

**AOYUE<sup>®</sup> Int3233**

## **Soldering Station**

### **Instruction Manual**

Thank you for purchasing the Aoyue int 3233 Soldering Station. Please read the manual before using the unit.  
Keep manual in accessible place for future reference.

Manufacturer:

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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 minimize the risk of injury or accidents .

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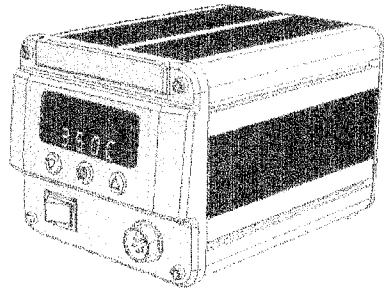
## PRODUCT DESCRIPTION

The Aoyue Int 3233 is a high performance induction heating soldering iron. It is equipped with a quick heating induction heater and specially designed tips suitable for advance lead free soldering . The separate tip and heater design offers cost efficiency and easy replacement of tips.

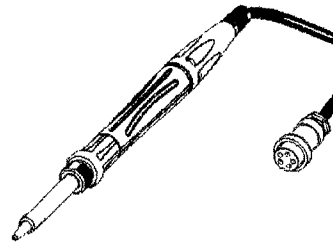
It has various functions and features such as digital offset, System lock-out , quick jump, Temperature Scale selection, auto sleep and auto calibration.

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

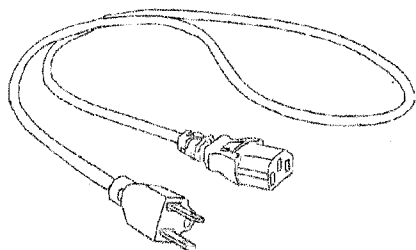
## PACKAGE INCLUSION



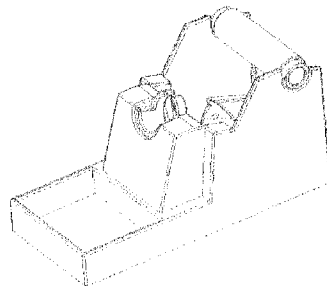
3233 Soldering Station



Soldering Iron



Power Cord



Soldering Iron stand

## 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.

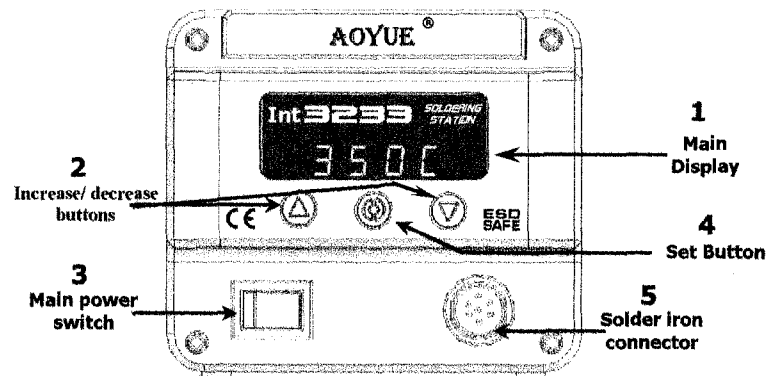
## SPECIFICATION

Voltage Input :	100V to 240V
Power Supply :	Switch mode
Station Dimensions:	110(w) x98 (h) x 155 (d) mm
Weight:	0.8Kg
Power Consumption:	70W
Temperature Range:	200°C - 450°C
Heating Element	Induction heater
Output voltage:	50V

## FUNCTIONS and FEATURES

- Microprocessor-controlled ESD safe Soldering station.
- Induction heater with removable tip design.
- Switch mode supply.
- Compatible with Lead free applications.
- High power heating element for fast heat recovery.
- Auto sleep and wake up function.
- Programmable sleep timer.
- System-lock out feature.
- Quick jump to favorite settings.
- Switch between Centigrade and Fahrenheit scale.
- Automated calibration.

## CONTROL PANEL GUIDE



## OPERATING GUIDELINES

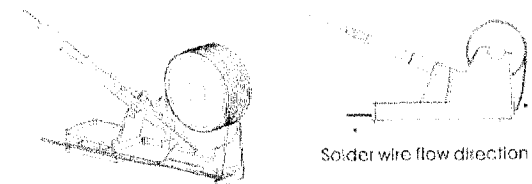
### REMINDERS:

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 in the OFF position.
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. 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 excess water before using. The tips maybe damaged when used with dry sponge.
8. The unit is now ready for use.

## **OPERATING GUIDELINES**

### **B. SYSTEM INITIALIZATION**

The 3233 is an advance system which uses a newly developed temperature sensing method. Therefore it is important that every time a new pen is plugged into the machine this system initialization routine and Tip calibration procedure be followed.

1. Ensure that unit is turned off.
2. Plug Soldering iron into its socket. Make sure the tip of the soldering iron is at room temperature. (between 20 to 30 C)
3. Press and hold the SET button while switching the unit on. Wait for the display to show three zeros "000" before letting go of the SET button.
4. After a few seconds the display would switch to 350C, which indicates the pen has been successfully registered into the machine. The next step is to calibrate the tip temperature.

### **C. CALIBRATING TIP TEMPERATURE**

The tip should only be calibrated at a set temperature of 350C. Calibrating at this level will ensure correct temperature in all temperature level settings.

1. Set temperature to 350C. 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. Wait for the display to reach the set temperature of 350C, then allow the tip to idle at the sensor for 60 seconds for proper temperature measurement.
2. Press and hold the SET button to enter the system configuration mode. Wait for the display to change to a number with an "A" as its prefix. This denotes that we are now configuring the digital offset of the system. A display like "A000" indicates that the digital offset is currently set at neutral.
3. Press the increase and decrease button to adjust the digital offset. A negative number denotes a negative offset and a positive number denotes a positive offset.

## **OPERATING GUIDELINES**

5. Adjust the offset number until the external temperature sensor reading is equal to our set temperature of 350C.
6. Repeatedly press the SET button until the display shows the word "SAVE". Press the increase button to save and exit from the system configuration mode.
7. The tip has now been properly calibrated.
8. Saved settings are stored into memory and will remain in effect unless changed by the user.

### **D. TEMPERATURE CONTROL**

1. Turn the power ON.
2. The display would show a number between 200 to 480 indicating the set temperature. Default setting is at 350C
3. After a few seconds the display would then switch to showing the actual temperature.
4. To Increase or decrease the temperature, press the temperature control increase or decrease buttons.
5. Temperature control range is from 200C to 450C.

### **D. QUICK JUMP FEATURE**

The system has two configurable quick jump settings. The quick jump features enables the user to easily jump to a predefined temperature level. The two most frequently used temperature level must first be saved into system memory. A simple push of two button will automatically jump to these preset temperature level.

#### **To configure these two temperature level:**

1. Press and hold the SET button to enter the system configuration mode.
2. Repeatedly press the SET button until the display shows a number with "b" as its prefix. This denotes that we are now configuring the first quick jump setting.

## **OPERATING GUIDELINES**

3. Select your desired quick jump temperature level by pressing the increase or decrease button.
4. To adjust the second quick jump level, repeatedly press the "SET" button until a number with a prefix "c" is displayed. This denotes that we are now configuring the Second quick jump setting.
5. Select your desired quick jump temperature level by pressing the increase or decrease button.
6. To save the settings, repeatedly press the SET button until the display shows the word "SAVE". Press the increase button to save and exit from the system configuration mode.
7. The two quick jump settings has now been configured and can be accessed by simultaneously pressing the "INCREASE" and "SET" button for the first Quick jump level. And simultaneously pressing the "DECREASE" and "SET" button will access the second quick jump level.

### **C. SLEEP FUNCTION**

The Soldering Iron is equipped with a vibration sensor. When the soldering iron has been left unmoved the system would begin the count down of the sleep timer. The suffix will change to a small letter "d" to indicate that the system is preparing to enter sleep mode. The display will show four dashes "- - - -" to indicate the system has entered sleep mode. To wake the system, simply lift up the soldering iron or push any control buttons.

#### **Sleep timer is configurable via the following method:**

1. With the unit turned On, press and hold the SET button.
2. Wait for the display to change to "A###", then repeatedly press the "SET" button until a number with prefix "d" or "dOFF" is displayed. This denotes that we are now configuring the sleep timer setting.
3. "dOFF" indicates that the sleep function is currently turned off. To adjust the timer settings press the increase or decrease button. Sleep timer is adjustable from 1 to 60 minutes.

## **OPERATING GUIDELINES**

4. To save the settings, repeatedly press the SET button until the display shows the word "SAVE". Press the increase button to save and exit from the system configuration mode.

### **D. SYSTEM LOCK**

The System lock feature disables adjustment to both temperature and system configuration. The display will show "Pin" when system lock feature is enabled. A PIN code is required to regain access to the system's settings and temperature adjustment. This PIN code is user defined and this feature can be disabled.

#### **To activate the system lock feature and select desired PIN code:**

1. With the unit turned On, press and hold the SET button.
2. Wait for the display to change to "A###", then repeatedly press the "SET" button until a number with prefix "E" or "E0FF" is displayed. This denotes that we are now configuring the system lock setting.
3. "E0FF" indicates that the system lock function is currently disabled. To select a system lock PIN code press the increase or decrease button. Select a number between 1 and 998.
4. To save and activate the system lock settings, repeatedly press the SET button until the display shows the word "SAVE". Press the increase button to save and exit from the system configuration mode.
5. The display would show the word "Pin", indicating system lock is enabled.

When the system lock feature is enabled changing of temperature and system settings are blocked. The system lock PIN must be entered to re-enable access to the system.

#### **To de-activate the system lock enter the system lock PIN code thru the following method:**

1. With the unit turned On, press and hold the SET button.

## OPERATING GUIDELINES

2. Wait for the display to change to "E999". This denotes that the system is waiting for the system lock PIN code.
3. Press the increase or decrease button to adjust to your previously selected PIN code. Press the set button to confirm PIN code entry. If PIN code is correct system lock would be disabled, if PIN entered is incorrect the display would revert to "E999".
4. If no PIN code is entered within a few seconds the system would revert to showing the actual temperature.

### **E. 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. While the unit is ON , press and hold the set button.
2. Wait for the display to change to "A###", then repeatedly press the "SET" button until "F C°" or "F F°" is displayed. This denotes that we are now configuring temperature scale settings.
3. "F C°" indicates that the current system scale is Centigrade. "F F°" denotes the selected temperature scale is the Fahrenheit scale. Press the increase or decrease button to select between the two temperature scales.
4. To save the temperature scale settings, repeatedly press the SET button until the display shows the word "SAVE". Press the increase button to save and exit from the system configuration mode.
- The temperature display would change according to the scale selected. A suffix "F" / "###F" indicates the Fahrenheit scale, while "C" / "###C" indicated the Centigrade scale.

### **E. AUTOMATED CALIBRATION**

The system's automated calibration can only be activated and utilized if attached to our separate auto-calibration adaptor. For detailed information on how to utilize this feature please refer to the manual provided with the auto-calibration adaptor.

## OPERATING GUIDELINES

**With the auto-calibration adaptor attached, tip calibration can be done via the following method:**

1. While the unit is ON , press and hold the set button.
2. Wait for the display to change to "A###", then repeatedly press the "SET" button until the prefix "G" or "G###" is displayed. This denotes that we are now in autocalibration mode.
3. Place the tip of the soldering iron to the sensor of the auto-calibration adaptor. Wait for the temperature reading to stabilize.
4. Press the increase button to start auto calibration.
5. The display would jump to "A###". The number shown indicates the system has automatically calibrated the required digital offset parameters for the tip.
6. To save the newly calculated digital offset configuration, repeatedly press the SET button until the display shows the word "SAVE". Press the increase button to save and exit from the system configuration mode.

**Note: During system configuration mode if it is decided that the recently changed setting should not be saved into system memory, repeatedly press the set button until the display shows the word "Cncl" (cancel). Press the increase button to exit system configuration mode without saving the most recent changes made.**

## 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. Standard temperature settings are 350 to 400 degrees Celsius.
- 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.

## 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 "PLUG"

#### **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 "PLUG"

#### **SOLUTION:**

The heating element may have been damaged. Replace heating element. Or check the wirings of the solder iron pen.

### **PROBLEM 3: DISPLAY SHOWS WARNING MESSAGES**

**Description:** Display shows the word " TIP"

#### **SOLUTION:**

This indicates that the tip is not inserted or is not properly attached to the soldering iron.

**CASE 2:** Display shows the word " OFF"

#### **SOLUTION:**

The system has gone into protection mode. It may be that the system has detected an over heat in the tip temperature due to improper calibration and system initialization. Repeat the steps in page 8 under **SYSTEM INITIALIZATION** and **TIP CALIBRATION**. Ensure that the maximum temperature is only at 450C.

### **PROBLEM 4: SOLDER IRON IS OVERHEATING**

**Description:** Solder iron tip is getting too hot while the displayed actual temperature stays is dropping or displays OFF.

#### **SOLUTION:**

Digital offset settings might be adjusted too high causing overheat protection. Repeat the steps in page 8 under **SYSTEM INITIALIZATION** and **TIP CALIBRATION**. Ensure that the maximum temperature is only at 450C.

### **PROBLEM 5: OTHER PROBLEMS NOT MENTIONED IN THIS DOCUMENT**

**SOLUTION:** Contact authorized service station.