

SMD REWORK STATION

1. Production Summary

1.1 Specification

rated power input	320W
Rated voltage range	AC220-240V, 50Hz
Air Pump	diaphragm pump
Capacity	24L/min(max)
Hot Air Temperature	150-500°C
Sensor	K thermocouple

1.2 Function

- * Closed loop of sensor Control Temperature, large power in starting, rapid in temperature raising, accuracy and constant in temperature, no effect caused by amount of air exhaust;
- * Prevent static electric and leakage electric to damage the PCB.
- * Unnecessary touch the PCB, so can avoid to move element and heating impaction.
- * Extensively adjust air and temperature and select different nozzle, so it can fit most of SMD.
- * Use inlet heating element, the type of heating element and nozzle is same as the international.
- * Delay to blow air when turn the power switch off, it can protect the automatic.

1.3 Usefulness

- * Fits most of SMD, Example for SOIC, CHIP, QFP, PLCC, BGA etc.
- * Contract hose

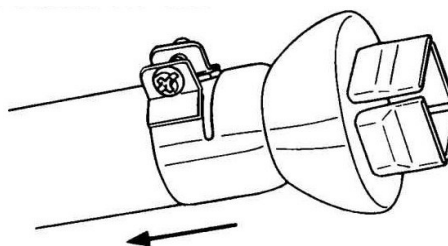
1.4 Accessories

FP Pick-up Wire.....	1 pc
FP Pick-up.....	1 pc

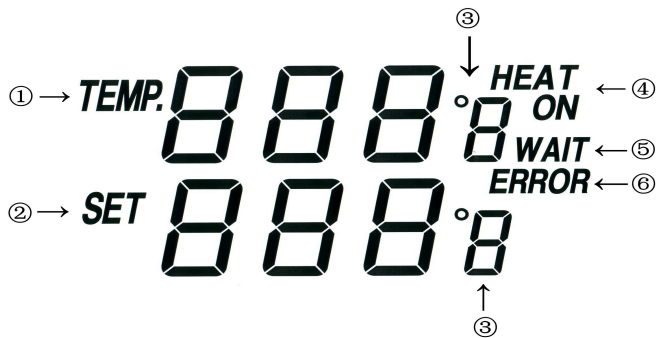
2. Operating Instructions

2-1 Before Operation

- * Select the FP Pick-up Wire that matches the size of the IC.
The Fp Pick-up has an S wire (14mm) attached to it, but an L wire (30mm) may be necessary, depending on the size of the IC, Choose the appropriate wire for the IC.
- * Select the Nozzle that matches the size of the IC.
Attach the nozzle when both the Pipe and the Nozzle are cool.
- * Loosen the screw on the nozzle
- * Attach the Nozzle as shown in the drawing.
- * Fasten the screw properly.



2-2 The display and temperature setting

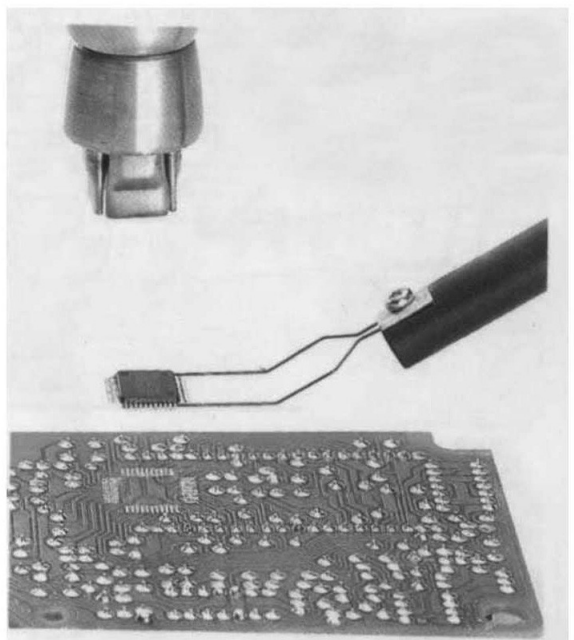


The digital display:

- ① shows the actual temperature of the soldering tip or the nozzle of the hot air gun.
- ② shows the setting temperature. Pressing the “UP” or “DOWN” button can switch the digital display to the set point display. The set-point can be changed for $\pm 1^{\circ}\text{C}$ by tapping the “UP” or “DOWN” button. Pressing the button will change the set-point quickly. The digital display will return automatically to the actual value and the iron will reach to the setting temperature quickly.
- ③ $^{\circ}\text{C}/^{\circ}\text{F}$ display: Switching the temperature display from $^{\circ}\text{C}$ to $^{\circ}\text{F}$ by pressing the “ $^{\circ}\text{C}/^{\circ}\text{F}$ ” button and then the electronic system will display the actual temperature ① and setting temperature ② in $^{\circ}\text{F}$, and vice versa.
- ④ When the actual temperature on the soldering tip of the nozzle is less than the set-point, “HEAT ON” will display and make the soldering tip or the nozzle heating up.
- ⑤ When the absolute offset is more than $\pm 10^{\circ}\text{C}$ between the actual temperature and the set-point on the soldering tip or the nozzle, “WAIT” will display. It means that the temperature electronic control system is not in the stable situation, we should wait a moment to let the “WAIT” disappear.
- ⑥ When “ERROR” display, there may be a trouble on the system, or the soldering iron is not connected to the control system correctly.

2-3 QFP Desoldering

- * **Plug the power cord into the power supply.**
After connection, the automatic blowing function may start sending air through the pipe, but the Heating Element remains cool.
- * **Turn the Power switch on.**
The Power Switch may be turned on at any time operating. Once the Power Switch is turned on, the H
- * **Adjust the Air Flow and Temperature Control Knob**
After adjusting the Air flow and Temperature Control for a short period of time. Refer to the distribution chart to adjust the temperature around 300 to 350 $^{\circ}\text{C}$. As for knob 1-5, in another nozzle, set it from 4-7. when the of airflow control must be over 4 position.
- * **Place the FP Pick-up under IC lead.**
Slip the FP Pick-up Wire under the IC lead.



If the width of the IC does not match the size
Of the FP Pick-up, adjust the width of the wire
By suppressing the wire.

* **Melt the solder**

Hold the iron so that the Nozzle is located directly
Over, but not touching the IC, and allow the hot air
To melt the solder. Be careful not to touch the leads
Of the IC with the nozzle.

* **Remove the IC.**

Once the solder has melted, remove the IC by lifting
The FP Pick-up.

* **Turn the Power Switch off.**

After the Power Switch is turned off, an automatic blowing function begins sending cool air
through the pipe in order to cool both heating element and the handle.
In case you don't use the unit for a long time, disconnect the plug.

* **Remove any remaining solder.**

After removing the IC, remove remaining solder with a wick or desoldering tool.
Note: in case of SOP, PLCC desolder it by using tweezers, etc.

2-4 QFP Soldering

* **Apply the solder paste.**

Apply the proper quantity of solder paste and install the SMD on the PWB.

* **Preheat SMD.**

Refer to the photo to preheat SMD. (Fig. I)

* **Soldering**

Heat the lead frame evenly. (Fig. II)

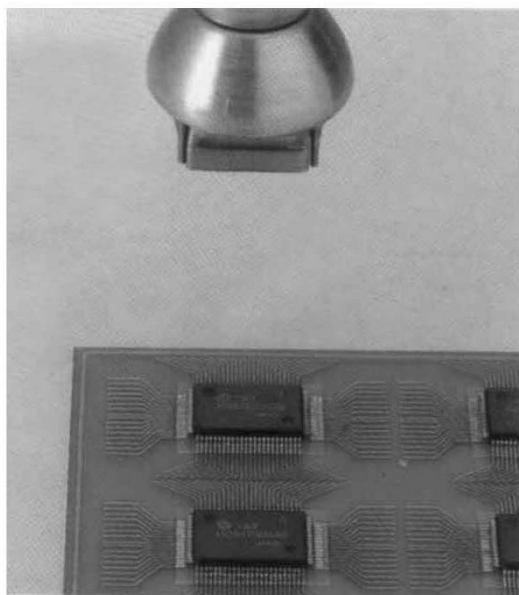


Fig. I

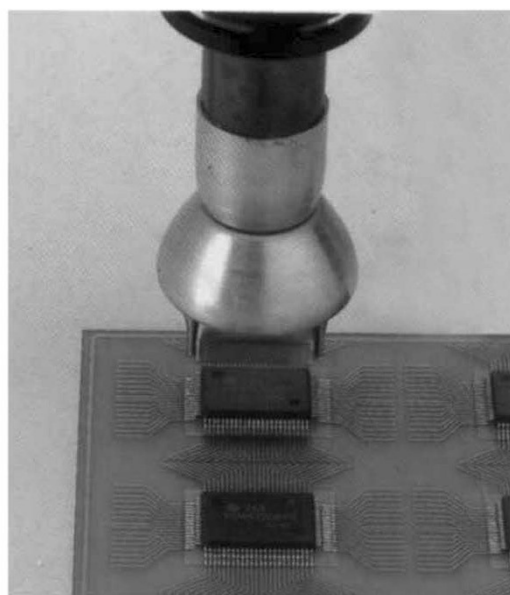


Fig. II

* **Washing**

When soldering is completed. Wash away the flux.

Note: While there is merits to solder by Hot air, it's also possible

To cause the defects such as solder balls, solder bridges. We recommend you to examine the conditions of soldering sufficiently.

3. Precautions

* **Attaching the Nozzle**

Do not force the Nozzle or pull on the edge of the Nozzle by pliers. Also, do not retighten the screw too tightly

* **Thermal Protector**

For safety, Power is automatically shut off should the unit exceed a certain temperature. Once the temperature. Once the temperature has dropped to a safety level, power is automatically turned on. Turn off the switch and cool the iron. After that, to continue operation, reduce the temperature setting or increase the air flow. Should the Thermal Protector be tripped and you do not wish to continue the operation or if you leave that place, be sure to turn the Power Switch off.

* **Caution-High Temperature Operation**

Do not use the SMD unit near ignitable gases, paper, or other inflammable materials.

Both the nozzle air are extremely hot and can cause painful burns. Never touch the heater pipe or allow the heated air to blow against your skin. Initially, the iron may emit white smoke, but this will soon disappear.

* **When heater's LED is lighting, the heater is heating, when heater's LED extinguishes, stop heat.**

* **After use, be sure to cool the unit.**

After turning off the power switch, the unit will automatically blow cool air through the pipe for a short period of time. Do not disconnect the plug during this cooling process.

* **Never drop or sharply jolt the unit**

The pipe contains quartz glass which can break if the unit is dropped or jolted sharply.

* **Do not disassemble the pump.**

* **Disconnect the plug when you don't use the unit for a long time.**

When the power cord is connected into the power supply, the unit has a little flow of electricity, even the Power Switch is in off position. So then you don't use the unit for a long time, disconnect the plug.

* When the temperature is over 350°C, when start it, the knob of airflow control should be at 3-8 position.

* When the working temperature is over 450°C, the knob of air flow control must be over 4 position.

4. WARNING

Warning: this tool must be placed on its stand when not in use.

A fire may result if the appliance is not used with care, therefore

----be careful when using the appliance in places where there are combustible material;

----do not apply to the same place for a long time;

----do not use in presence of an explosive atmosphere;

----be aware heat may be conducted to combustible materials that out of sight;

----place the appliance on its stand after use and allow it to cool down before storage;

----do not leave the appliance unattended when it is switched on.

Warning: this appliance is not intended for use by young children and infirm persons unless they have been adequately supervised by a responsible person to ensure that they can use the appliance safely.

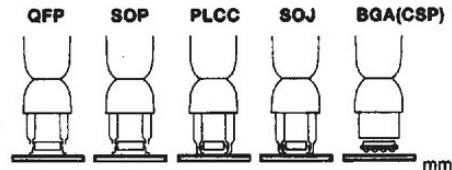
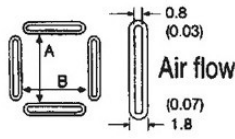
Warning: Young children should be supervised to ensure that they do not play with the appliance.

Unused soldering tools should be stored in a dry location which is out of the reach of children. Switch off all unused soldering tools.

Option Parts

Nozzles

The size in name/specification indicates the size of IC Package



mm (Inch)

Part No.	Package Type	Dimensions (mm)	Dimensions (Inch)
79-3902	QFP 10 x 10	(0.39 x 0.39)	A: 10.2 (0.4) B: 10.2 (0.4)
79-3903	QFP 14 x 14	(0.55 x 0.55)	A: 15.2 (0.6) B: 15.2 (0.6)
79-3904	QFP 17.5 x 17.5	(0.68 x 0.68)	A: 19.2 (0.76) B: 19.2 (0.76)
79-3905	QFP 14 x 20	(0.55 x 0.78)	A: 15.2 (0.6) B: 21.2 (0.83)
79-3906	QFP 28 x 28	(1.1 x 1.1)	A: 29.7 (1.17) B: 29.7 (1.17)
79-3922	PLCC 17.5 x 17.5	(0.68 x 0.68) (44 pins)	A: 18.5 (0.73) B: 18.5 (0.73)
79-3923	PLCC 20 x 20	(0.78 x 0.78) (52 pins)	A: 21 (0.83) B: 21 (0.83)
79-3924	PLCC 25 x 25	(0.98 x 0.98) (68 pins)	A: 26 (1.02) B: 26 (1.02)
79-3925	PLCC 30 x 30	(1.18 x 1.18) (84 pins)	A: 31 (1.22) B: 31 (1.22)
79-3926	PLCC 12.5 x 7.3	(0.49 x 0.29) (18 pins)	A: 9 (0.35) B: 14 (0.55)
79-3927	PLCC 11.5 x 11.5	(0.45 x 0.45) (28 pins)	A: 13 (0.51) B: 13 (0.51)
79-3928	PLCC 11.5 x 14	(0.45 x 0.55) (32 pins)	A: 15 (0.59) B: 13 (0.51)
79-3931	BQFP 24 x 24	(0.94 x 0.94)	A: 24.2 (0.95) B: 24.2 (0.95)
79-3932	TSOL 18.5 x 8	(0.73 x 0.31)	18.5 (0.73)
79-3933	SOP 11 x 21	(0.43 x 0.83)	11.7 (0.46)
79-3934	SOP 7.6 x 12.7	(0.3 x 0.5)	8.2 (0.32)
79-3935	SOP 13 x 28	(0.51 x 1.1)	13.5 (0.53)
79-3936	SOP 8.6 x 18	(0.34 x 0.71)	8.7 (0.34)
79-3937	QFP 20 x 20	(0.78 x 0.78)	A: 20.2 (0.8) B: 20.2 (0.8)
79-3938	QFP 12 x 12	(0.47 x 0.47)	A: 12.2 (0.48) B: 12.2 (0.48)
79-3939	QFP 28 x 40	(1.1 x 1.57)	A: 27.7 (1.09) B: 39.7 (1.56)
79-3940	QFP 40 x 40	(1.57 x 1.57)	A: 40.2 (1.58) B: 40.2 (1.58)
79-3941	QFP 32 x 32	(1.26 x 1.26)	A: 32.2 (1.27) B: 32.2 (1.27)
79-3901	Single Ø2.5	(0.09)	Ø2.5 (I.D.) (0.09)
79-3907	Single Ø4.4	(0.17)	Ø4.4 (I.D.) (0.17)
79-3908	SOP 4.4 x 10	(0.17 x 0.39)	4.8 (0.19)
79-3909	SOP 5.6 x 13	(0.22 x 0.51)	5.7 (0.22)
79-3910	SOP 7.5 x 15	(0.3 x 0.59)	7.2 (0.29)
79-3921	SOP 7.5 x 18	(0.3 x 0.7)	7.2 (0.28)
79-3929	Bent Single 1.5 x 3	(0.06 x 0.12)	45° Ø1.5 (I.D.) (0.06) Ø1.2 (I.D.) (0.048)
79-3942	Dual Single Ø1.5 x 5.10	(0.06 x 0.2-0.39)	Adjustable Pitch 5 (0.2) 5-10mm 10 (0.39)

