

AOYUE[®]

SP 3500

**Environment Friendly
Hot Plate System**

INSTRUCTION MANUAL

Thank you for purchasing Aoyue SP3500 hot plate system.
It is important to read the manual before using the equipment.
Please keep manual in accessible place for future reference.



Manufacturer:

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<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 .

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BASIC TROUBLESHOOTING GUIDE

PROBLEM 1: THE UNIT HAS NO POWER

1. Check if the unit is switched ON. Power switch located at the back.
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 SHOWS "Err"

Description: Digital display shows the message "Err" upon turning on the hot plate function.

SOLUTION:

Sensor is damaged or loose .

PROBLEM 4: ACTUAL TEMPERATURE IS NOT RISING, DISPLAY SHOWS "Err"

Description: Digital display shows the message "Err" after a few minutes of the actual temperature not rising .

SOLUTION:

The heating elements may have reached the end of its life.

PROBLEM 5: UNIT SHOWS UNCONVENTIONAL BEHAVIOR

Description: Unit operates erratically.

SOLUTION1: 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:

Contact the vendor.

DIGITAL CALIBRATION

Digital Temperature Calibration Example 1

- The external temperature sensor displays 250 degrees.
- The set temperature and displayed actual temperature of the is 300 degrees.
- $300 - 250 = 50$. An additional adjustment of 50 degrees is required. Upon entering calibration mode, the display shows "010", indicating a calibration number of 10 is already present.
- Therefore $10 + 50 = 60$.
- We adjust from "010" to "060" by pressing the up adjustment button.
- Save and exit calibration mode.
- The external temperature sensor would now display 298 to 302.

Digital Temperature Calibration Example 2

- The external temperature sensor displays 300 degrees.
- The set temperature and displayed actual temperature is 350 degrees.
- $300 - 350 = -50$. An additional adjustment of -50 degrees is required. Upon entering calibration mode, the display shows "010", indicating a calibration number of 10 is already present.
- Therefore $10 - 50 = -40$.
- We adjust from "010" to "-40" by pressing the down adjustment button.
- Save and exit calibration mode.
- The external temperature sensor would now display 298 to 302.

NOTES:

- Calibration will only make the newly calibrated point the most accurate. Other temperature points may be a little off.

PRODUCT DESCRIPTION

The Aoyue SP3500 hot plate system with integrated smoke absorbing function, cooling plate and cooling fan functions.

It has a patented environment friendly design that efficiently filter solder fumes with its integrated smoke absorber..

A microprocessor controlled heater ensures precise temperature regulation ensuring protection from heat damage to components and overheating.

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

Features:

- Microprocessor-controlled equipment.
- Digital display of actual and set temperature.
- Digital tactile touch type controls for precision and ease of use.
- Dual plate system design.
- Hot plate equipped with two heaters for rapid heat up.
- Cold plate designed with cooling fins and fan exhaust for quick cooling.
- Suitable for lead-free and standard processes.

SPECIFICATION

MAIN STATION	
Power Input :	available in 110V / 220V
Station Dimensions:	260(w) x 239(h) x 180(d) mm
Weight:	5 Kg
Power Consumption:	500W
Temperature Range:	80°C - 380°C
Heating Element:	Resistance Heater

Specifications are subject to change without prior notice.

PACCKAGE INCLUSIONS

1 unit SP3500 Station

1 pc. Instruction Manual

1 pc. Power Cord

DIGITAL CALIBRATION

B. Utilizing Digital Temperature Calibration

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

1. Turn on the hot plate function.
2. Set to appropriate temperature you want to calibrate. Place an external temperature meter on the center of the hot plate.
3. The readings on the external temperature sensor should be more or less equal to the displayed temperature. If there are large discrepancy in the temperature reading we can re-calibrate the temperature setting.
4. First write down the set temperature of the hot plate and the actual temperature reading from the external temperature meter.
For example: set temperature = **300**
external temperature = **350**
Calibration needed = **-50**
5. Turn off the Hot Plate Function. Simultaneously press and hold for 5 seconds the Hot Plate Function button and the Increase temperature button.
6. The Temperature Display ("1" from the control panel) . Will switch to "000" indicating it is now in digital calibration adjustment mode. The calibration range is from "-30" to "030" . The leading "-" sign signifies a negative calibration number while a leading "0" signifies a positive calibration number.
7. Use the Temperature Adjustment buttons ("3" and "4" from the control panel) to increase or decrease the calibration number. In our example the set temperature is 300 but the actual temperature is 350, There is need to decrease the temperature by 50 degrees. Press the down button until we reach "-50 ".
8. Save the value by pressing and holding the Hot Plate Function button ("2" from the control panel).

OPERATING GUIDELINES

8. Adjust the desired set temperature by pushing the increase or decrease set temperature buttons. ("3" and "4" of the control panel guide.)
9. Reflow soldering/ pre-heating process may be done when the desire temperature has been reached.
10. To enable/disable the smoke absorbing function while soldering simply press the smoke absorber fan button. ("6" from the control panel guide).
11. A separate cooling plate may be attached to allow faster cooling or target device.
12. To disable the heating element while using the cooling plate and cooling fan function simply deactivate the hot plate function by pressing the hot plate function button ("2" from the control panel guide). The display would show the residual temperature of the hot plate alternately flashing the word "OFF" indicating the hot plate heater is turned off.

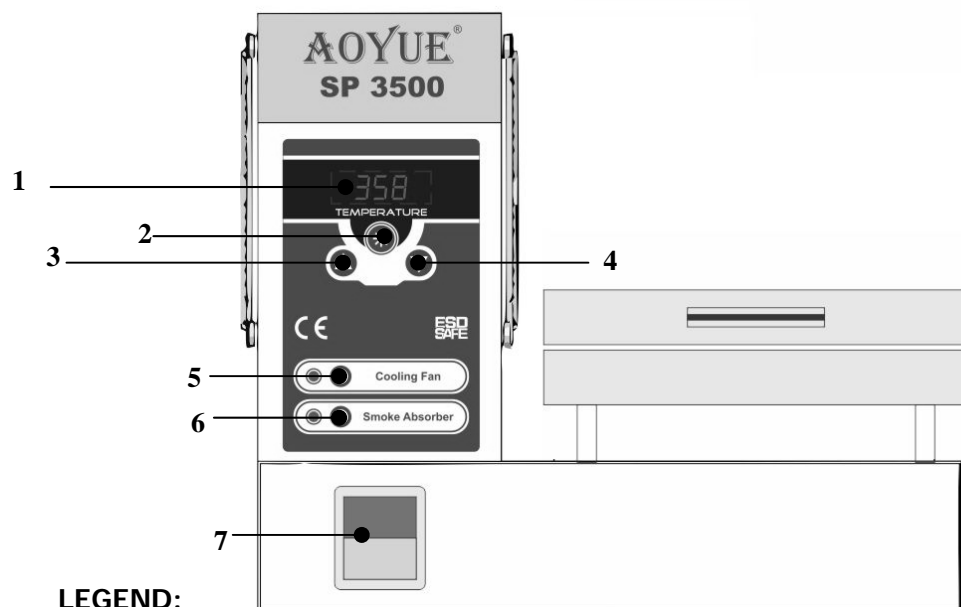
SAFETY PRECAUTIONS



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

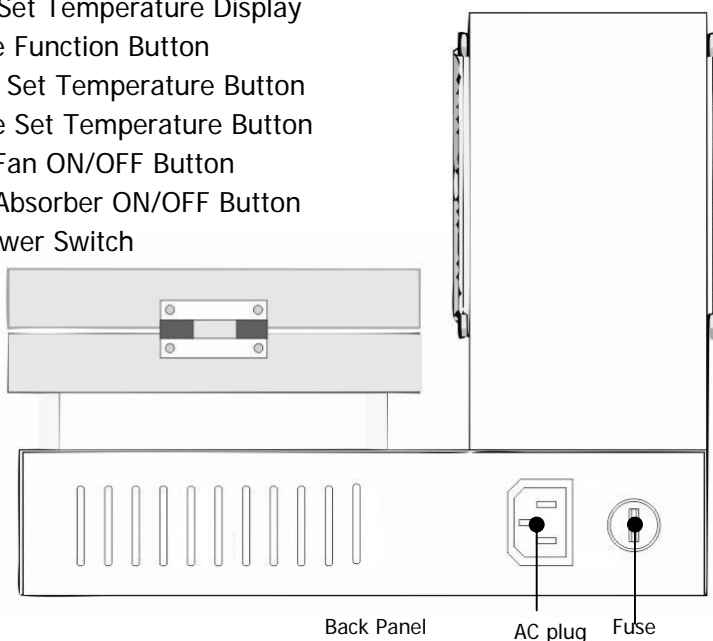
- Check each component after opening the package to make sure everything is in good condition. If there are any suspected damage, do not use the item and report the issue to your vendor.
- Turn OFF the main power switch and unplug the device when moving the device from one location to another.
- Do not 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:

- 1 — Actual / Set Temperature Display
- 2 — Hot Plate Function Button
- 3 — Increase Set Temperature Button
- 4 — Decrease Set Temperature Button
- 5 — Cooling Fan ON/OFF Button
- 6 — Smoke Absorber ON/OFF Button
- 7 — Main Power Switch



OPERATING GUIDELINES

IMPORTANT REMINDERS:

1. Make sure the equipment is placed on a flat stable surface.
2. Ensure all terminal connections are properly secured.

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

A. Hot plate soldering

1. Plug the device to the main power source using the power cord provided in the package.
2. Flip out the cooling plate and lift out the cooling plate leg.
3. Switch ON the device by activating the main power switch. The display panel ("1" from the control panel guide) will show "OFF". This indicates that the hot plate heating function is not activated.
4. If the system's hot plate function is deactivated and the actual temperature of the hot plate is above 70 degrees Celsius. The display will alternate between showing the actual temperature of the hot plate and the word "OFF". This is to indicate that the hot plate temperature is still at a relatively high temperature.
5. When the actual temperature falls below 70 degrees Celsius the display would continuously show the message "OFF". This indicates that the hot plate function is turned off, and the temperature of the hot plate has cooled to below 70 degrees Celsius.
6. To quickly cool down the hot plate switch on the cooling fan by pressing the cooling fan button. ("5" from the control panel guide).
7. To start the hot plate function press the hot plate activation button. ("2" from the control panel guide)
8. The display would initially show the set temperature ("1" from the control panel guide). After a few seconds the display will switch to displaying the actual temperature.