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> [YIHUA 939D+ Digital Soldering Station User Manual](#)

YIHUA 939D+

YIHUA 939D+ Digital Soldering Station User Manual

Model: 939D+

1. INTRODUCTION

The YIHUA 939D+ Digital Soldering Station is a high-performance soldering system designed for precision heat control and reliable operation. It is suitable for a wide range of applications, from industrial manufacturing to hobbyist electronics repair.

This manual provides essential information for the safe and effective use, setup, operation, maintenance, and troubleshooting of your YIHUA 939D+ Digital Soldering Station.

2. SAFETY PRECAUTIONS

Always observe the following safety precautions to prevent injury and damage to the equipment:

- Ensure the soldering station is connected to a grounded power outlet (110-127V US-standard).
- Do not operate the unit in wet or damp conditions.
- Always use appropriate personal protective equipment, including safety glasses.
- Soldering irons reach high temperatures. Avoid direct contact with the hot tip and allow it to cool before handling.
- Use in a well-ventilated area to avoid inhaling solder fumes.
- Keep flammable materials away from the soldering area.
- Unplug the unit from the power source before cleaning or performing maintenance.
- Keep out of reach of children.

3. PRODUCT COMPONENTS

The YIHUA 939D+ Digital Soldering Station package includes the following components:

- 1 x 939D+ Digital Soldering Station
- 1 x 907F Detachable Soldering Iron
- 1 x Metallic Iron Holder
- 1 x Premium Brass Tip Cleaner
- 1 x Cleaning Sponge

- 5 x Quality Iron Tips (SGS Certified)
- 1 x Pair of ESD-Safe Tweezers
- 1 x Tube of Premium Solder (Lead-Free)



Figure 3.1: YIHUA 939D+ Digital Soldering Station and included accessories.

This image displays the main soldering station unit, the soldering iron, the metallic iron holder with a brass tip cleaner, a cleaning sponge, a set of five additional soldering tips, ESD-safe tweezers, and a tube of lead-free solder wire. These components are essential for setting up and operating the soldering station.

4. SETUP INSTRUCTIONS

1. **Unpacking:** Carefully remove all components from the packaging. Inspect for any damage.
2. **Placement:** Place the soldering station on a stable, heat-resistant, and non-flammable surface. Ensure adequate ventilation around the unit.
3. **Iron Holder Assembly:** Position the metallic iron holder in a convenient and safe location near the soldering station.

Ensure it is stable and will not tip over.

4. **Connect Soldering Iron:** Connect the 907F detachable soldering iron to the "IRON" receptacle on the front panel of the soldering station. Ensure the connection is secure.
5. **Power Connection:** Plug the power cord into a standard 110-127V US-standard grounded electrical outlet.
6. **Tip Preparation:** Before first use, or when changing tips, ensure the desired soldering tip is securely inserted into the soldering iron.



Figure 4.1: Labeled components of the YIHUA 939D+ Soldering Station.

This diagram highlights key features of the soldering station, including the temperature display, adjustment knob, power switch, soldering iron connector, and the metallic iron holder. Understanding these parts is crucial for proper setup and operation.

Your browser does not support the video tag.

Video 4.1: Official YIHUA video demonstrating the YIHUA 939D+ Digital Soldering Station with accessories. This video provides a visual overview of the product and its included components, aiding in initial setup and understanding the package contents.

5. OPERATING INSTRUCTIONS

1. **Power On:** Flip the power switch located on the side or back of the unit to the "ON" position. The digital display will illuminate.
2. **Set Temperature:** Turn the large adjustment knob on the front panel to set the desired soldering temperature. The digital display will show the set temperature. The temperature range is 392°F to 896°F (200°C to 480°C).
3. **Temperature Unit Selection:** Press the "°C/°F" button to switch between Celsius and Fahrenheit temperature readings.
4. **Heating:** The soldering iron will begin to heat up rapidly. The display will show the current temperature as it rises to the set point.
5. **Soldering:** Once the set temperature is reached and stabilized, you can begin soldering. Apply the soldering iron tip to the joint, then feed solder wire onto the heated joint.
6. **Power Off:** After use, turn the power switch to the "OFF" position and allow the soldering iron to cool down completely before storing.



QUICK HEATING

SMART
TEMPERATURE CONTROL

AUTOMATIC
DETECTION SYSTEM

ESD-SAFE
COMPLIANT

The 939D+ heats up quickly to your set temperature and maintains the temperature steadily even when you are soldering. The consistent, quick, and reliable performance makes the 939D+ the perfect choice for those who solder on a regular basis.

Figure 5.1: The YIHUA 939D+ demonstrating its quick heating capability.

This image illustrates the quick heating feature of the 939D+ station, emphasizing its efficiency in reaching and maintaining the desired temperature for soldering tasks.

Recommended Soldering Temperatures:

For optimal results and to ensure proper solder flow, follow these guidelines:

- The set temperature for a soldering iron/station should be approximately 50°C / 90°F above the solder's melting point to achieve a better solder connection.
- An additional 100°C / 180°F higher temperature is recommended to provide a heat reserve for quick thermal recovery of the tip after the solder connection is made.

Recommended Temperature for Soldering

General Rule of Thumb

Your preferred
Solder's Melting Point + 50°C + 100°C = **Smoother Soldering Experience**

For example:



If you use **Lead-Free Solder**
Lead-Free Solder (Sn-Ag-Cu)
220°C

$$220^{\circ}\text{C} + 50^{\circ}\text{C} + 100^{\circ}\text{C} = \mathbf{370^{\circ}\text{C}}$$

1. The set temperature for a **soldering iron/station** should be approximately **50°C / 90°F** above its melting point to make a better solder connection.

2. The set temperature for a **soldering iron/station** should be an additional approximately **100°C / 180°F** higher to provide a heat reserve for the quick thermal recovery of the tip after the solder connection is made.



Figure 5.2: Guide for calculating optimal soldering temperature.

This graphic provides a formula and example for determining the ideal soldering temperature, especially when using lead-free solder, to ensure smooth and effective soldering.

6. MAINTENANCE AND TIP CARE

Proper maintenance extends the life of your soldering station and ensures consistent performance.

Soldering Tip Cleaning:

Regular cleaning of the soldering tip is crucial for effective heat transfer and to prevent oxidation. The YIHUA 939D+ includes two methods for tip cleaning:

- **Brass Wool Cleaner:** Use the included brass wool in the metallic iron holder to gently wipe off excess solder and oxidation from the hot tip. The brass wool is designed not to damage the tip plating.
- **Wet Cleaning Sponge:** Dampen the cleaning sponge with water (do not soak). Wipe the hot soldering tip across the damp sponge to clean it.



Figure 6.1: Illustration of two tip cleaning methods.

This image visually demonstrates the use of both the brass wool and the wet cleaning sponge for maintaining a clean soldering tip, which is vital for optimal performance.

Your browser does not support the video tag.

Video 6.1: Official YIHUA video on soldering station maintenance and tip care. This video provides practical demonstrations of how to properly clean and maintain soldering tips, ensuring their longevity and performance.

General Maintenance:

- **Cleaning the Unit:** Wipe the exterior of the soldering station with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Tip Replacement:** Replace soldering tips when they become excessively worn or corroded. Ensure the station is off and the iron is cool before changing tips.
- **Storage:** Store the soldering station and its components in a clean, dry environment when not in use.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Soldering iron not heating.	Power switch is off; Power cord not connected; Faulty heating element; Loose iron connection.	Ensure power switch is ON; Check power cord connection; Replace heating element (if applicable); Re-seat soldering iron connector.
Temperature unstable or inaccurate.	Dirty or oxidized soldering tip; Sensor malfunction; Calibration needed.	Clean the soldering tip thoroughly; Contact customer support for sensor issues; Perform temperature calibration (refer to advanced settings in full manual).
Solder not melting properly.	Temperature set too low; Oxidized tip; Incorrect solder type.	Increase temperature setting; Clean and tin the soldering tip; Ensure appropriate solder is used for the application.
Unit powers on but display is blank.	Internal fault.	Unplug and re-plug the unit. If the problem persists, contact customer support.

8. SPECIFICATIONS

Feature	Detail
Model	939D+
Brand	YIHUA
Power Source	AC
Voltage	110 Volts
Wattage	120 Watts
Temperature Range	392°F to 896°F (200°C to 480°C)
Display Type	LCD Digital Display
Item Weight	4.33 pounds

Feature	Detail
Product Dimensions	5.4 x 4.4 x 3.6 inches
Included Components	Soldering Station, Soldering Iron, Metallic Iron Holder, Brass Tip Cleaner, Cleaning Sponge, 5 Iron Tips, ESD-Safe Tweezers, Lead-Free Solder

9. WARRANTY AND SUPPORT

YIHUA provides a 12-month US-exclusive manufacturer technical coverage for the 939D+ Digital Soldering Station. For any technical assistance or support, please contact YIHUA customer service. You can also find professional assistance on Amazon.

For further information or to purchase replacement parts, please visit the [YIHUA Official Store](#).