OWNER'S MANUAL

16121-TL

SMD
BENCH-TOP REWORK STATION

IMPORTANT!
Read and understand this manual before using the instrument.
Failure to understand and comply with safety rules and operating
Instructions can result in serious or fatal injuries and/or property damage.

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SMD REWORK STATION

1. Product Summary

1-1 Specifications

Power Consumption:	320W
Air Pump:	Diaphragm pump
Capacity:	24L/min (max)
Hot Air Temperature:	150 - 500'C
Sensor:	Type K thermocouple

1-2 Function

* Closed loop temperature sensing , high power at start-up for a rapid temperature rise to the set point. A constant temperature is then maintained. No effect caused by amount of air flow.
* Prevent static electricity and leakage currents from damaging the PCB.
* Unnecessary to touch the PCB, minimum movement and heat impact.
* Easy adjustment of air flow and temperature. Interchangeable nozzles fit most types of SMDs.
* Delay on shutdown allows air flow to continue to cool nozzle to a safe level

1-3 Usefulness

* Interchangeable nozzles to fit most SMD devices. (SOIC, CHIP, QFP, PLCC, BGA etc.)

1-4 Accessories (Not supplied but recommended)

* Desoldering braid, tweezers, IC handling tools, anti-static mat & straps.

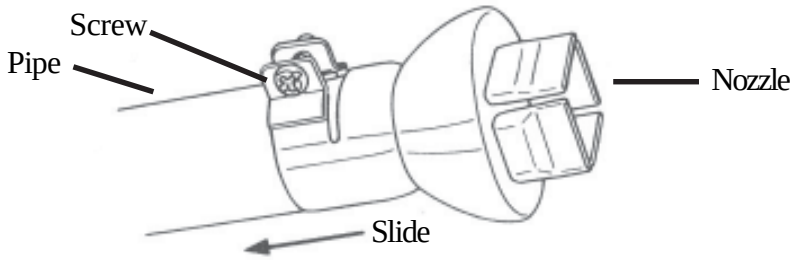
2. Operating Instructions

2-1 Setup

*** Remove marked shipping screws from bottom of base unit!**

Failure to remove screws will result in damage & void warranty

* 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.
* Be sure to tighten the screw properly.
* Select an IC tool or tweezers that matches the size of the IC you are removing or mounting.



2-2 Desoldering

*** Plug the power cord into the power supply.**

After connection, the pump may start sending air through the pipe, but the Heating Element remains cool.

*** Turn the Power switch on.**

Once the Power Switch is turned on, the Heating Element will begin to warm up.

NOTE: If the temperature setting is over 350"C", the airflow control must be above the 3 position. .
When the working temperature is over 450"C", the airflow control must be above the 4 position.

*** Adjust the Air Flow and Temperature Control Knobs.**

After adjusting the Air Flow and Temperature Control Knob, wait for the temperature to stabilize.
We recommend you to adjust the temperature to around 300 to 350"C". As for Air Flow; in case of single/ dual port nozzle, set the knob between 1 & 5, in larger nozzles, set it from 4 - 7.
When the working temperature is over 450 "C", the airflow control knob must be greater than the 4 position.

*** Melt the solder.**

Hold the head 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, using tweezers, IC extraction tool or other tool, as needed.

*** Turn the Power Switch off.**

After the Power Switch is turned off, the automatic cool down function begins. Air flows through the pipe in order to cool the 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 from circuit board pads with solder braid or desoldering tool.

2-3 Soldering

*** Apply the solder paste.**

Apply the proper quantity of solder paste to circuit board pads.

*** Place SMD**

Carefully align SMD onto board pads.

*** Slowly preheat SMD**

Place Nozzle several inches away to warm SMD to prevent thermal shock **(Fig. 1)**.

*** Melt the solder**

Place Nozzle close but not touching SMD lead frame. Continue applying hot air until all leads have bonded to the wetted solder pads **(Fig: 2)**.

NOTE: It is possible to have solder balls, voids, solder whiskers or solder bridging using the Hot Air method.
Please carefully examine board for these defects.

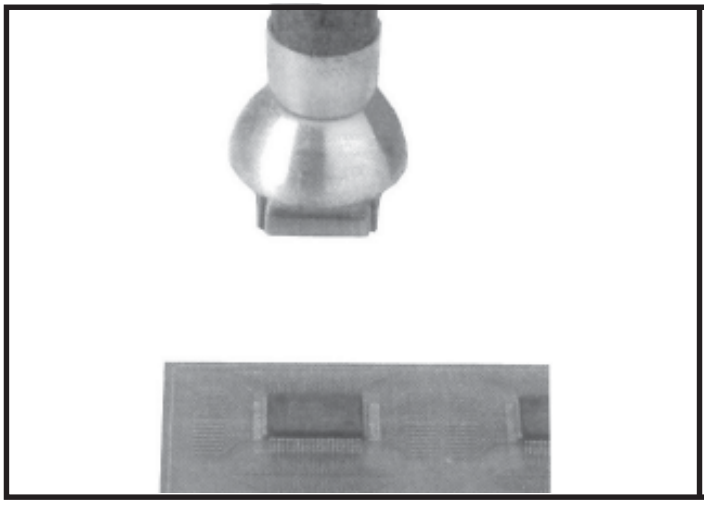


Figure 1

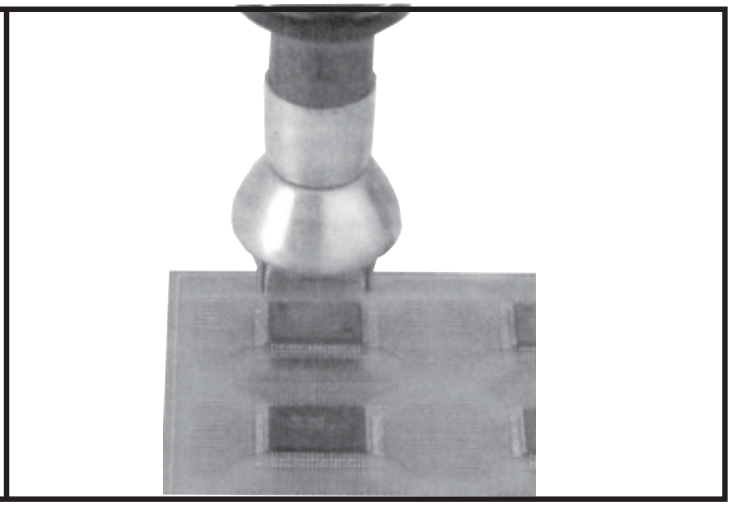


Figure 2

2-3 Soldering CONTINUED

*** Cleaning.**

Carefully remove any remaining flux/solder residue using cleaner and method specified by solder manufacturer.

3 Precautions

*** Attaching the Nozzle**

Do not force or strike the Nozzle or pull on the edge of the Nozzle with pliers. Also, do not tighten the screw too tightly.

*** Thermal Protector**

For safety, power is automatically shut off should the unit exceed a certain temperature. Once the temperature has dropped to a safe level, power is automatically turned on.

Turn off the power switch and allow the head to cool. After protector resets you should reduce the temperature

setting or increase the air flow.

NOTE: Should the Thermal Protector be tripped and you do not wish to continue or if you leave the work area, be sure to turn the Power Switch off.

*** Caution- High Temperature Operation**

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

Both the nozzle & the 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 on, the heater is heating, when heater's LED is off unit has reached set temperature.

3 Precautions CONTINUED

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

After turning off, 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, hit or sharply jolt the unit.**

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

*** Do not disassemble the pump.**

Shock hazard! There are no user serviceable parts inside base unit.

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

When the power cord is connected to the power mains, the unit has a small flow of electricity, even when the Power Switch is in off position.

*** When turning on the unit**

If the temperature setting is over 350"C", the airflow control must be above the 3 position. .
When the working temperature is over 450"C", the airflow control must be above the 4 position.

4 Nozzles

Optional and Replacement Nozzles available