# AIR NOZZLES

*Sold Separately*

## Straight Single
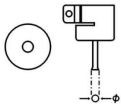
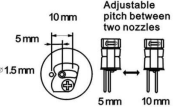| Nozzle Model | Nozzle Size, ∅(mm) |
|---|---|
| 1124 | 2.5 |
| 1130 | 4.4 |
| 1194 | 6 |
| 1195 | 8 |
| 1196 | 7 |
| 1197 | 9 |
| 1198 | 12 |

## Bent Single
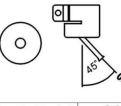
| Nozzle Model | 1142 |
|---|---|

## Dual Single Adjustable

| Nozzle Model | 1325 |
|---|---|

## Single In Line Package
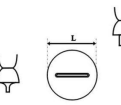
| Nozzle Model | IC Package Size | Nozzle Length (mm) |
|---|---|---|
| 1191 | SIP 25L | 26 |
| 1192 | SIP 50L | 52.5 |

## Ball Grid Array
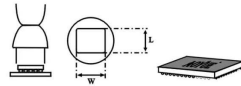
| Nozzle Model | IC Package Size (mm) | Nozzle Size (mm) W | Nozzle Size (mm) L |
|---|---|---|---|
| 1010 | BGA 9x9 | 10 | 10 |
| 1313 | BGA 12x12 | 13 | 13 |
| 1616 | BGA 15x15 | 16 | 16 |
| 1919 | BGA 18x18 | 19 | 19 |
| 2828 | BGA 27x27 | 28 | 28 |
| 3636 | BGA 35x35 | 36 | 36 |
| 3939 | BGA 38x38 | 39 | 39 |
| 4141 | BGA 40x40 | 41 | 41 |

## Small Outline J-Lead

| Nozzle Model | IC Package Size (mm) | Nozzle Size (mm) L | Nozzle Size (mm) W |
|---|---|---|---|
| 1183 | SOJ 15x8 | 16 | 8 |
| 1184 | SOJ 18x8 | 19 | 10 |
| 1214 | SOJ 10x26 | 25.9 | 12 |

## Plastic Leaded Chip Carrier
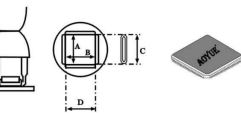
| Nozzle Model | IC Package Size (mm) | Nozzle Size (mm) A | B | C | D |
|---|---|---|---|---|---|
| 1135 | PLCC 17.5x17.5 (44pins) | 18.5 | 18.5 | 15 | 15 |
| 1136 | PLCC 20x20 (52pins) | 21 | 21 | 19 | 19 |
| 1137 | PLCC 25x25 (68pins) | 26 | 26 | 24 | 24 |
| 1138 | PLCC 30x30 (84pins) | 31 | 31 | 29 | 29 |
| 1139 | PLCC 7.3x12.5 (18pins) | 9 | 14 | 69 | 69 |
| 1140 | PLCC 11.5x11.5 (28pins) | 13 | 13 | 15 | 10 |
| 1141 | PLCC 11.5x14 (32pins) | 15 | 13 | 15 | 10 |
| 1188 | PLCC 9x9 (20pins) | 11 | 11 | 10 | 10 |
| 1189 | PLCC 34x34 (100pins) | 36.5 | 36.5 | 33.5 | 33.5 |

## Small-Outline Package
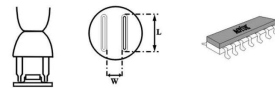
| Nozzle Model | IC Package Size (mm) | Nozzle Size (mm) L | Nozzle Size (mm) W |
|---|---|---|---|
| 1131 | SOP 4.4x10 | 10 | 4.8 |
| 1132 | SOP 5.6x13 | 15 | 5.7 |
| 1133 | SOP 7.5x15 | 16 | 7.2 |
| 1134 | SOP 7.5x18 | 19 | 7.2 |
| 1257 | SOP 11x21 | 21 | 11.7 |
| 1258 | SOP 7.6x12.7 | 11.7 | 8.2 |
| 1259 | SOP 13x28 | 29 | 13.5 |
| 1260 | SOP 8.6x18 | 19 | 8.7 |

## Thin Small-Outline
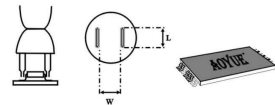
| Nozzle Model | IC Package Size (mm) | Nozzle Size (mm) L | Nozzle Size (mm) W |
|---|---|---|---|
| 1185 | TSOL 13x10 | 10 | 11.9 |
| 1187 | TSOL 18.5x8 | 10 | 18.5 |
| 1186 | TSOL 18x10 | 11.7 | 18.2 |

## Quad Flat Pack
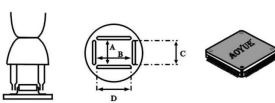
| Nozzle Model | IC Package Size (mm) | Nozzle Size (mm) A | B | C | D |
|---|---|---|---|---|---|
| 1125 | QFP 10x10 | 10.2 | 10.2 | 10 | 10 |
| 1126 | QFP 14x14 | 15.2 | 15.2 | 15 | 15 |
| 1127 | QFP 17.5x17.5 | 19.2 | 19.2 | 19 | 19 |
| 1128 | QFP 14x20 | 15.2 | 21.2 | 15 | 21 |
| 1229 | QFP 28x28 | 29.5 | 29.7 | 29 | 29 |
| 1215 | QFP 42.5x42.5 | 42.5 | 42.5 | 40 | 40 |
| 1261 | QFP 20x20 | 20.2 | 20.2 | 21 | 21 |
| 1262 | QFP 12x12 | 12.2 | 12.2 | 12 | 12 |
| 1263 | QFP 28x40 | 27.7 | 39.7 | 29 | 39 |
| 1264 | QFP 40x40 | 40.2 | 40.2 | 39 | 39 |
| 1265 | QFP 32x32 | 32.2 | 32.2 | 31 | 31 |

## Bumpered Quad Flat Pack
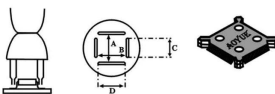
| Nozzle Model | IC Package Size (mm) | Nozzle Size (mm) A | B | C | D |
|---|---|---|---|---|---|
| 1180 | BQFP 17x17 | 18.2 | 18.2 | 13.6 | 13.6 |
| 1181 | BQFP 19x19 | 19.2 | 19.2 | 16 | 16 |
| 1203 | BQFP 35x35 | 35.2 | 35.2 | 30.6 | 30.6 |
| 1182 | BQFP 24x24 | 24.2 | 24.2 | 21 | 21 |

# AOYUE® Int 2738
## Lead-Free Repairing System

# INSTRUCTION MANUAL

Thank you for purchasing model Int2738 Lead-free Repairing System.
Please read manual before using the unit.
Keep manual in an accessible place for future reference.

CE · ESD SAFE

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## REPLACEMENT TIPS

*Sold Separately*
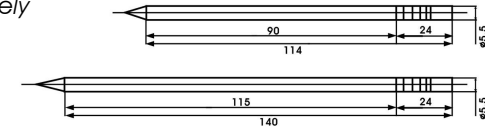


**Bevel Type**
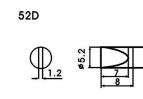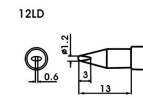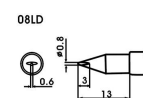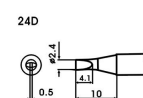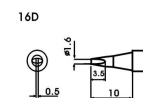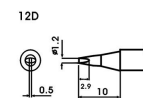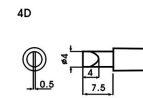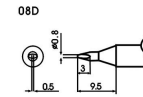
08D

4D

12D

16D

24D

08LD

12LD

52D

**Chisel Type**

1BC
1BCF ✱

2BC
2BCF ✱

3BC

1C

4C
4CF ✱

**Flow Type**

2BCM

3BCM

**Conical Type**

B

2B

I

LB

LI

**Tunnel Type**

1401

1403

1404

1402

**Blade Type**

K

KL

KU

**Sharp-Bent Type**

02J
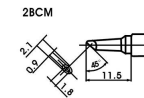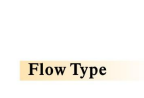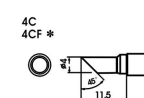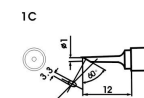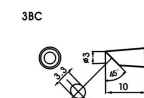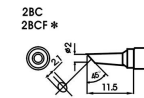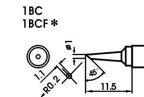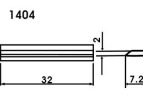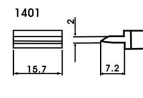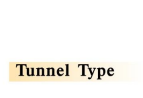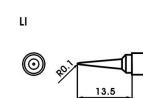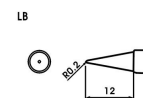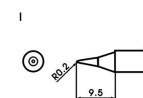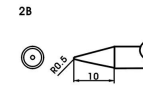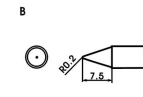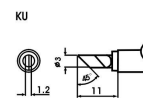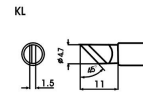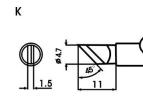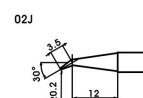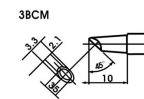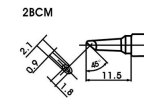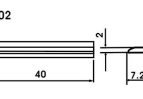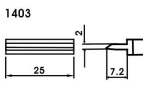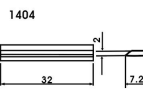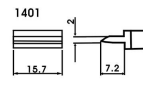
✱ These tips are tinned on the soldering surface only.

## 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.

### B. Replacing the Soldering Iron tip

1. Always turn the power OFF when removing or inserting a tip.
2. When the tip is hot, hold it with the heat resistant pad and pull it out.
3. Insert the new tip fully into the handle. If the tip is not fully inserted, the display will show a sensor error when power is turned on. ⎍⎍⎍

### C. Care for the Soldering Iron tip

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

### D. Checking the soldering iron connection cord for damages

1. Remove the soldering tip and the nipple.
2. Push the socket out from inside the handle assembly.
3. Measure the resistance values between the connector and the lead wires at the socket as follows:
   Pin 1 - Red ( + )
   Pin 3 - Blue (ground)
   Pin 5 - Black ( - )
If any value exceeds 0Ω or is ∞, replace the handle assembly.



## PACKAGE INCLUSION



Hot Air Gun and Hot Air Gun Holder

Air Nozzles
(1124, 1130, 1197, 1010, 1313, 1919)

2738 Main Station

Soldering Iron with Smoke Absorber

LF-2B Tip

2630B Soldering Iron Holder with Solder Wire Stand

30150J Heat Resistant Pad

939 Vacuum Suction Pen

30181X Filter Pads (6 pcs.)

G001 IC Popper

Power Cord
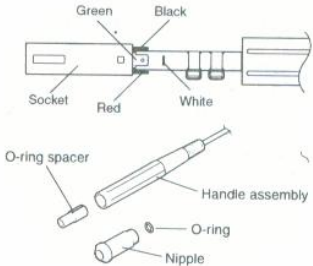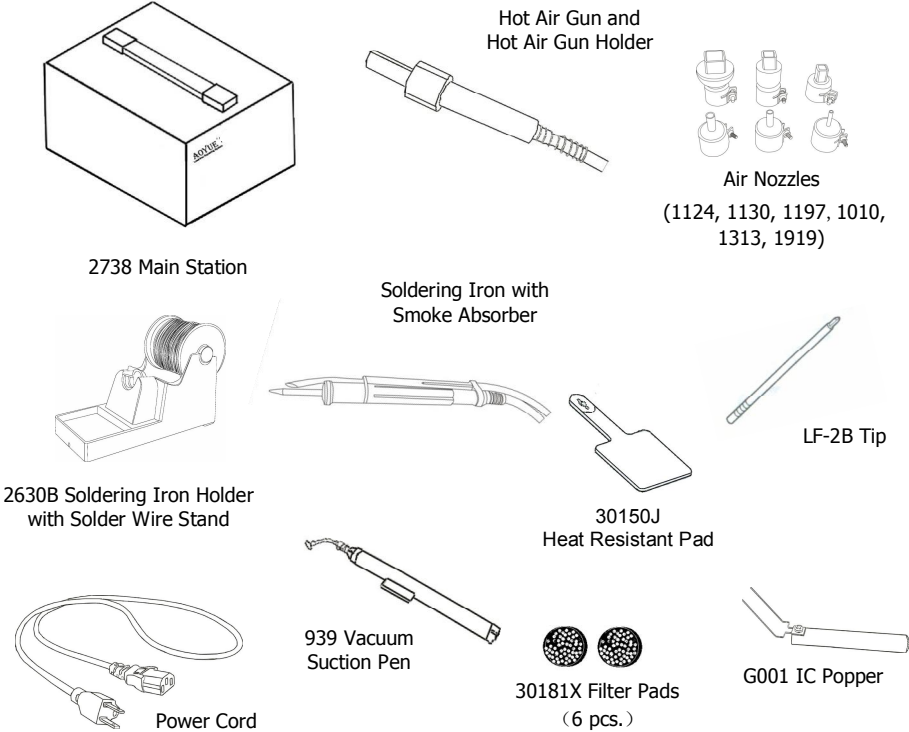
## SPARE PARTS LIST

| Part No. | Description |
|----------|-------------|
| 10094 | Hot air gun heating element |
| 30106S | Plastic handle of hot air gun |
| S009 | Hot air gun complete handle |
| 20962 | Hot air gun metal pipe |
| P002 | Diaphragm pump |
| 30127S | Soldering Iron plastic handle |
| B011 | Soldering Iron complete handle |

# SPECIFICATIONS

| MAIN STATION | |
|---|---|
| Power Input : | available in 110V / 220V |
| Station Dimensions: | 188(w) x 126(h) x 250(d) mm |
| Weight: | 5.6Kg |
| **SOLDERING IRON** | |
| Power Consumption: | 70W |
| Temperature Range: | 250°C - 480°C |
| Heating Element: | Ceramic Heater |
| Output Voltage: | 24V |
| **HOT AIR GUN** | |
| Power Consumption: | 500W |
| Temperature Range: | 100°C - 480°C |
| Heating Element | Metal Heating Core |
| Pump/Motor Type: | Diaphragm Pump |
| Air Capacity: | 23 l /min (max) |
| **SMOKE ABSORBER** | |
| Vacuum Pressure: | 600mm Hg |

# OPERATING PROCEDURE

### II. SOLDERING IRON

1. Check if the Soldering Iron is attached properly to the 5-pin receptacle and the vacuum tube is securely connected.
2. Be sure that all function buttons are not pressed.
3. Turn on the Power Switch.
4. Press the SOLDER IRON function switch to turn on the soldering iron function.
5. When a signal beep is heard, press the Reset button.
6. Solder iron is set to automatically increase temperature to 350°C upon turning on. Unit will display 350°C for 3 seconds then automatically switch to display *real temperature* of the solder iron.
7. Set the temperature. Adjust to your desired temperature, using the ⊘ ⊗ button.
8. Start using when real temperature reaches the set temperature.

   *Note: Automate soldering time — This is an optional setting.  You can set soldering time to 30 minutes then it automatically turns off. To activate this function:*

1. Press the ⊘ ⊗ temperature adjust button of the solder iron in a simultaneous manner together with the Reset button.
2. The display will show t·30 indicating that the 30 minute automate time is turned on.
3. After 30 minutes the buzzer beeps and the temperature decreases to room temperature. When heating element power has been shutoff, the display will show c·8·ɔ
4. To start soldering again, press the Reset button once.
 ** Automate function is automatically deactivated when temperature is re-adjusted or when reset button is pressed.

### III. SMOKE ABSORBER

1. Wait until the soldering iron reaches the set temperature and stabilizes.
2. Set Vacuum Control to *smoke absorber*.
3. Press the SMOKE ABSORBER function switch.
4. Fumes absorbed will pass through a filter and be blown out thru the hot air gun. So the smoke that is blown out from the hot air gun during soldering is already filtered.

⚠️ *IMPORTANT: Filters should be cleaned and replaced regularly so that it would not clog up the air path and will effectively clean the toxic fumes produced during soldering process.*

## OPERATING PROCEDURE

### I. HOT AIR GUN

1. Be sure that all function buttons are not pressed.
2. Turn on the Power Switch.
3. Set Vacuum Control to *SMD rework*.
4. Press the [ **HOT AIR GUN** ] function switch to turn on hot air reworking function.
5. Set the airflow level. You can adjust to your desired airflow by using the △ ▽ buttons. Airflow range is from 15 – 99.
6. Set the temperature. Adjust to your desired working temperature, using the △ ▽ button.
7. When airflow and temperature has been set, wait until the *real temperature* reaches the *set temperature* before using the Hot Air Gun.
8. After using the Hot Air Gun, do not immediately turn off the power switch, instead turn off the hot air gun function switch to activate the *auto-cool off function* of the unit. This is for safety and proper maintenance of the unit.

⚠ *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.*

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

*Note: Auto-cool off function — after turning off the hot air gun function switch, unit starts to blow cool air to decease temperature of the hot air gun, hot air gun function will automatically be turned off when the hot air gun temperature reached a safe level of 90°C. (Auto-cool off will not function when main power switch is turned off)*

*Note: 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 fifteen minutes, temperature automatically decreases and eventually turns to sleep mode. When the handle is held again the unit will go back to its previous setting.*

## FEATURES

◆ Lead-free, smoke-free, 3 in 1 multifunctional repairing system. Combines the function of a Hot Air Gun, a Soldering Iron and a Smoke Absorber.

◆ Microprocessor controlled ESD safe unit. All digital display of hot air temperature, soldering iron temperature and air pressure with touch type panel controls.

◆ Unique 15-minute stand-by auto sleep mode. Returns to previous setting when the handle is held up again. Programmable auto reworking time from 20 to 9999 seconds.

◆ Designed with an auto-cool off process. Upon turning the unit off, it starts to blow cold air until it reaches a safe temperature of 85 degrees, this is to ensure safety and to prolong usage life of the heating element.

◆ Compound tip designed for efficiency. Replacement of tips with easy slip in/ out method.

◆ Creative built-in smoke extractor that absorbs the fumes created at the source. Eliminates the space hindering smoke absorbing units yet allowing a healthy environment.

◆ Compatible with various type of air nozzles. Please see page #12 for list of available air nozzles.

◆ Compatible with different kind of tips. Please see p#11 for list of replacement tips.

## SAFETY PRECAUTION

⚠ **CAUTION: Misuse may cause extensive damage to the unit.**
**For your own safety, be sure to comply with the following precautions.**

◆ Check every component after opening the package whether everything is in good working condition. If there are any damages suspected , don't use the item and contact your dealer.

◆ When moving the unit to another location, be sure to turn off the power switch and remove the plug.

◆ Do not strike or subject to physical shock the main unit, hot air gun, soldering iron or any parts of the system. Use carefully and lightly so as not to damage any parts.

◆ Be sure the unit is grounded. Always connect power to a grounded receptacle.

## ASSEMBLY AND PREPARATION

### A. Soldering Iron
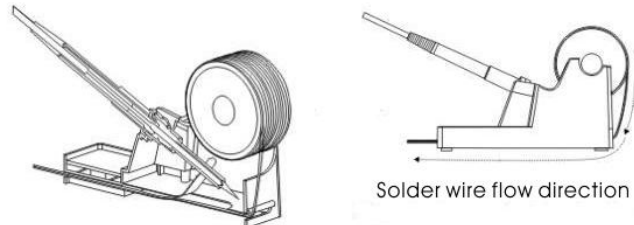
1. Install solder wire to the solder iron holder. (Figure 1)



**Figure 1. Soldering Iron stand with solder wire holder**

Solder wire flow direction

2. Attach the soldering iron cord assembly to the 5-pin output at the lower center area of the main unit.

3. Place soldering iron to the soldering iron stand as shown in Figure 1.

### B. Smoke Absorber

Attach the smoke absorbing tube to the vacuum cap. Make sure that the cord connections are free from any tangles.

### C. 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, loosen the screw that holds it on the left side of the station. After loosening both screws, turn the holder ride side up, then tighten the screws back.

Place the hot air gun in the sensor controlled holder to prepare for usage.

## PANEL GUIDE
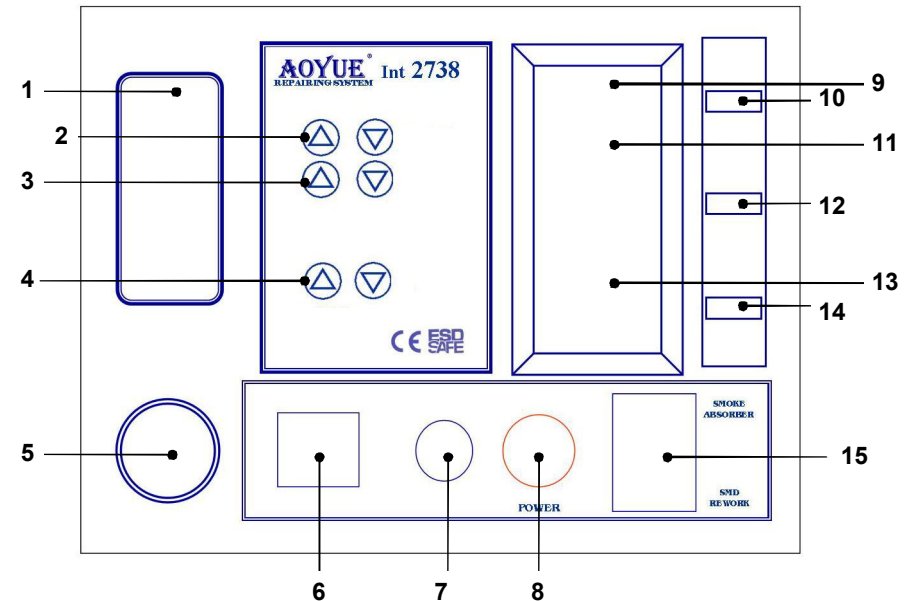


1 — Airflow gauge
2 — Hot air gun temperature adjustment button
3 — Hot air gun airflow adjustment button
4 — Soldering iron temperature adjustment button
5 — Hot air gun connecting outlet
6 — Vacuum Cap
7 — Soldering iron receptacle
8 — Main power switch
9 — Digital display of hot air gun temperature (actual and set)
 - $A$ - actual temperature
 - $b$ - temperature being set
 - $E$ - cooling down
 - $-$ - sleep (standby) and off mode
10 — Hot air gun function switch
11 — Digital display of airflow
 - $F$ - actual airflow
 - $C$ - airflow being set
12 — Reset button for all settings
13 — Soldering iron temperature (actual and set)
14 — Soldering iron function switch
15 — Vacuum control
 - Smoke Absorber - when using smoke absorbing function of solder iron
 - SMD rework - when using the hot air gun