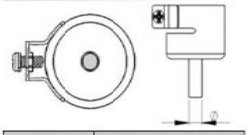
AOYUE®

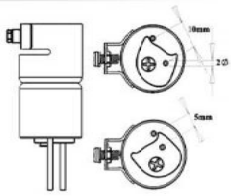
Replacement Air Nozzles

STRAIGHT SINGLE

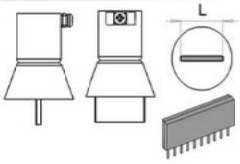


MODEL#	MEASUREMENT
1124	2.4 mm
1130	4.4 mm
1194	6 mm
1195	8 mm
1196	7 mm
1197	9 mm
1198	12 mm

DUAL SINGLE ADJ.

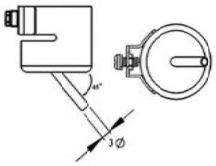


SINGLE IN LINE

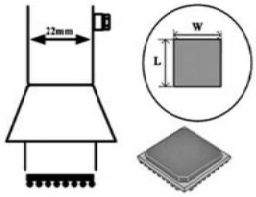


MODEL#	IC SIZE	L (mm)
1191	SIP 25L	26
1192	SIP 50L	52.5

BENT SINGLE

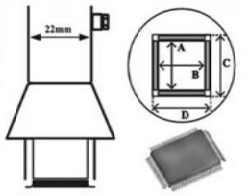


BGA SERIES



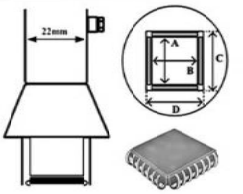
MODEL#	IC SIZE	L (mm)	W (mm)
1010	9 x 9 mm	10	10
1313	12 x 12 mm	13	13
1616	15 x 15 mm	16	16
1919	18 x 18 mm	19	19
2828N	27 x 27 mm	28	28
3030N	29 x 29 mm	30	30
3232W	31 x 31 mm	32	32
3636W	36 x 36 mm	36	36
3939W	38 x 38 mm	39	39
4141W	40 x 40 mm	41	41
4343W	42 x 42 mm	43	43
4545W	44 x 44 mm	45	45

QFP SERIES



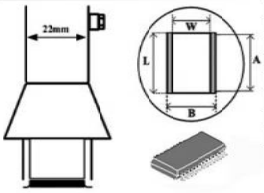
MODEL#	IC SIZE	A (mm)	B (mm)	C (mm)	D (mm)
1125	10 x 10 mm	9	9	16	16
1126	14 x 14 mm	14	14	21	21
1127	17.5 x 17.5 mm	18	18	25	25
1128	14 x 20 mm	20	14	21	27
1129	28 x 28 mm	28	28	35	35
1215	42.5 x 42.5 mm	41	41	48	48
1261	20 x 20 mm	19	19	26	26
1262	12 x 12 mm	11	11	18	18
1263	28 x 40 mm	38	28	35	45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

PLCC SERIES



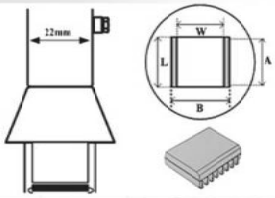
MODEL#	IC SIZE	A (mm)	B (mm)	C (mm)	D (mm)
1135	17.5 x 17.5 mm	17.5	17.5	24.5	24.5
1136	20 x 20 mm	20	20	27	27
1137	25 x 25 mm	25	25	32	32
1138	30 x 30 mm	30	30	37	37
1139	7.3 x 12.5 mm	7.5	12.5	14.5	19.5
1140	11.5 x 11.5 mm	12	12	19	19
1141	11.5 x 14 mm	12	14	19	21
1188	9 x 9 mm	10	10	17	17
1189	34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

SOP SERIES



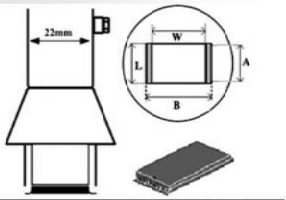
MODEL#	IC SIZE	L (mm)	W (mm)	A (mm)	B (mm)
1131	4.4 x 10 mm	11	3.8	9	10.3
1132	5.6 x 13 mm	16	4.7	14	11.7
1133	7.5 x 15 mm	17	6	15	13
1134	7.5 x 18 mm	20	6	18	13
1257	11 x 21 mm	22	11	20	18
1258	7.6 x 12.7 mm	12	7	10	14
1259	13 x 28 mm	30	12.5	28	19.5
1260	8.6 x 18 mm	20	7.7	18	14.7

SOJ SERIES



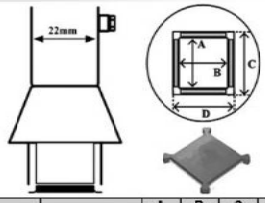
MODEL#	IC SIZE	L (mm)	W (mm)	A (mm)	B (mm)
1183	15 x 8 mm	17	7	15	14
1184	18 x 8 mm	20	9	18	16
1214	10 x 26 mm	27	11	25	18

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	17.2	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

Manufacturer:
AOYUE INTERNATIONAL LIMITED
Jishui Industrial Zone, Nantou, Zhongshan City,
Guangdong Province, P.R.China
http://www.aoyue.com

AOYUE® INT 768+

Professional Repairing System

INSTRUCTION MANUAL

Thank you for purchasing Aoyue Int768+ Professional Repairing System.
It is important to read the manual before using the equipment.
Please keep manual in accessible place for future reference.

CE

ESD SAFE

This manual is designed to familiarize the technician with the proper operation 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 .

This appliance can be used by children aged form 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

The specific instructions related to the safe operation of this appliance (as given in 7.12 of this standard) shall be collated together in the front section of the user instructions.
The height of the characters, measured on the capital letters, shall be at least 3 mm.
These instructions shall also available in an alternative format, e.g. on a website.

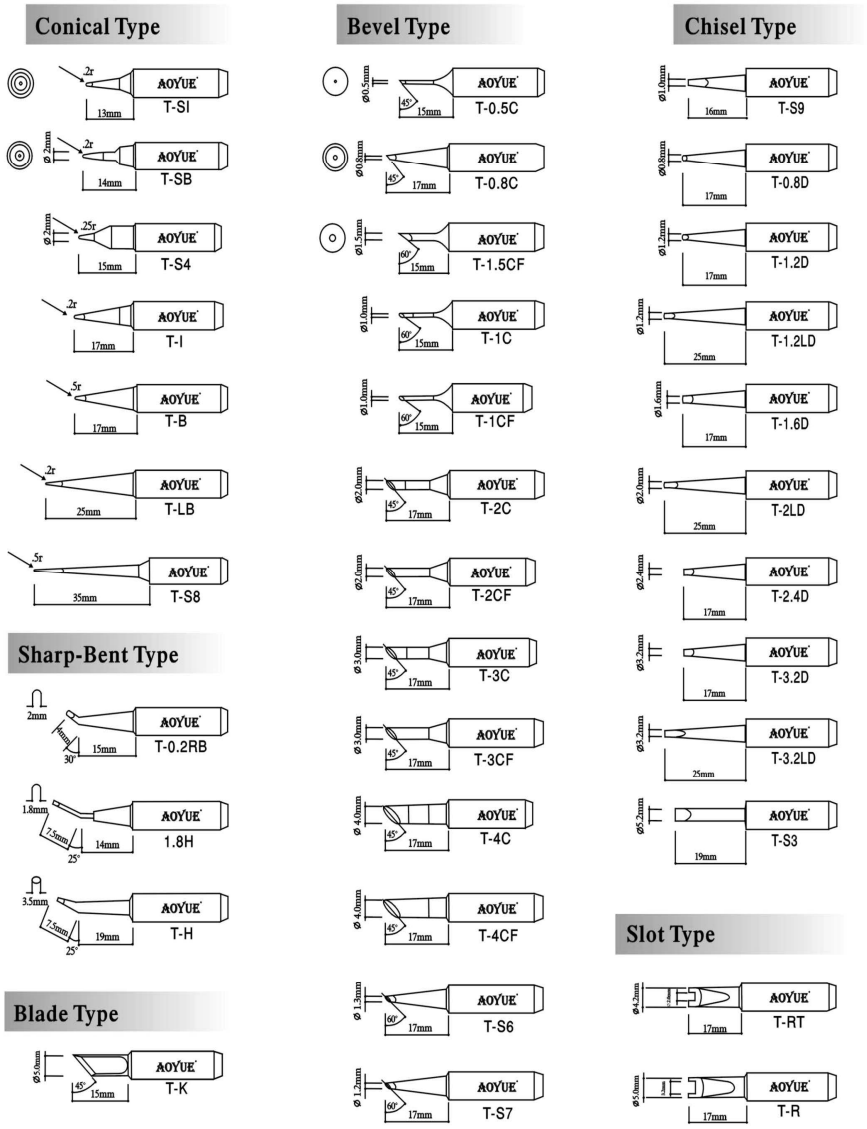
A fire may result if the appliance is not used with care, therefore:

- → be careful when using the appliance in places where there are combustible materials ;
- → do not apply to the same place for a long time;
- → do not use in presence of an explosive atmosphere;
- → be aware that heat may be conducted to combustible materials that are 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.

Rohs

Correct Disposal of this product	
	This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

REPLACEMENT TIPS



Note: The above items are sold separately.

BASIC TROUBLESHOOTING GUIDE

PROBLEM 6: AIR PRESSURE LEVEL IS SIGNIFICANTLY LOW NO MATTER HOW HIGH THE AIRFLOW LEVEL IS CALIBRATED

Case 1: Check the mains voltage (AC power source). If the voltage level falls significantly low, about 15-20% lower than the standard, there will also be a noticeable drop in the air pressure level.

SOLUTION: Please refer to your local power service provider.

Case 2: The microcontroller might have detected the operating frequency incorrectly. The user will notice that airflow level is weaker with reference to the airflow gauge compared with the displayed value.

SOLUTION: Try to press the RESET button on the panel to let the device re-detect the proper operating frequency.

PROBLEM 7: SOLDERING IRON TEMPERATURE DISPLAY PANEL SHOWS "PLUG" CHARACTERS

Case 1: The system shows "PLUG" from the soldering iron temperature display panel .

SOLUTION 1: Check if the soldering iron connection assembly is properly connected and secured to the receptacle on the control panel.

SOLUTION 2: Make sure the soldering iron tip is properly inserted and secured inside the handle. Lose contacts between the tip and handle can also cause this error message.

PROBLEM 8: DISPLAY AND OTHER DEVICE OPERATION ISSUES

SOLUTION: Try to switch OFF the device and switch ON again. Unplug the system from the main power source and plug in again when necessary

OTHER PROBLEMS NOT MENTIONED:

TABLE OF CONTENTS

PRODUCT DESCRIPTION

The Aoyue INT768+ Professional Repairing System is a reworking equipment that combines the functionality of a Hot Air Gun, Soldering Iron, and DC Power Supply in one sophisticated package.

One of the notable features of this device is the auto-cooling process of the Hot Air Gun. This functionality protects the device (and its components) from excessive heat by blowing air (at room temperature) upon achieving any of the following two 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. This will be discussed in further detail together with the complete features in the succeeding sections of this manual.

Finally, the unique, innovative design with digital control panel and display provides precision, safety, and ease of use to match all reworking requirements.

PACKAGE INCLUSION

1 unit	Int 768+ Main Station
1 pc.	Soldering Iron with Tip
1 pc.	Soldering Iron Spare Heating Element
1 pc.	2660 Soldering Iron Holder with Solder Wire Stand**
1 pc.	939 Vacuum Suction Pen
1 pc.	G001 IC Popper
1 pc.	Instruction Manual
1 each.	Air Nozzles (1124, 1130, 1197, 1010, 1313, 1919)
1 pc.	10013 DC Connecting Wires
1 pc.	Power Cord
.	

**** Kindly refer to soldering iron stand installation on page 8 for parts and instructions.**

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: TEMPERATURE DISPLAY IS ALWAYS ABOVE 500°C

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

SOLUTION:

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

PROBLEM 3: ACTUAL AIR TEMPERATURE IS NOT INCREASING

Description: Actual temperature reading is not increasing or decreasing based on desired level. The panel will then display a blinking "OFF" on panel.

SOLUTION:

The heating element may be broken and needs to be replaced.

PROBLEM 4: THE UNIT IS VIBRATING TOO MUCH

Check if the 4 screws that hold the pump in place are properly and tightly connected. Unplug the system from the main power source before opening the case to check the internal settings.

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.

CARE and MAINTENANCE

B. Care for the Soldering Iron tip.

Always keep the solder-plated section of the tip coated with a small amount of solder. If the tip is coated with oxide, the tip's heat conductivity will be lowered. Coating the tip with a small amount of fresh solder ensures maximum heat conductivity.

STEPS in Checking, Cleaning and Tinning the Tip

1. Set temperature to 250° C (482° F)
2. After real temperature reaches the set temperature, use a damp sponge to clean the tip and check for damages.
3. If the tip has oxidation, apply solder and wipe using the damp sponge, repeat these steps until oxidation is removed.
4. After cleaning, coat tip with a thin layer of solder and set it aside ready for the next usage.
5. If the tip shows disfiguration or has rust on it. Change the tip.

SPECIFICATIONS

MAIN STATION	
Power Input :	available in 110V / 220V
Station Dimensions:	188(w) x 126(h) x 250(d) mm
Weight:	6.3 Kg
SOLDERING IRON	
Power Consumption:	60W
Temperature Range:	200°C - 480°C
Heating Element:	Ceramic Heater
Output Voltage:	24V
HOT AIR GUN	
Power Consumption:	550W
Temperature Range:	100°C - 480°C
Heating Element	Metal Heating Core
Pump/Motor Type:	Diaphragm Pump
Air Capacity:	23 l /min (max)
POWER SUPPLY	
Total Current:	1.5A
DC Output Voltage:	0-15V

FUNCTIONS and FEATURES

- Microprocessor-driven ESD safe equipment.
- 3-in-1 repairing system combining Hot Air Gun, Soldering Iron, and DC Power Supply in one sophisticated package.
- Digital control and display of hot air temperature, soldering iron temperature, air pressure, and DC supply voltage.
- Delivers stable DC power supply from 1V to 15V at 1.5A with knob-type control to regulate desired output voltage.
- Programmable timer functionality from 6 to 9999 seconds for automating reworking tasks.
- User-configurable 1- to 20-minute idle-to-auto-stand-by mode (with 5 minutes as default) for additional device protection and power saving.
- Built-in auto-cooling process that protects the system and its components from excessive heat, thereby, prolonging usage life.
- Compatibility with various type of air nozzles and soldering iron tips. (Please refer to MISCELLANEOUS section of this manual.)

SAFETY PRECAUTIONS

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

- Check each component after opening the package to make sure everything is in good condition. If there are any suspected damage, don't use the item and report the issue to your dealer.
- Turn off power switch and unplug the unit from the mains power source when moving the equipment from one location to another.
- Do not strike or subject the equipment (or its components) to physical shock. Use carefully to prevent damage on any parts.
- Make sure the unit is always grounded. Always connect power to a grounded receptacle.

OPERATING PROCEDURE

E. DC POWER SUPPLY

1. Turn on the power switch. Make sure that the connectors are properly attached.
2. Press the voltage supply function button. (20) from the panel. It will then display the voltage and current supply.
3. Adjust DC voltage regulator knob for desired output voltage. DC voltage output ranges from 1-15 V.

WARNING: The display will indicate the following when short circuit occurs.

This warns the operator that the power switch should be immediately turned off and discontinue operation. Repeat the process again making sure that all connection are properly connected. The system will incur permanent damage when short circuit for more than 20 seconds occur.

CARE and MAINTENANCE

A. Replacing the Hot Air Gun heating element

1. Remove the screws which secure the handle and slide the cord tube.
2. Open the handle. Disconnect the ground wire and remove the pipe.
3. Remove the heating element by disconnecting the terminal.
4. Insert a new heating element and reconnect the terminal. Handle the heating element with care. Never rub its wire. Reconnect the ground wire after replacing the element.
5. Assemble the handle in the reverse order of disassembly.

OPERATING GUIDELINES

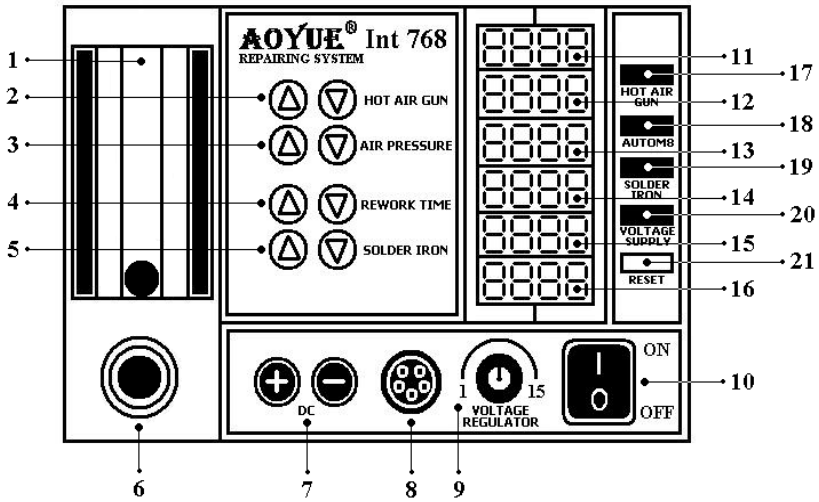
C. AUTOMATE HOT AIR REWORKING

1. Turn on the hot air gun function switch , and set to the desired re-working temperature. Turn of hot air gun function switch.
2. Turn on the automate function switch,"18" from the panel, Set the time by using the up/down rework time button,"4" from the panel. It is preset at 300 seconds.
3. After preferred automate rework time has been set. Turn on the hot air gun function switch.
4. Timer would start counting down when the actual hot air temperature has reached the set temperature. Once automate rework time is finished, it would cool down automatically, and display the letters "End" indicating automate process is finished.
5. To resume manual hot air reworking de-press automate function switch.

D. SOLDERING IRON

1. Check if the Soldering Iron is attached properly to the 6-pin receptacle and the vacuum tube is securely connected.
2. Turn on the Power Switch.
3. Press the Soldering Iron function switch to turn on soldering iron. "19" from the panel.
4. When the display shows the word "PLUG" check the connection of the soldering iron to its receptacle.
5. The Solder iron is set to automatically increase temperature to 249° C upon turning on. It will show the set temperature when you are adjusting the temperature, then it will automatically switch to display the actual temperature when you have finished setting the temperature.
5. Set the temperature using the up/down Solder iron buttons ,"5" from the panel
6. Start using when real temperature reaches the set temperature.

CONTROL PANEL GUIDE



LEGEND:

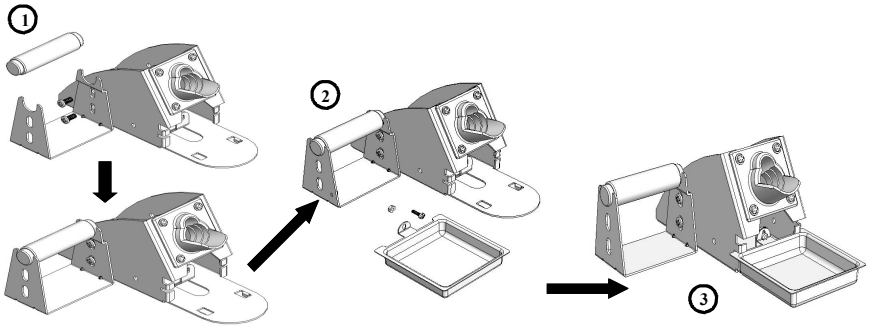
1 — Air Gauge
2 — Hot Air Gun Temperature Control Buttons
3 — Air Pressure Control Buttons
4 — Auto Rework Time Adjustment Buttons
5 — Soldering Iron Temperature Control Buttons
6 — Hot Air Output Terminal
7 — DC Voltage Supply Output Terminal
8 — Soldering Iron 5-Pin Connecting Terminal
9 — DC Voltage Supply Control Knob
10 — Main Power Switch
11 — Hot Air Gun Temperature Display
12 — Hot Air Gun Pressure Display
13 — Auto Rework Time Display
14 — Soldering Iron Temperature Display
15 — DC Voltage Display
16 — DC Current Display
17 — Hot Air Gun Activation Switch
18 — Auto Reworking Activation Switch
19 — Soldering Iron Activation Switch
20 — DC Voltage Supply Activation Switch
21 — Reset Button

ASSEMBLY and PREPARATION

A. Soldering Iron

1. Connect the soldering iron cord assembly to the 5-pin output terminal found at the lower portion of the main unit. Please refer to item 8 from the Control Panel Guide.
2. Place soldering iron to the soldering iron stand as shown above.

B. Soldering Iron Stand



B. Hot Air Gun

The 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 upside.
3. Fasten the two screws back.
4. Place the hot air gun on the holder in preparation for usage.

Note: 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.

C. DC Power Supply

Connect the mobile phone power supply to the DC output terminal using the connecting wires provided with the package. Observe proper polarity of connections.

OPERATING GUIDELINES

Auto-sleep mode — unit is also programmed to have an auto-sleep mode, this is activated when hot air gun is turned on but is placed on the hot air gun holder and not put to use for set amount of minutes, temperature automatically decreases and eventually turns to sleep mode. When the handle is held up again the unit will go back to its previous setting.

Sleep Mode Timer Set-Up

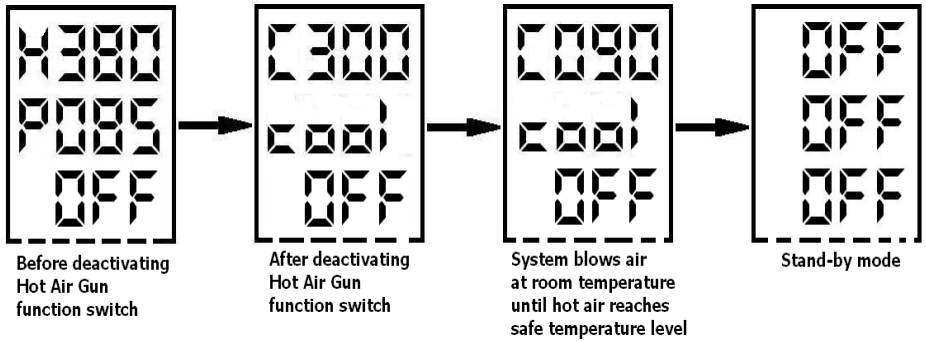
1. Switch the unit ON (or press "Reset" button, from the panel).
2. Press and hold hot air gun up button, while the Name and model is displayed.
3. Display panel, will initially indicate '-0**5-**', which means the device will switch to sleep mode after **5** minutes (default) of idle time and if the nozzle is docked on the handle for the duration of time.
4. Adjust the time before sleep by pressing air pressure up and down buttons.
5. Press Hot air gun down button to confirm.
6. The device will start counting down when the hot air gun is docked on the handle. Once countdown is finished and the hot air gun still docked, the device will automatically blow air (at room temperature) to bring down temperature to 90°C. The panel will then display four dashes "- - - - " to indicate that the device is now in sleep mode.

NOTES:

- Time is configurable from 1 to 20 minutes (default 5 minutes).
- The device has a switch located at the handle (cradle), which activates the countdown before the system goes to sleep.
- Once the hot air gun is released from the handle during sleep mode, the unit will automatically switch back to previous working temperature and airflow level parameters.
- Timer settings defaults back to 5 minutes every time the unit is powered down or the reset button is pushed.

Auto-cool off function

1. When reworking is complete, return the Hot Air Gun to its holder and **DO NOT** immediately unplug the device from the main power source.
2. Deactivate the HOT AIR GUN activation switch first in order to activate the auto-cooling process. The system will start to blow air (at room temperature) at maximum rate to reduce heat from the hot air gun and bring the temperature down to a safe level of **90°C**. During this time, the prefix of hot air gun temperature display will also change from "**H**" to "**C**" while temperature is gradually decreasing. The air pressure level, likewise, will be at its highest reading as indicated from the display panel. Once the temperature drops to approximately **90°C** the hot air gun will automatically stop and display "**OFF**" on the panel. It is now safe to unplug the device from the main power source if the system reached this stage.



3. Unplug the device from the main power source.
4. Allow the device (and its components) to completely cool down before keeping in a safe and dry place. (Optional but recommended).

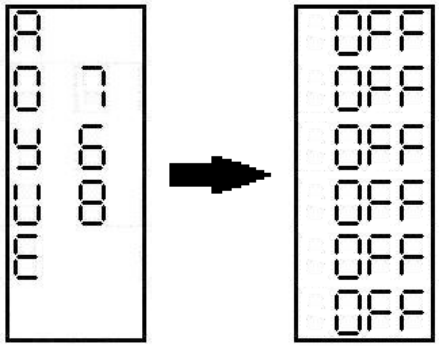
IMPORTANT REMINDERS:

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

NOTE: Please refer to the CONTROL PANEL GUIDE if needed.

A. START-UP PROCEDURE

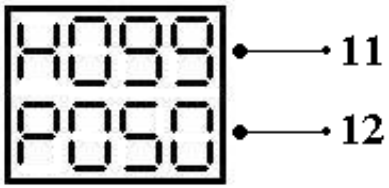
1. Plug the device to the main power source.
2. Switch ON the device using the main power switch (item 10 on the CONTROL PANEL GUIDE) found at the lower right portion of the control panel.
3. The display panel will show the product name momentarily and then "OFF" on each line of the panel, provided all function switches are deactivated. See below for illustration.



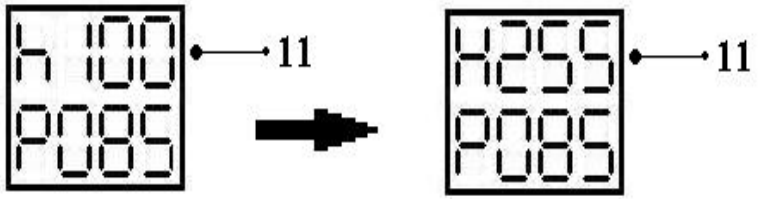
4. The air gauge (item 1) will also appear illuminated by ample light and the metal ball inside is at the lowest position of the visible area.
5. The system will remain in this state until a function is activated.

B. HOT AIR GUN

1. Switch ON the equipment by activating main power switch (10).
2. Activate HOT AIR GUN function switch (17) from the right side of the control panel.
3. The system will immediately blow air from the hot air gun while gradually increasing the air temperature to the default value of 99°C. The ball inside the air gauge will also settle somewhere in the middle of the visible area, corresponding to an air pressure level of 50. The display area for hot air temperature and air pressure level, items 11 and 12, respectively, will show the following.



4. Adjust air pressure using the AIR PRESSURE control buttons (3).
5. Adjust hot air temperature using the HOT AIR GUN temperature control buttons (2). **Note:** When increasing or decreasing the air temperature, the prefix of the display area for hot air gun temperature (11) will temporarily change from uppercase "H" to lowercase "h", indicating that **heat** is being adjusted. Once the buttons are released, it will switch back to its original case while the temperature value also gradually increases or decreases and until the desired temperature is reached.



6. You may start reworking as soon as the desired air temperature and air pressure levels are reached.
7. . When reworking is complete, place the Hot Air Gun back to its holder.
8. Deactivate the HOT AIR GUN function switch (17). The system will immediately start the auto-cooling process.

Note: During this process, the system will try to release excess heat by blowing air (at room temperature) until it reaches a safe temperature value of 85°C before completely switching OFF.

9. Wait for the auto-cooling process to finish before switching OFF the main power switch (10). If the display panel shows "OFF" on each line, then it is now safe to do so.
10. Unplug the device from the main power source.

⚠ IMPORTANT: Remember to set airflow level first before setting the temperature so that it would not damage the heating element, causing it to be burnt out prematurely. This would help lengthen the usage life span of the main unit and the heating element.

⚠ IMPORTANT: Airflow level should be set accordingly, working with low airflow and high temperature often causes heating element to get easily burnt.