

AOYUE[®]

Int 852A+ pro

Int 852A++ pro

(Centigrade / Fahrenheit switchable)

**SMD
Rework Station**

INSTRUCTION MANUAL

Thank you for purchasing Aoyue int 852A+ pro/ int 852A++ pro
SMD Rework Station.

It is important to read the manual before using the equipment.
Please keep manual in accessible place for future reference.



Manufacturer:

AOYUE INTERNATIONAL LIMITED

Jishui Industrial Zone, Nantou, Zhongshan City,
Guangdong Province, P.R.China

<http://www.aoyue.com>

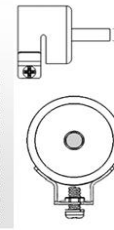
This manual is designed to familiarize and instruct the operator with the proper usage and maintenance of the equipment. The “Care and Safety Precautions” section explains the hazards of using any type of soldering or reworking device. Please read carefully and observe the guidelines in order to maximize usage and minimize the risk of injury or accidents .

TABLE OF CONTENTS

Product Description	3
Specifications	3
Package Inclusion	4
Functions and Features	4
Safety Precautions	5
Control Panel Guide	6
Assembly and Preparation	7-8
Operating Guidelines	8-13
Basic Troubleshooting Guide	14
Air Nozzles	15

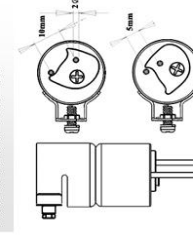
MOYUE® Replacement Air Nozzles

STRAIGHT SINGLE

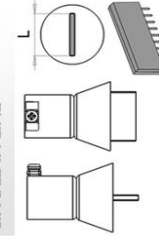


MODEL#	MEASUREMENT
1124	2.4 mm
1130	4.4 mm
1194	6 mm
1195	8 mm
1196	7 mm
1197	9 mm
1198	12 mm

DUAL SINGLE ADJ.

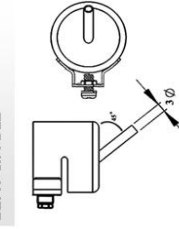


SINGLE IN LINE

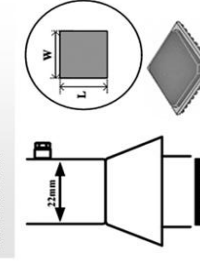


MODEL#	IC SIZE	L (mm)
1191	SIP 25L	26
1192	SIP 50L	52.5

BENT SINGLE

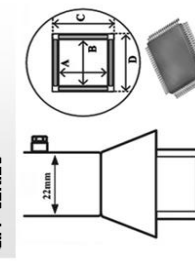


BGA SERIES



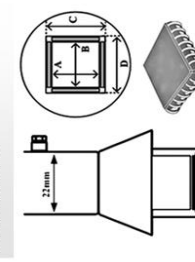
MODEL#	IC SIZE	L (mm)	W (mm)
1010	9 x 9 mm	10	10
1313	12 x 12 mm	13	13
1616	15 x 15 mm	16	16
1919	18 x 18 mm	19	19
2626A	27 x 27 mm	28	28
3030A	29 x 29 mm	30	30
3222A	31 x 31 mm	32	32
3636W	36 x 36 mm	36	36
3939W	38 x 38 mm	39	39
4141W	40 x 40 mm	41	41
4343W	42 x 42 mm	43	43
4646W	44 x 44 mm	45	45

QFP SERIES



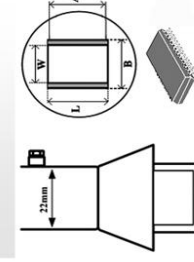
MODEL#	IC SIZE	A (mm)	B (mm)	C (mm)	D (mm)
1125	10 x 10 mm	9	9	16	16
1126	14 x 14 mm	14	14	21	21
1127	17.5 x 17.5 mm	18	18	25	25
1128	14 x 20 mm	20	14	21	27
1129	28 x 28 mm	28	28	35	35
1215	42.5 x 42.5 mm	41	41	48	48
1261	20 x 20 mm	19	19	26	26
1262	12 x 12 mm	11	11	18	18
1263	28 x 40 mm	38	28	35	45
1264	40 x 40 mm	38	39	46	46
1265	32 x 32 mm	31	31	38	38

PLCC SERIES



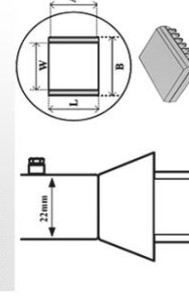
MODEL#	IC SIZE	A (mm)	B (mm)	C (mm)	D (mm)
1135	17.5 x 17.5 mm	17.5	17.5	24.5	24.5
1136	20 x 20 mm	20	20	27	27
1137	25 x 25 mm	25	25	32	32
1138	30 x 30 mm	30	30	37	37
1139	7.3 x 12.5 mm	7.5	12.5	14.5	19.5
1140	11.5 x 11.5 mm	12	12	19	19
1141	11.5 x 14 mm	12	14	19	21
1188	9 x 9 mm	10	10	17	17
1189	34 x 34 mm	35.5	35.5	42.5	42.5

SOP SERIES



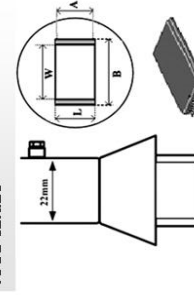
MODEL#	IC SIZE	L (mm)	W (mm)	A (mm)	B (mm)
1131	4.4 x 10 mm	11	3.8	9	10.3
1132	5.6 x 13 mm	16	4.7	14	11.7
1133	7.5 x 15 mm	17	6	15	13
1134	7.5 x 18 mm	20	6	18	13
1257	11 x 21 mm	22	11	20	18
1258	7.6 x 12.7 mm	12	7	10	14
1259	13 x 26 mm	30	12.5	28	19.5
1260	8.6 x 18 mm	20	7.7	18	14.7

SOJ SERIES



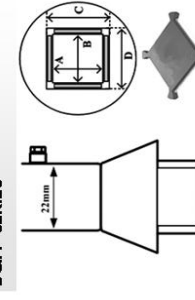
MODEL#	IC SIZE	L (mm)	W (mm)	A (mm)	B (mm)
1183	15 x 8 mm	17	7	15	14
1184	18 x 8 mm	20	9	18	16
1214	10 x 26 mm	27	11	25	18

TSOL SERIES



MODEL#	IC SIZE	L (mm)	W (mm)	A (mm)	B (mm)
1185	13 x 10 mm	11	11	9	18
1186	18 x 10 mm	12	17	10	24
1187	18.5 x 8 mm	11	18	9	25

BQFP SERIES



MODEL#	IC SIZE	A (mm)	B (mm)	C (mm)	D (mm)
1180	17 x 17 mm	17.2	24.2	24.2	24.2
1181	19 x 19 mm	18.2	18.2	25.2	25.2
1182	24 x 24 mm	23.2	23.2	30.2	30.2
1203	35 x 35 mm	34.2	34.2	41.2	41.2

BASIC TROUBLESHOOTING GUIDE

PROBLEM 1: THE UNIT HAS NO POWER

1. Check if the unit is switched ON.
2. Check the fuse. Replace with the same type if fuse is blown.
3. Check the power cord and make sure there are no disconnections.
4. Verify that the unit is properly connected to the power source.

PROBLEM 2: HOT-AIR GUN TEMPERATURE DISPLAY IS ALWAYS ABOVE 500°C

Description: Constant display of above 500°C temperature from the panel then displays an "OFF" on the panel after a few minutes.

SOLUTION:

The thermal sensor may be broken and needs to be replaced.

PROBLEM 3: HOT-AIR GUN ACTUAL AIR TEMPERATURE IS NOT INCREASING

Description: Actual temperature reading is not increasing based on desired level.

SOLUTION:

The heating element may be broken or is at the end of its life and needs to be replaced.

PROBLEM 4: THE UNIT IS VIBRATING TOO MUCH

SOLUTION: Check if the pump is properly secured. Unplug the system from the main power source before opening the case to check inside the station.

PROBLEM 5: THE UNIT IS VERY NOISY

SOLUTION:

Make sure the screw at the center of the base of the main unit has been removed. This holds the pump in place during transportation and needs to be removed before using the equipment.

PROBLEM 6: UNIT SHOWS UNCONVENTIONAL BEHAVIOR

Description: Unit operates erratically.

SOLUTION: Try to switch OFF the device and switch ON again.

OTHER PROBLEMS NOT MENTIONED:

Contact the vendor.

PRODUCT DESCRIPTION

The Aoyue int 852A+ pro/ int 852A++ pro SMD Rework is a reworking tool designed to remove and/or repair surface mounted devices such as SOIC, CHIP, QFP, BLCC, BGA, and so on.

It has several safety features such as the auto-cooling process of the Hot Air Gun. This functionality protects the device (and its components) from excessive heat upon reaching any of the following conditions: (1) when the soldering gun remained idle on its resting handle after a certain period and (2) when the temperature of the device is above a safe threshold upon turning off.

SPECIFICATION

Station Dimensions	188 (W) x 127 (L) x 244 (D) mm
Weight	3.8 Kg.
Power Input	AC 110-220 V / 50-60 Hz
Power Consumption	500 W
Temperature Range	100°C - 480°C
Heating Element Type	Metal Heating Core
Pump/Motor Type	Diaphragm Special-Purpose Lathe Pump
Air Capacity	23 l/min (Max)

Specifications are subject to change without prior notice.

PACKAGE INCLUSIONS

QUANTITY	PART DESCRIPTION
1 unit	Main Station with Hot Air Gun
4 pcs	Air Nozzles (1124, 1130, 1196, 1197)
1 pc	Z003 Hot Air Gun Holder
1 pc	Vacuum Suction Pen (For Int852A+ pro) only
1 pc	G001 IC Popper (for Int852A++ pro)
1 pc	Power Cord
1 pc	Instruction Manual

* Type of soldering tip included might change depending on availability.

** Kindly refer to soldering iron stand installation insert for parts and instructions.

FUNCTION and FEATURES

- Microprocessor-controlled ESD safe equipment.
- Switchable temperature readout between Fahrenheit and Centigrade.
- Fast heating response with built-in thermal protector
- Built-in temperature sensor that aids in providing stable (temperature) measurements.
- Integrated airflow gauge for precise airflow level adjustment
- Digital control and display of hot air temperature and air pressure.
- User configurable sleep mode for additional device protection and power saving.
- Built-in auto-cooling process that protects the system and its components from excessive heat, prolonging usage life.
- Compatibility with air nozzles of various types.

OPERATING GUIDELINES

G. Line Frequency Selection

By default, the system's line frequency has been programmed from the factory but for some cases when a manual override of the line frequency is needed the following procedure can be done.

1. Follow **System Setting** procedures 1 to 6. Adjust system selection menu to "SEL 4", then press the air flow control up button "C3".
2. If successful the display "B2" would show "-50" indicating frequency is being set.
3. Adjust the frequency with the air flow control buttons "C3 and C4". Select "-50" for 50 Hz and select "-60" for 60 Hz.
4. Save the selected settings and exit from the frequency selection menu by pressing the Hot Air gun function switch "F" .

H. Utilizing the Hot Air Gun Digital Temperature Calibration

By default, the system is properly calibrated but for some cases when a little adjustment of the Hot Air Gun temperature is required the following procedure can be done.

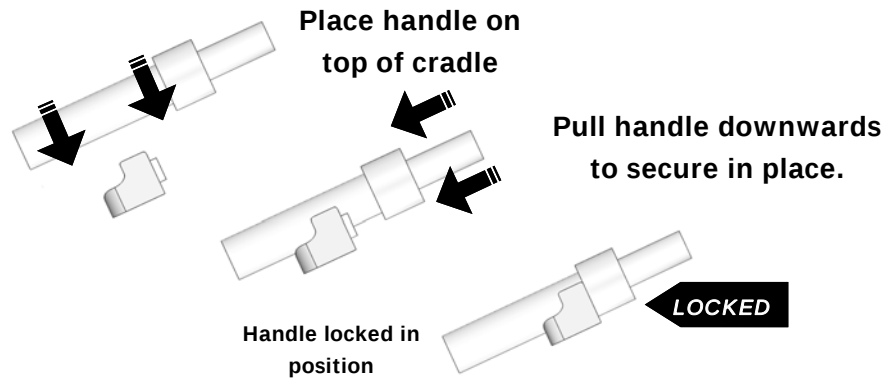
1. Follow **System Setting** procedures 1 to 6. Adjust system selection menu to "SEL 4", then press the air flow control up button "C3".
2. If successful the display would show " Add 000" indicating hot air gun digital calibration is being set.
3. Adjust the offset value with the air flow control buttons "C3 and C4", the word "Add" signifies a positive calibration value while the word "Sub" signifies a negative calibration value. Value is adjustable from -50 to 90 degrees with "000" signifying no offset.
4. Save the selected calibration settings and exit from the calibration adjustment menu by pressing the Hot Air gun function switch "F" .
5. Enter hot air gun function and set to desire temperature to check if additional calibration is needed.

OPERATING GUIDELINES

8. To wake the hot air gun from its sleep mode, simply lift the hot air gun from its holder or press any control button.

Hot air gun proper placement

To ensure sleep mode activation handle should be properly placed and locked into position.



F. Selecting the Temperature Scale

The displayed temperature can be toggled between the Centigrade scale or the Fahrenheit scale.

To switch between the two scales follow these procedures:

1. Follow **System Setting** procedures 1 to 6. Adjust system selection menu to "SEL 3", then press the air flow control up button "C3".
2. If successful the display would show "Set F " indicating system scale setting is being set.
3. Select the system temperature scale with the air flow control buttons "C3 and C4". Select "C" for Celsius scale and select "F" for Fahrenheit scale.
4. Save the selected temperature scale settings and exit from the temperature scale adjustment menu by pressing the Hot Air gun function switch "F" .

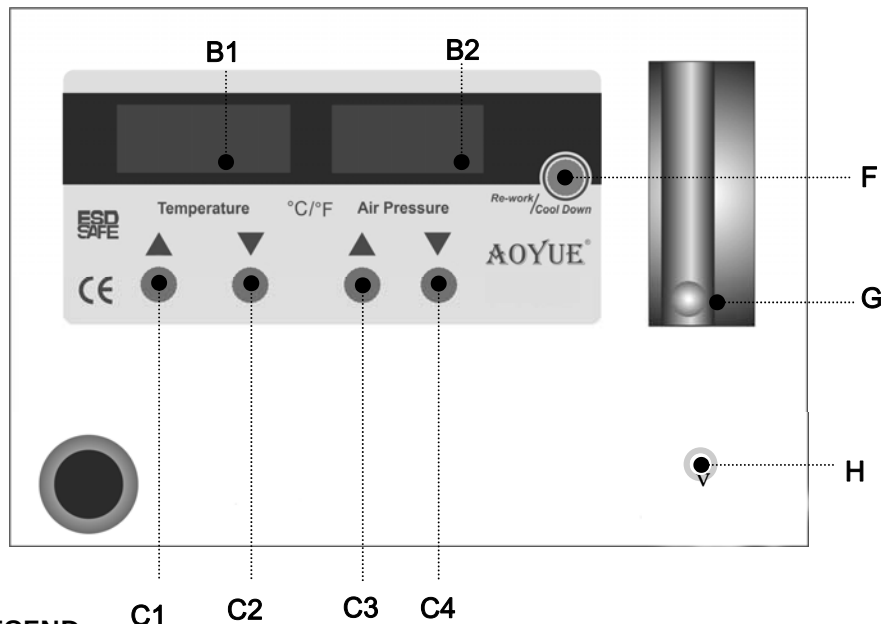
SAFETY PRECAUTIONS



CAUTION: Improper usage can cause serious injury to personnel and/or damage to equipment. For your own safety, please observe the ff. precautions.

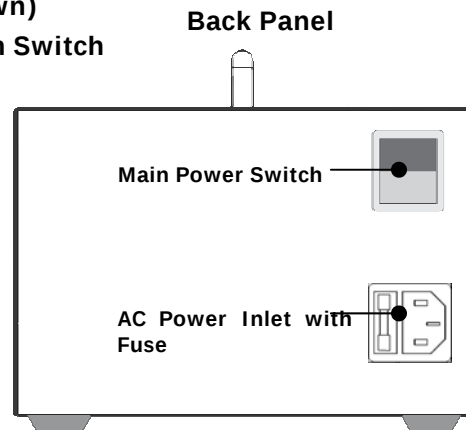
- Check each component after opening the package to make sure everything is in good condition. If there are any suspected damage, do not use the item and report the issue to your vendor.
- Turn OFF the main power switch and unplug the device when moving the device from one location to another.
- Do not strike or subject the main unit to physical shock. Use carefully to avoid injury and damage to any part.
- Handle with care.
 - Never drop or sharply jolt the unit.
 - Contains delicate parts that may break if the unit is dropped.
- Make sure the equipment is always grounded. Always connect power to a grounded receptacle.
- Temperature may reach as high as 480°C when switched ON.
 - Do not use the device near flammable gases, paper and other flammable materials.
 - Do not touch heated parts, which can cause severe burns.
 - Do not touch metallic parts near the tip.
- Disconnect the plug from the power source if the unit will not be used for a long period.
 - Turn off power during breaks, if possible.
- Use only genuine replacement parts.
 - Turn off power and let the unit cool before replacing parts.
- The unit may produce a small amount of smoke and unusual odor during initial usage. This is normal and should not yield any negative result when reworking.
- Soldering process produces smoke — use on well ventilated place.
- Do not alter the unit, specifically the internal circuitry, in any manner.

CONTROL PANEL GUIDE



LEGEND:

- B1 - Temperature Display
- B2 - Airflow Level Display
- C1 - Temperature Control (Up)
- C2 - Temperature Control (Down)
- C3 - Airflow Control (Up)
- C4 - Airflow Control (Down)
- F - Hot Air Gun Function Switch
- G - Airflow Gauge
- H - Vacuum pen Connector
(for i852A+ + only)



OPERATING GUIDELINES

Selection Menu	Function
1	Hot Air Gun Sleep Timer
2	Temperature Scale Adjustment
3	AC Line Frequency Selection
4	Hot Air Gun Digital Offset

E. Activating Hot Air Gun Auto-Sleep Mode

The hot air gun's SLEEP mode can be activated by following the set of procedures below:

- Follow **System Settings** procedures 1 to 6.
- Adjust system selection menu to SEL 1, then press the air flow control up button "C3".
- If successful the display "B1 and B2" would show "t 60" indicating soldering iron sleep timer setting is being set.
- Adjust the sleep timer with the air flow control buttons "C3 and C4", Sleep timer is adjustable from 5 to 60 minutes with "t OFF" signifying sleep timer is turned off.
- Save the selected timer settings and exit from the sleep timer adjustment menu by pressing the Hot Air gun function switch "F".
- If the sleep mode is activated the sleep timer will start counting down once the hot air gun is placed securely on the hot air gun holder. **See: Hot air gun proper placement on page 12.** The display "B1" will show the letter "L" indicating the hot air gun has been locked into position.
- When the sleep timer expires, the system will start cooling down the hot air gun by blowing air at maximum intensity while the display shows a flashing OFF to signify hot air gun is currently preparing to go into sleep mode. Once the hot air gun actual temperature goes below 90 degrees, the display "B1 and B2" would show " - - - - - " seven dashes indicating hot air gun is now in sleep mode.

OPERATING GUIDELINES

C. VACUUM PICK UP PEN (FOR Int 852A + + only)

1. Connect the vacuum pick up tool to the vacuum pen connector ("H" form the control panel guide).
2. Make sure the Hot Air gun function switch is in the off position.
3. Select the appropriate vacuum pick up head and attach to the vacuum pick up tool.
4. Simultaneously press the air pressure control up and air pressure control down button ("C3 and C4" from the control panel guide). This will activate the vacuum pick up mode.
5. During the vacuum pick up mode the display "B2" will show the word "VAC" indicating it is currently in the vacuum pick up mode.
6. Us the vacuum pen to pick up small components, Place the tip of the vacuum pen on top of the component, cover the hole found on the vacuum pen to pick up the component.
7. To drop the component down, uncover the hole on the vacuum pen.
8. To deactivate the vacuum pick up mode. Simultaneously press the air pressure control up and air pressure control down button ("C3 and C4" from the control panel guide).

D. System Settings

The device has a system settings menu which can be access by following the procedures below:

1. Turn off unit.
2. Ensure that the Hot Air gun function switch "F" is in the ON position.
3. Power ON unit by switching the power switch to ON.
4. While the "AOYUE" name is scrolling simultaneously press and hold both temperature control up and down button (C1,C2).
5. If successful the display would show "SEL 1" indicating that the system settings menu has be accessed.
6. Adjust selection menu with the air flow control down button "C4".
7. Selection menu is adjustable from 0 to 7. To enter the selected function, press the hot air gun function switch.

ASSEMBLY and PREPARATIONS

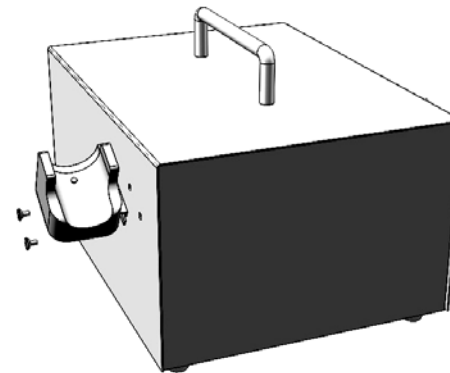
As soon as the equipment has been removed from the package, **REMOVE THE SCREW** located at the center of the bottom of the main unit. This screw holds the pump in place during transportation.

 **WARNING:** Failure to remove the screw before using the equipment can cause damage to the system.

Hot Air Gun holder was installed on the station upside down for packaging purpose.

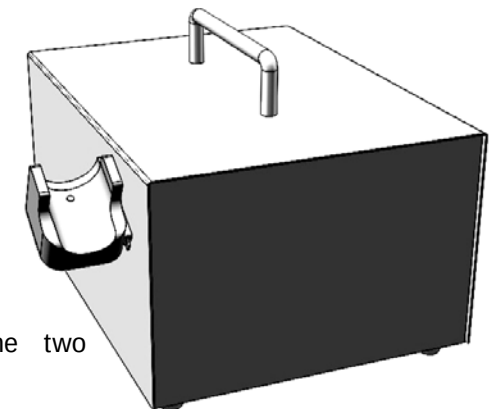
To set up the Hot Air Gun holder:

1. Loosen the two screws that secure the holder to the station.
2. Turn the holder right side up.
3. Re-fasten the two screws.
4. Place the hot air gun onto the holder in preparation for usage.



Loosen the two screws that secure the holder to the station.

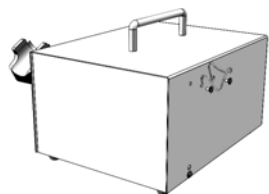
Turn the holder right side up.



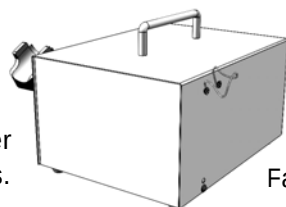
Re-fasten the two screws.

ASSEMBLY and PREPARATIONS

(FOR Int 852A++ pro only)



Loosen the two screws that on the side of the station.



Align the vacuum pen holder legs with the two screw holes.

Fasten the two screws.

OPERATING GUIDELINES

IMPORTANT REMINDERS:

1. Make sure the equipment is placed on a flat stable surface and all the heat-generating components placed on their respective holders or stands.
2. Ensure all function switches are OFF prior to reworking.
3. Ensure all terminal connections are properly secured.

IMPORTANT: Please refer to the **CONTROL PANEL GUIDE** page for buttons and display panel directory.

A. INITIAL PROCEDURES

1. Plug the device to the main power source using the power cord provided in the package.
2. With all function switches deactivated and all terminal connections properly secured, switch ON the device by activating the main power switch.
3. The display panels, B1 and B1 will temporarily show the product name in a scrolling manner and then display "OFF" on all rows once the scroll is finished. The system will remain at this state until the user activates a function.

OPERATING GUIDELINES

B. HOT AIR GUN

1. Follow the initial procedures above, "**A. INITIAL PROCEDURES**".
2. Activate "Hot Air Gun" switch ("F" from the control panel).
3. The system will immediately start to blow air and increase the air temperature according to the set values.
4. Adjust the air flow level using the airflow control buttons ("C3 and C4" from the control panel).

IMPORTANT: When adjusting the air temperature, it is strongly advised to initially increase the airflow level in order to manage the system temperature. This is to protect the heating element inside the handle from excessive heat.

5. Adjust the hot air gun air temperature using the temperature control buttons ("C1 and C2" from the control panel). The display for Hot Air Gun Temperature will change from actual temperature display to set temperature display while temperature is being adjusted. When set temperature adjustment is done wait a few seconds for the display B1 to return to displaying the actual temperature.
6. When reworking is complete, return the Hot Air Gun to its holder and **DO NOT** immediately turn off the main power switch.
7. Deactivate the Hot Air Gun Function button first in order to activate the auto-cooling process. The system will start to blow air (at room temperature) at a fast rate to reduce heat from the hot air gun and bring down the temperature to a reasonable safe level of **80°C**. During this time, the display for hot air gun temperature will also alternate from "Off" to actual temperature display. Likewise, the air pressure level is at its highest reading as indicated from the air flow gauge. Once the temperature drops to approximately **80°C** the system will halt and display "OFF" on the panel. It is now safe to switch off the main power switch.
8. Turn OFF the main power switch.
9. Unplug the device from the main power source.