

AOYUE[®]

Pronunciation: /aw u/

2980

**Soldering Station
Station**

Instruction Manual

Thank you for purchasing the Aoyue 2980 Soldering Station. Please read the manual before using the unit.
Keep manual in accessible place for future reference.

Manufacturer:

AOYUE INTERNATIONAL LIMITED

Jishui Industrial Zone, Nantou, Zhongshan City,

Guangdong Province, P.R.China

<http://www.aoyue.co>

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 2980 is a high power soldering station having with up to 90 watts of heating power. It is compatible with our T-series soldering Iron tips with over 35 different tips to choose from. It features quick heating PTC ceramic heater for fast response and heat recovery.

It has functions such as digital offset, auto wake function, auto sleep function and Temperature Scale selection.

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

PACKAGE INCLUSION

1 unit 2980 Main Station with iron

1 pc. Solder spool hanger

1 pc. Brass wire sponge holder

1 pc. Brass wire sponge

1 pc. Instruction Manual

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.

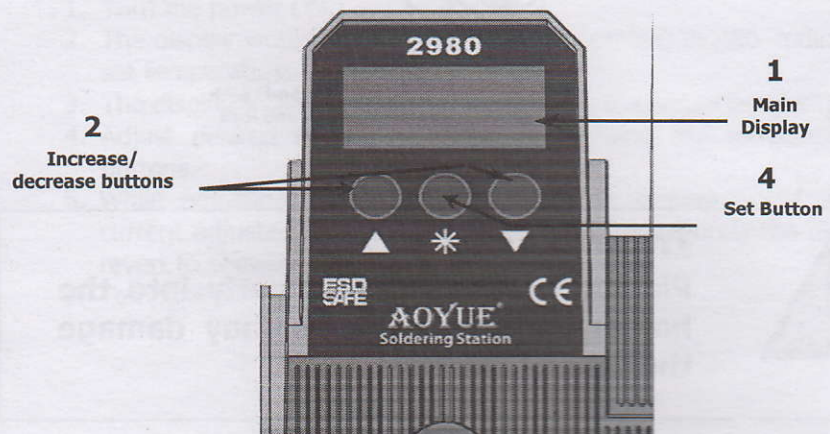
SPECIFICATION

Voltage Input :	available in 110V / 220V
Station Dimensions:	123w) x110 (h) x 151(d) mm
Weight:	580g
Power Consumption:	Up to 90W Max (60W rated)
Temperature Range:	200°C - 480°C
Heating Element	PTC Ceramic heater
Output voltage:	AC 110V or 220V

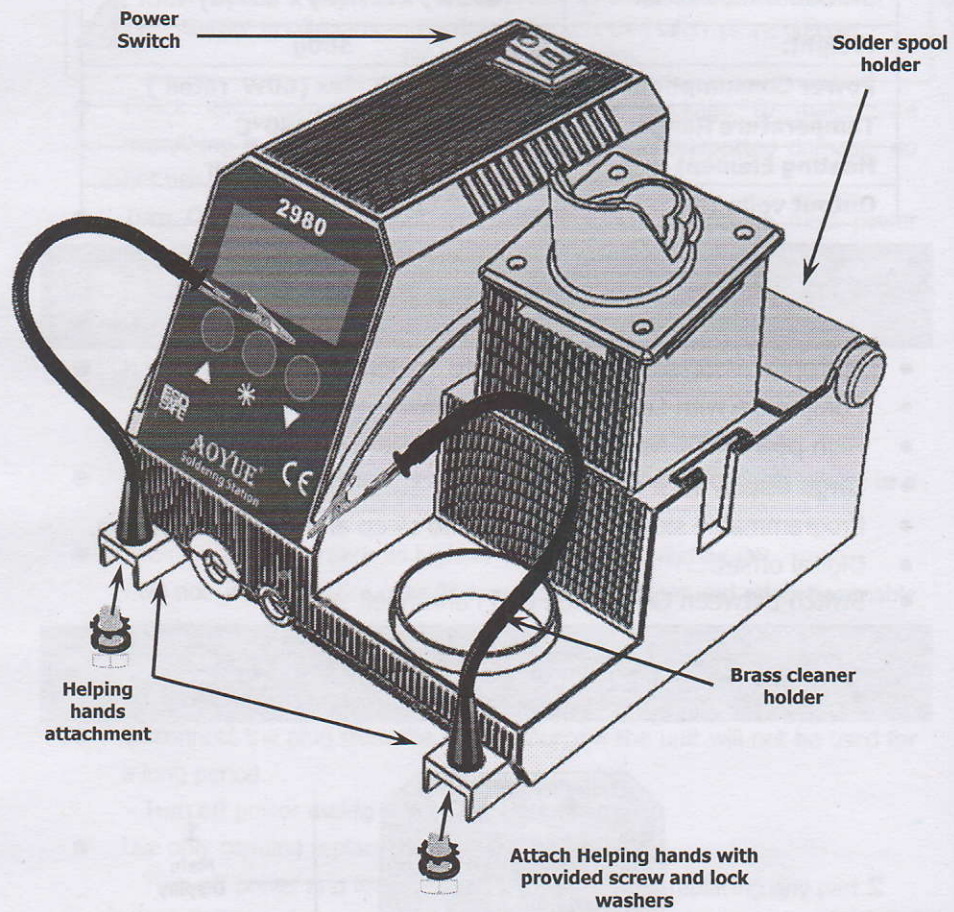
FUNCTIONS and FEATURES

- Microprocessor-controlled ESD safe Soldering station.
- Compatible with Lead free applications.
- High power PTC heating element for fast heat recovery.
- Large display with digital controls.
- Programmable sleep timer, with auto sleep and wake up function.
- Digital offset.
- Switch between Centigrade and Fahrenheit scale.

CONTROL PANEL GUIDE



INSTALLATION GUIDELINES



Important!!!

Place soldering iron properly into the holder, failure to do so may damage the case of the unit.

OPERATING GUIDELINES

REMINDERS:

- ◆ Make sure the equipment is placed on a flat stable surface and all the heat-generating components placed on their respective holders or stands.
- ◆ Ensure all function switches are in the OFF position.
- ◆ 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. Plug the power cord into a grounded wall socket. The station is protected against electrostatic discharge and must be grounded for full efficiency.
2. 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.
3. Place soldering iron to the soldering iron holder.
4. Important!!! place soldering iron properly failure to do so may damage the case of the unit.

B. TEMPERATURE CONTROL

1. Turn the power ON.
2. 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. Adjust desired set temperature by pressing the increase/decrease buttons.
5. While adjusting the set temperature the display would show the current adjusted set temperature, after a few seconds the display will revert to showing the actual temperature.
6. Temperature control range is from 200C to 480C.

OPERATING GUIDELINES

C. DIGITAL OFFSET

The unit is provided with a digital offset feature for tip calibration.

To calibrate the tip temperature:

1. Set to desired working temperature.
2. 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, then allow the tip to idle at the sensor for 60 seconds for proper temperature measurement.
4. Press and hold the both UP and DOWN button to enter the digital offset configuration mode. Wait for the display to change to 000
5. "000" indicates that the digital offset is currently set at neutral.
6. 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.
7. Adjust the offset number to add or subtract the temperature.
8. Press and hold the SET button until the systems goes back to showing the set temperature with the C or F
9. The tip has now been properly calibrated.
10. Saved settings are stored into memory and will remain in effect unless changed by the user.

D. 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 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 both UP and DOWN button to enter the digital offset configuration mode, Do not let go continue pressing both buttons until a display "000t" is shown.
2. A number with suffix "t" or "000t" denotes that we are now configuring the sleep timer setting.

OPERATING GUIDELINES

3. "000t" 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.
4. To save the settings, Press and hold the SET button until the systems goes back to showing the set temperature with the C or F

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. With the unit turned On, Press and hold the SET button
2. The displayed suffix will change from " C" to " F" ."C" indicates that the current system scale is Centigrade. "F" denotes the selected temperature scale is the Fahrenheit scale.
3. To change it from "F" to "C" simply press and hold the set button until display reverts back to "C" .

CARE AND MAINTENANCE

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.

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.

After usage:

Always clean the tip and coat it with fresh solder after use. This guards against oxidation and pro-longs tip life.

System Care:

Never allow the unit to stay idle at high temperature for extended periods. Utilize the automated sleep feature to conserve energy, prolong 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.

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 power cord and make sure there are no disconnections.
3. Verify that the unit is properly connected to the power source.

PROBLEM 2: TEMPERATURE IS NOT INCREASING

CASE 1: Tip temperature does not increase, display shows the word a high number, tip has reached the end of its life and needs to be replaced

SOLUTION:

Replace heating element.

CASE 2: Solder Iron displays a low number and the tip is not getting hot.

SOLUTION:

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

PROBLEM 3: SOLDER IRON TIP IS OVERHEATING

Description: Solder iron tip is getting too hot.

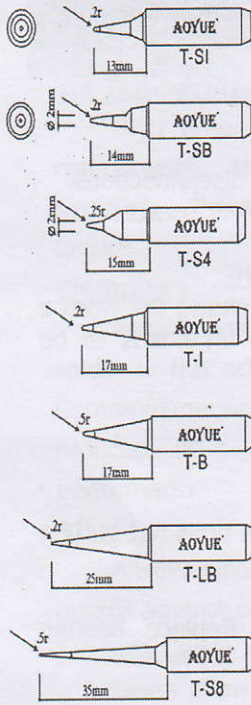
SOLUTION:

Digital offset settings might be adjusted too high causing overheat protection. Repeat the steps in page 8 under **DIGITAL OFFSET**. Ensure that the maximum temperature is only at 480C. Adjust and lower the digital offset value.

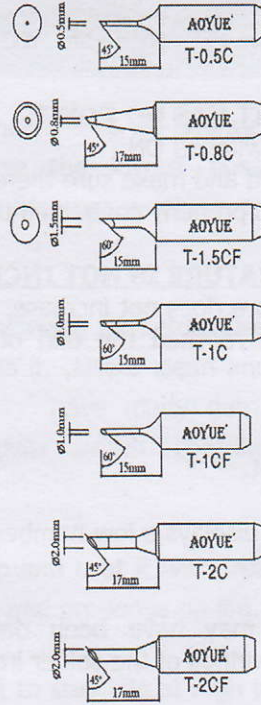
PROBLEM 4: OTHER PROBLEMS NOT MENTIONED IN THIS DOCUMENT

SOLUTION: Contact authorized service station.

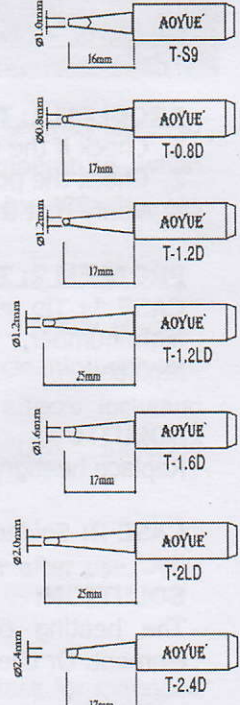
Conical Type



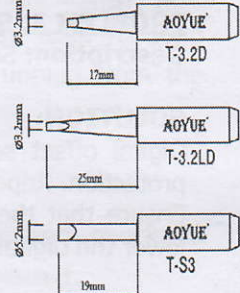
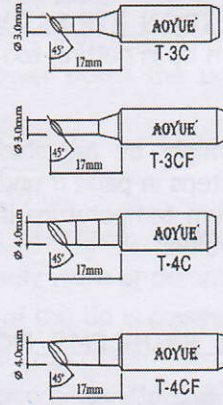
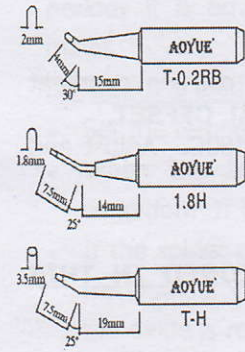
Bevel Type



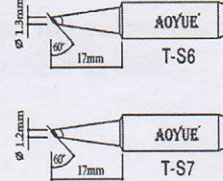
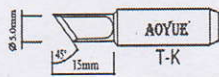
Chisel Type



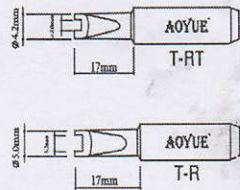
Sharp-Bent Type



Blade Type



Slot Type



Suitable for all AOYUE soldering irons except lead free composite tip series, induction series and 938