{*2} Varies depending on nozzle shape

New user friendly functions for SMD rework

- New type of nozzles for improving temperature characteristics

The new nozzles improve work efficiency with uniform heating by hot air convection inside the nozzle which is created due to vents on the nozzle top. (Only with BGA nozzles)



• Vacuum pickup function

The vacuum pickup function is to pick up a component with a suction pad and vacuum.

It will pick a component only after the hot air melts solder joints. This can avoid an error to peel off the land by removing a component with excessive force.



• Pickup indicator

By pre-setting pickup function, a component can be picked up automatically when solder is melted. At the same time, the indication comes up and the moment of picking up will be visible. Even a component and solder joints can not be seen as covered by a nozzle, easy and safe picking up is possible.



Interface designed for intuitive operation. Possible to link to a PC

• Easy-to-read LCD

Equipped with a high-visibility LCD to make it easy to check the various product settings or operation status. Indications are displayed using graphics as well as letters and numbers so information can be checked intuitively.



• Easy-to-operate multi-direction control knob

The multi-direction control knob makes it easy to make and change settings shown in the LCD.

There are several ways of knob movements, dialing, pressing, and tilting up and down and left to right for quick operation.



• Link to a PC (A USB I/F terminal available)

A USB V/F terminal is available to link to a computer. The dedicated software, which can display and record various settings or temperature data on a computer screen in real time, is included.



• A USB device terminal for easy data transfer

Data can be transferred through a USB memory even without a computer.



Use conventional HAKKO nozzles

Align the projection part, attach the conventional nozzle to the heater pipe.



*The heater pipe of HAKKO FR-810 (discontinued) has two projection parts. In order to use the conventional nozzle, put the conversion adaptor on the heater pipe that was included in your purchased HAKKO FR-810 as one of standard accessories.

[Click here](#) for details.

Simple nozzle removal and easy maintenance

Nozzle can be changed quickly when working with a wide range of components. Conventional HAKKO nozzles can be used by using a special conversion adapter (option).

Heater replacement is also simple.

Quick-change N51 nozzles



Simple, tool-free removal and attachment.

Simple heater replacement



Simply remove four screws to replace heater.

Can also create a simple thermal profile (same as **HAKKO FR-810B**)

• **Timer function**

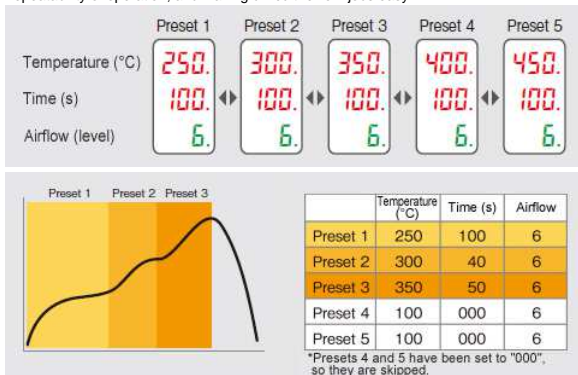
Timer function is to control the time of operation.

This can help to prevent parts from overheating and can improve the overall quality of rework.

• **Chain presets function for making a simple thermal profile**

The chain presets function is to make a simple thermal profile by combining several preset conditions. (Up to 5 steps)

This can improve work efficiency a lot by standardizing work time, avoiding overheating, improving repeatability of operation, and making difficult rework jobs easy.



Auto sleep and auto shutoff features

To ensure safety and conserve power, when the handpiece is placed in the handpiece holder, the auto sleep function will be activated and it will start cooling automatically.

If the handpiece has not been removed from the handpiece holder (e.g. Using it in a rework fixture) and it has been idle for 30 minutes, auto shutoff function will be activated. It will be automatically powered off. Access to settings can be restricted by the password function.

Assembly of a low-cost SMD rework system

A low cost rework system can be assembled with a bottom heater, a grip fixture, and a board holder.



Grip Fixture L

A board holder can be easily attached to the large baseplate



Grip Fixture M

Recommended if a bottom heater is not required or in case of use



A dedicated bottom heater for FR-811

Equipped with carbon heaters.

of a bottom heater other than the dedicated model for FR-811.

Heating area is divided into 2 sections.



Board Holder

Makes it easy to set and remove a PWB and to make fine adjustments after setting.



Board Clip

Accepts even irregular-shaped PWB.



Board Support Unit

Supports PWB from underneath to minimize warping.