Manufacturer:
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http://www.aoyue.com

AOYUE® Int3210

Soldering Station

Instruction Manual

Thank you for purchasing the Aoyue int 3210 Soldering Station. Please read the manual before using the unit. Keep manual in accessible place for future reference.

This manual is designed to familiarize and instruct 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 mini-

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 IS NOT INCREASING

Description: Tip temperature does not increase, display shows the word "PEn"

SOLUTION:

The solder Iron is not connected or its connection is loosely connected to the main station. Plug the solder iron firmly and lock into position.

CASE 2: Solder Iron is properly connected, display still shows "PEn"

SOLUTION:

The sensor or wires of the sensors may have been damaged. Replace heating element (sensor is integrated into the heating element). Or check the wirings of the solder iron pen.

PROBLEM 3: SOLDER IRON IS OVERHEATING

Description: Solder iron tip is getting too hot while the displayed actual temperature stays below 200.

SOLUTION:

If the heating element have just been replaced then the heating element wires might have been soldered incorrectly. Heating element have polarities and should be soldered accordingly.

PROBLEM 4: OTHER PROBLEMS NOT MENTIONED IN THIS DOCUMENT

SOLUTION: Please bring the unit to a certified service station.

CARE AND MAINTENANCE

1. **Tip Temperature :** High temperature shortens tip life and may cause thermal shock to components. Always use the lowest possible temperature when soldering.
2. **Cleaning :** Always clean the soldering tip before use to remove any residual solder or flux adhering to it. Use a clean and moist cleaning sponge. Contaminants on the tip have many detrimental effects including reduced heat conductivity which contribute to poor soldering performance.
3. **After usage**: Always clean the tip and coat it with fresh solder after use. This guards against oxidation and pro-longs tip life.
4. **System Care:** Never allow the unit to stay idle at high temperature for extended periods. Utilize the automated sleep feature to conserve energy, pro-long tip and heating element life. If unit will not be used for long periods it is advised to power down the unit and unplug from the mains.
5. **Inspecting and cleaning the tip:**

- Set the temperature to 250°C.
- When the temperature stabilizes, clean the tip and check its condition. If the tip is badly worn or deformed, replace it.
- If the solder plated part of the tip is covered with black oxide, apply fresh solder containing flux and clean the tip again. Repeat until all the oxide is removed then coat the tip with fresh solder.
- Never file the tip to remove oxide.
- Remaining oxides such as the yellow discoloration on the tip shaft can be removed with isopropyl alcohol.

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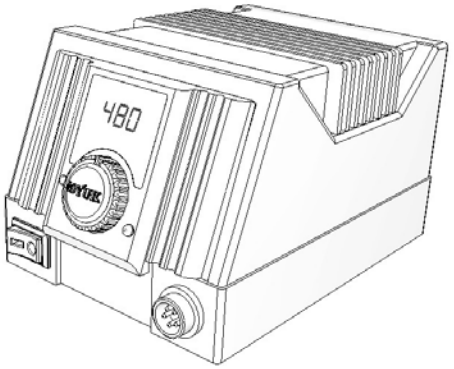
PRODUCT DESCRIPTION

The Aoyue Int3210 is a high performance soldering iron. It is equipped with a fast acting ceramic heater suitable for advance lead free soldering . The separate tip and heater design offers cost efficiency and easy replacement of tips.

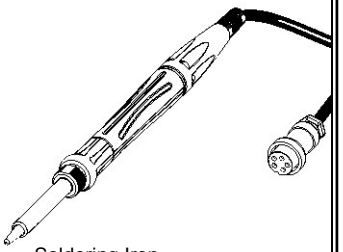
It has a special programmable sleep function. When activated it can prolong heater life and save power by shutting off the heating element whenever no user interaction has been detected for the set amount of time.

These features will be discussed in greater detail together with the complete features in the succeeding sections of this manual.

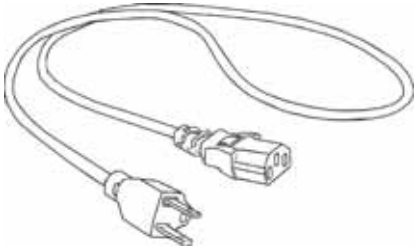
PACKAGE INCLUSION



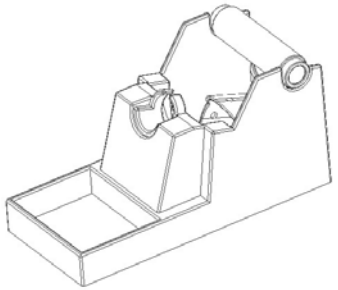
3210 Soldering Station



Soldering Iron



Power Cord



Soldering Iron stand

OPERATING GUIDELINES

- Saved settings are stored into memory and will remain in effect un less changed by the user.

4. To signify that sleep countdown is initiated, a small dot will appear besides the last digit displayed.
5. The system will go into sleep mode upon the expiration of the sleep timer.
6. The display will show three dashes " - - - "to signify system is in sleep mode.
7. To wake the unit from sleep mode, simply pick up the pen or slightly turn the temperature control knob.

D. CALIBRATION

1. Measure the tip temperature through an external temperature reader with a thermocouple as its sensor. Ensure the external temperature reader's sensor and the solder iron's tip can keep good physical contact.
2. Adjust to desired temperature. Then allow a few minutes for the temperature to stabilize, apply a little bit of solder to the tip and sensor for better readings.
3. Insert a small screwdriver into the calibration hole.
4. Turn screw driver clockwise or counter clockwise to increase and decrease the temperature, when Displayed temperature and the external sensor shows the same readings the system has been calibrated.

Note: After calibration, the tip's temperature would be most accurate only with the tip used to calibrate the system and the set temperature used during calibration. Other tips or Set temperature level may not be as precise.

OPERATING GUIDELINES

B. TEMPERATURE CONTROL

1. Turn the power ON. Display will show the words "On".
2. After a few seconds the display would show a number between 200 to 480 indicating the set temperature.
3. The display would then switch to showing the actual temperature.
4. To Increase the temperature, turn the Temperature control knob clock wise. To decrease Set temperature, turn the Temperature control knob counter clockwise. The display would revert to showing the set temperature while the control knob is being adjusted.
5. When the desired temperature has been set, let go of the the temperature control knob. The display would then revert to showing the actual temperature after a few seconds.

C. SLEEP FUNCTION

1. The Soldering Iron is equipped with a vibration sensor.
2. When the soldering iron has been left unmoved the system would begin countdown for the sleep timer.
3. Sleep timer is configurable via the ff. method.

- Upon switching ON the unit, gently shake the soldering iron pen to enter into the sleep timer configuration mode.
- When the system has entered into sleep timer configuration mode, the display would change to "t##" (where ## represents the sleep time)
- Adjust the sleep time by turning the temperature control knob clockwise to increase timer and counterclockwise to decrease timer.
- "t00" signifies that the sleep timer is turned OFF. Therefore unit will never go into sleep mode.
- Sleep timer is adjustable from 10 to 60 minutes.
- The system will automatically save the settings after the control knob has been left unmoved for a few seconds.

SAFETY PRECAUTIONS

CAUTION: Improper usage can cause serious injury to personnel and/or damage to equipment and work 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, do not use the item and report the issue to your vendor.
- Turn OFF the main power switch and unplug the device from power source when moving the device.
- Do not strike or subject the main unit (and all its components) to physical shock. Use carefully to avoid 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 down before replacing any part.
- 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 places.
- Do not alter the unit, specifically the internal circuitry, in any manner.

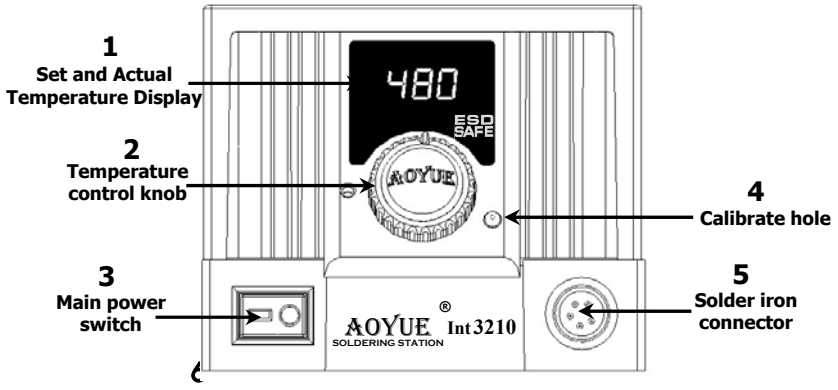
SPECIFICATION

MAIN STATION	
Voltage Input :	available in 110V / 220V
Station Dimensions:	110(w) x98 (h) x 155 (d) mm
Weight:	1.5Kg
Power Consumption:	75W
Temperature Range:	200°C - 480°C
Heating Element	Ceramic heater
Output voltage:	24V

FUNCTIONS and FEATURES

- Microprocessor-controlled ESD safe Soldering station.
- Ceramic heater and removable tip design.
- Compatible with Lead free applications.
- High power heating element for fast heat recovery.
- Large temperature control knob for easy adjustment.
- Auto sleep and wake up function.
- Programmable sleep timer.

CONTROL PANEL GUIDE



OPERATING GUIDELINES

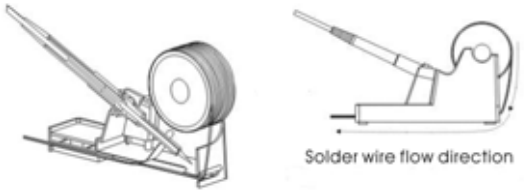
REMINDERS:

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 plugging to wall aoutlet.

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

A. INITIAL PROCEDURES

1. Insert the power cord into the receptacle at the back of the station.
2. Plug the power cord into a grounded wall socket. The station is protected against electrostatic discharge and must be grounded for full efficiency.
3. Be sure the power switch is OFF before connecting or disconnecting the soldering iron cord. Failure to do so may result in damage to the circuit board.
4. Install solder wire to the solder iron holder.
5. Attach the soldering iron to the 5-pin output at the bottom right area of the station.
6. Place soldering iron to the soldering iron stand as shown in the figure below.



7. Dampen the sponge with water and squeeze dry before using. The tips maybe damaged when used with dry sponge.
8. The unit is now ready for use.