YIHUA 8786D-I, 305D-IV

YIHUA 8786D-I Soldering & Rework Station and 305D-IV DC Lab Power Supply User Manual

Comprehensive instructions for setup, operation, and maintenance.

1. Introduction

This manual provides detailed instructions for the safe and effective use of your YIHUA 8786D-I Soldering & Rework Station and YIHUA 305D-IV Regulated DC Lab Power Supply bundle. Please read this manual thoroughly before operating the equipment and retain it for future reference.

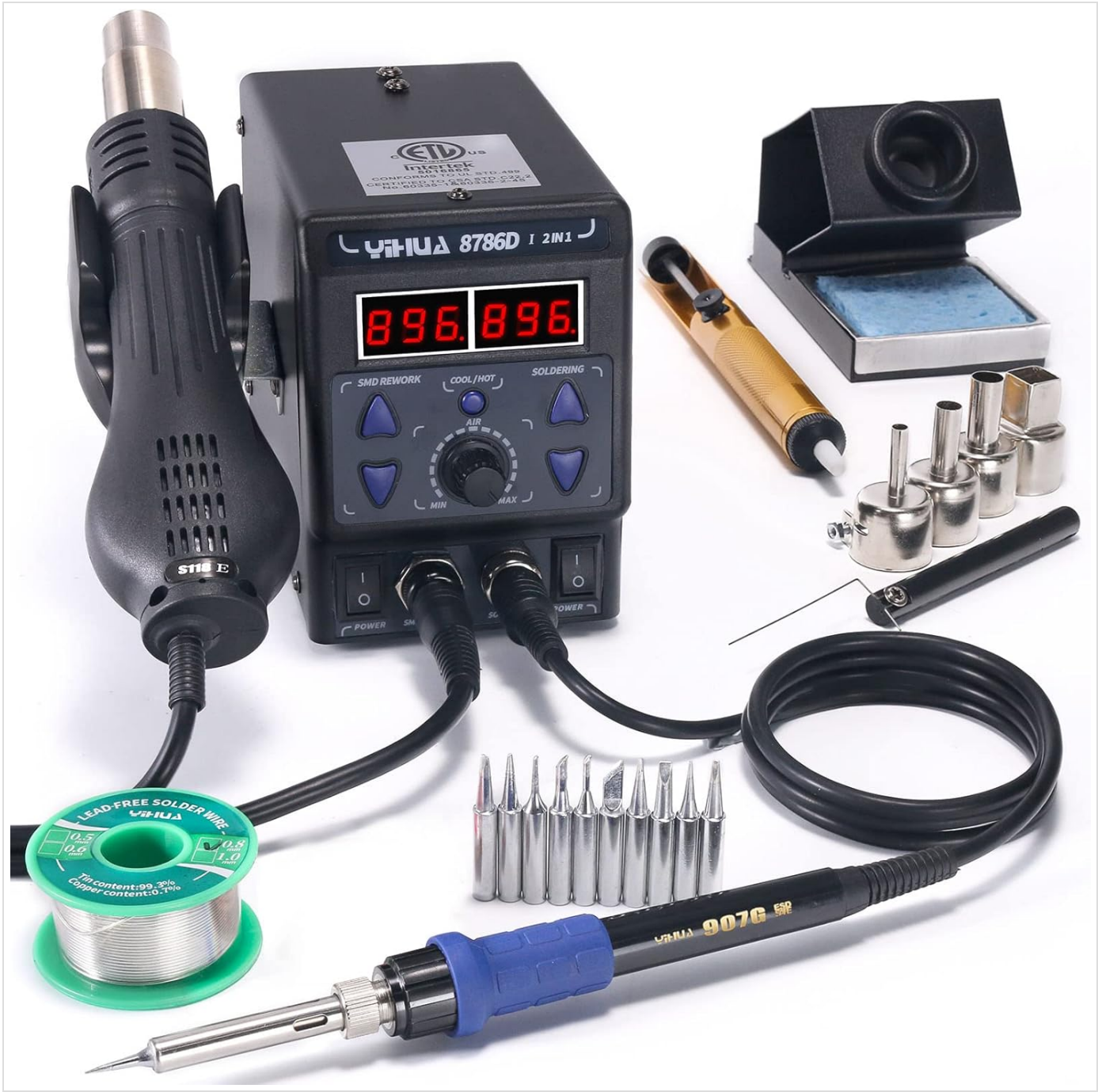

Figure 1: YIHUA 8786D-I Soldering & Rework Station and 305D-IV DC Lab Power Supply Bundle

2. Safety Instructions

WARNING: Improper use can lead to electric shock, fire, or personal injury. Always follow these safety guidelines.

- Operate the equipment in a well-ventilated area to avoid inhaling solder fumes.
- Wear appropriate personal protective equipment, including safety glasses.
- Ensure the power supply voltage matches the equipment's requirements (110-127V for US models).
- Do not touch hot surfaces of the soldering iron or hot air nozzle. Allow them to cool before handling.
- Keep flammable materials away from the work area.
- Disconnect power before performing any maintenance or when the equipment is not in use.
- Do not operate equipment with damaged cords or plugs.
- Keep children and unauthorized personnel away from the work area.

3. Product Overview and Components

This bundle includes the YIHUA 8786D-I Soldering & Rework Station and the YIHUA 305D-IV Regulated DC Lab Power Supply, along with essential accessories.

3.1 YIHUA 8786D-I Soldering & Rework Station

This unit combines a hot air rework station and a soldering iron station. Key components include:

- Main control unit with digital displays for temperature.
- Hot air gun with various nozzles.
- Soldering iron with assorted tips.
- Soldering iron holder with cleaning sponge.

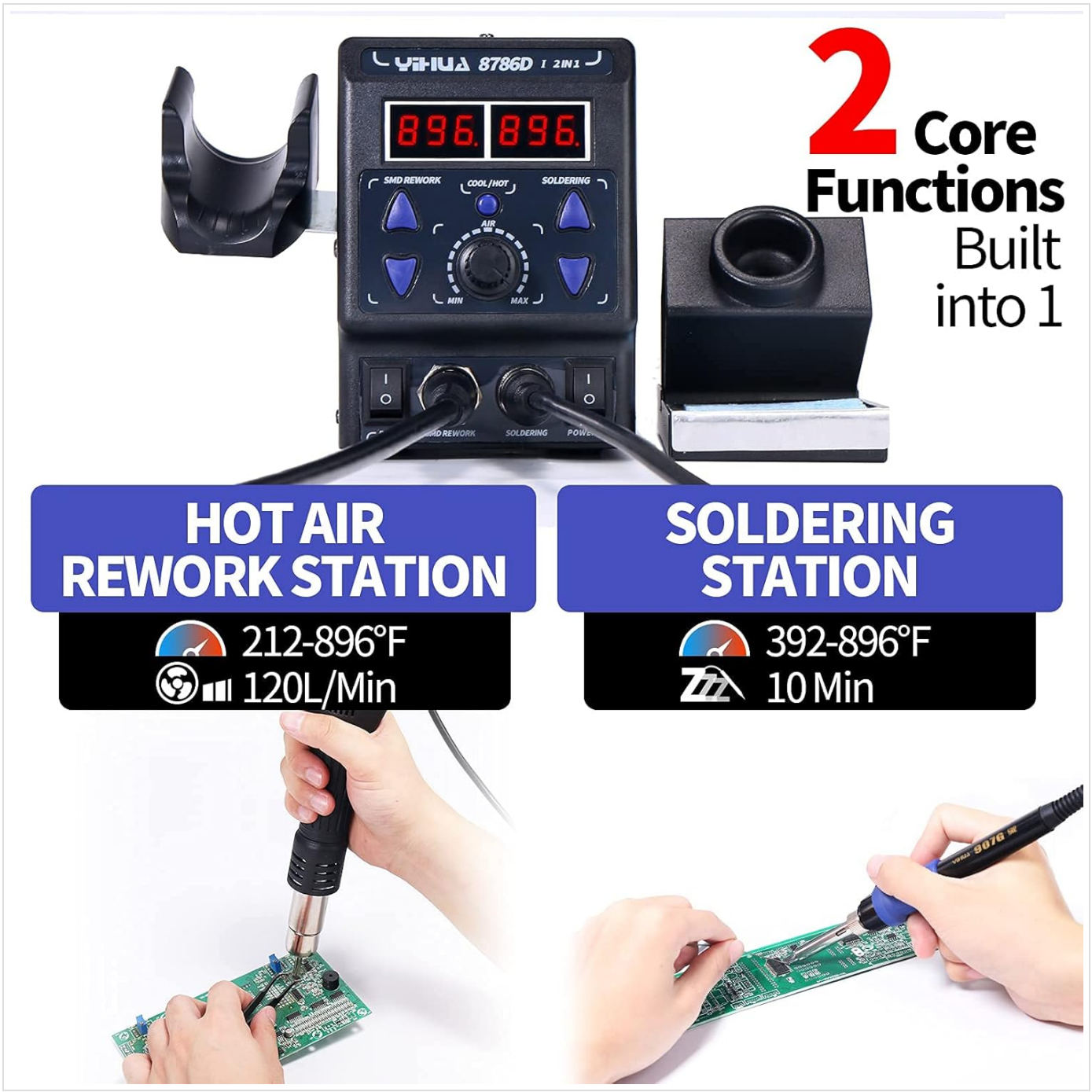

Figure 2: YIHUA 8786D-I Rework Station with Hot Air and Soldering Functions

3.2 YIHUA 305D-IV Regulated DC Lab Power Supply

This unit provides a variable regulated DC power output. Key components include:

- Main control unit with digital displays for voltage, current, and power.
- Voltage and Current adjustment knobs (fine and coarse).
- Output terminals (positive, negative, ground).

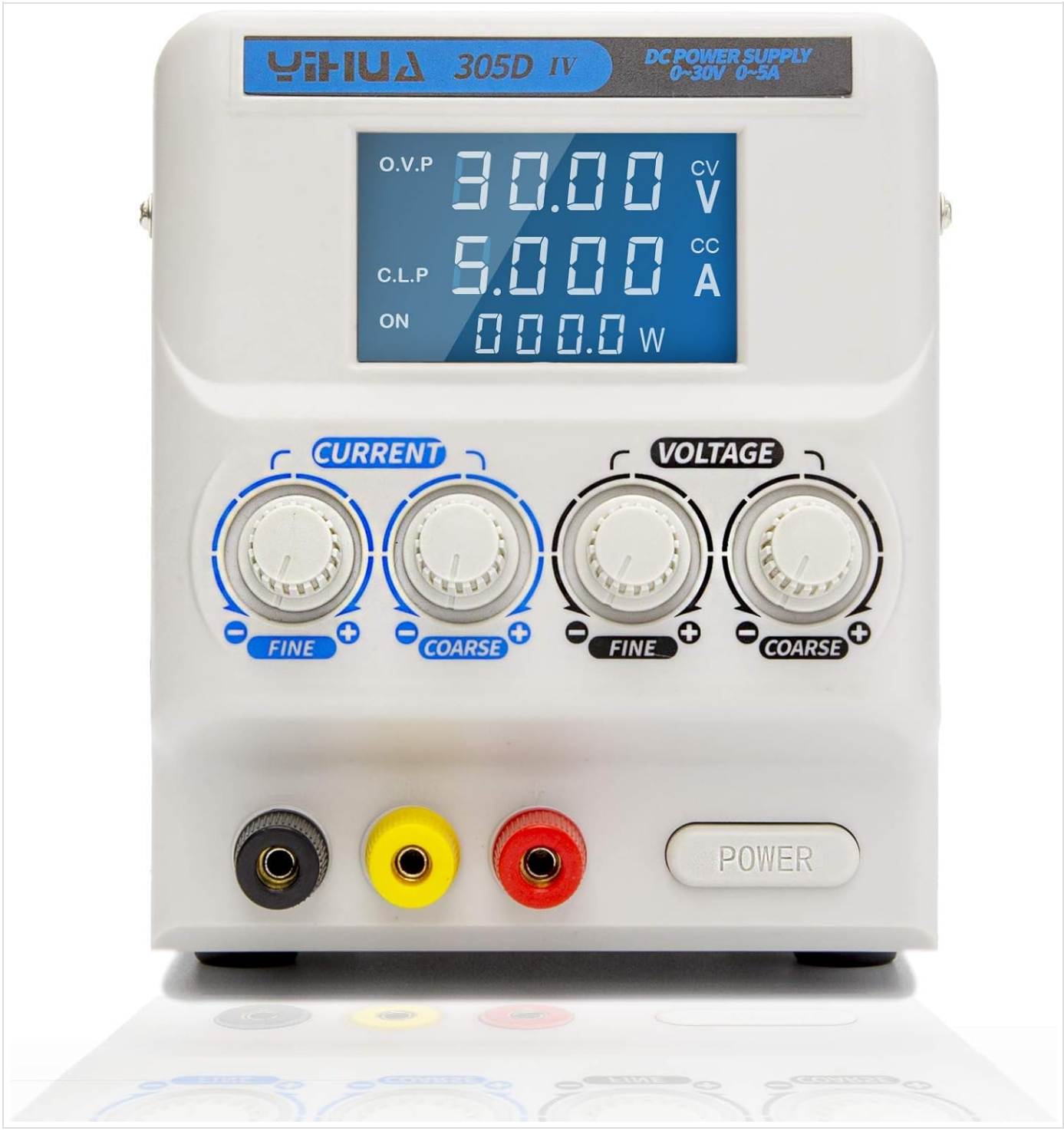

Figure 3: YIHUA 305D-IV Regulated DC Lab Power Supply

4. Setup and Installation

4.1 YIHUA 8786D-I Soldering & Rework Station

1. **Placement:** Place the main unit on a stable, heat-resistant surface.

2. **Connect Hot Air Gun:** Insert the hot air gun connector firmly into its designated port on the main unit. Ensure it is pushed all the way in and then fasten the retaining ring.
3. **Connect Soldering Iron:** Insert the soldering iron connector firmly into its designated port on the main unit. Ensure it is pushed all the way in and then fasten the retaining ring.
4. **Power Connection:** Connect the power cord to the main unit and then to a grounded 110-127V AC outlet.
5. **Soldering Iron Holder:** Place the soldering iron in its holder. Ensure the cleaning sponge is moistened before use.

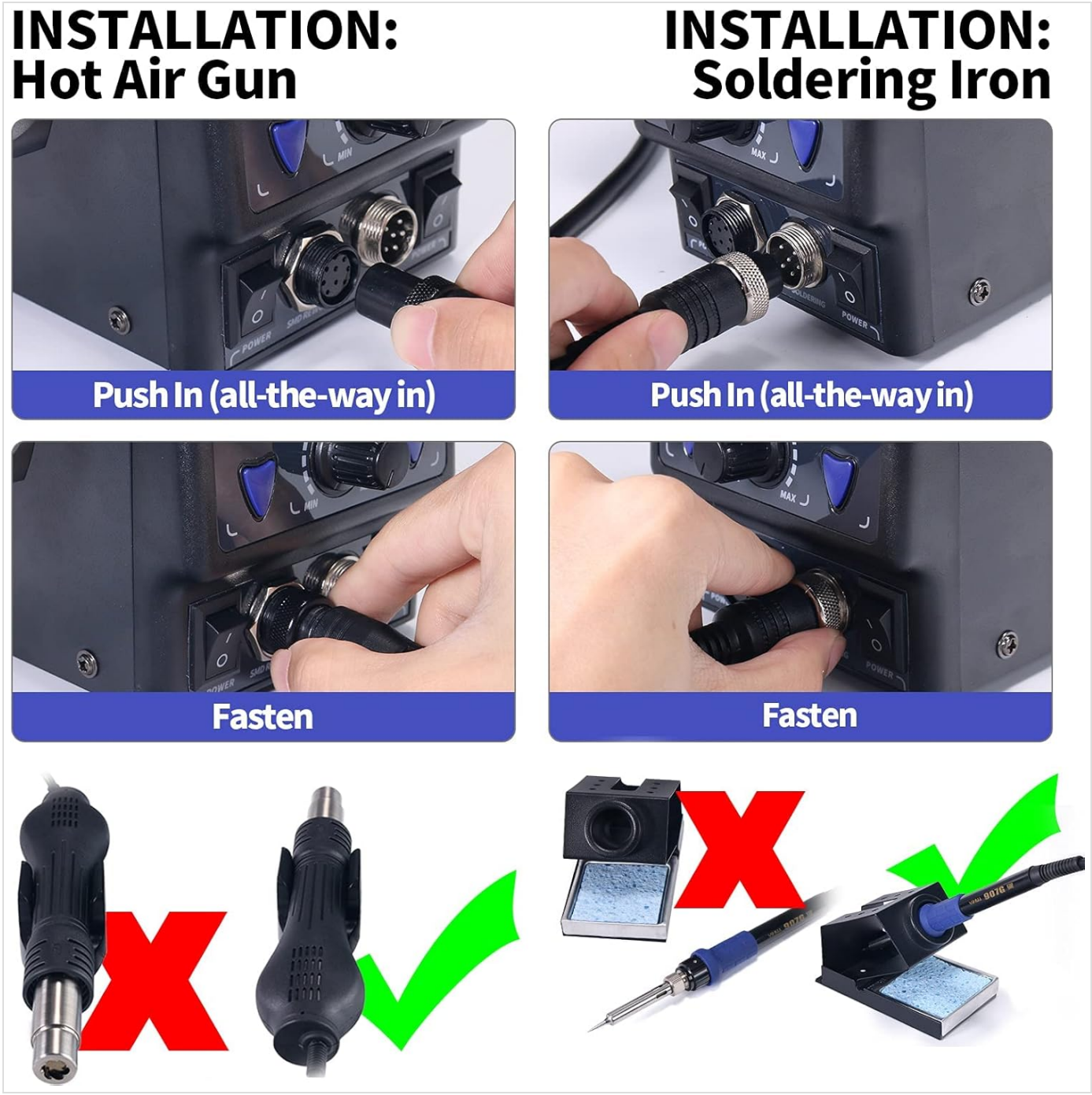

Figure 4: Connecting the Hot Air Gun and Soldering Iron

4.2 YIHUA 305D-IV Regulated DC Lab Power Supply

1. **Placement:** Place the power supply on a stable surface, ensuring adequate ventilation.
2. **Power Connection:** Connect the power cord to the unit and then to a grounded 110-127V AC outlet.
3. **Output Connections:** Connect your load to the output terminals using appropriate test leads. Red for positive (+), Black for negative (-), and Yellow/Green for ground (GND).

5. Operating Instructions

5.1 YIHUA 8786D-I Soldering & Rework Station

1. **Power On:** Flip the main power switch to the 'ON' position.
2. **Select Mode:** Use the dedicated power switches for the Hot Air Rework Station and Soldering Station to activate the desired function.
3. **Adjust Hot Air Temperature and Airflow:** For the hot air station, use the temperature control buttons (Up/Down) to set the desired temperature (212-896°F). Adjust the airflow using the airflow knob. The unit features temperature stabilization.
4. **Hot Air In-Holder Standby Mode:** When the hot air gun is placed in its holder, it automatically cools down to 212°F and enters standby mode. It will heat up to the set temperature when removed from the holder.
5. **Adjust Soldering Iron Temperature:** For the soldering station, use the temperature control buttons (Up/Down) to set the desired temperature (392-896°F). The unit features PID temperature stabilization for consistent heat.
6. **Soldering Iron Sleep Mode:** The soldering iron enters a 10-minute sleep mode when idle, reducing its temperature to 392°F to minimize tip wear. It quickly reheats when picked up.
7. **Power Off:** Turn off the individual station switches, then the main power switch.

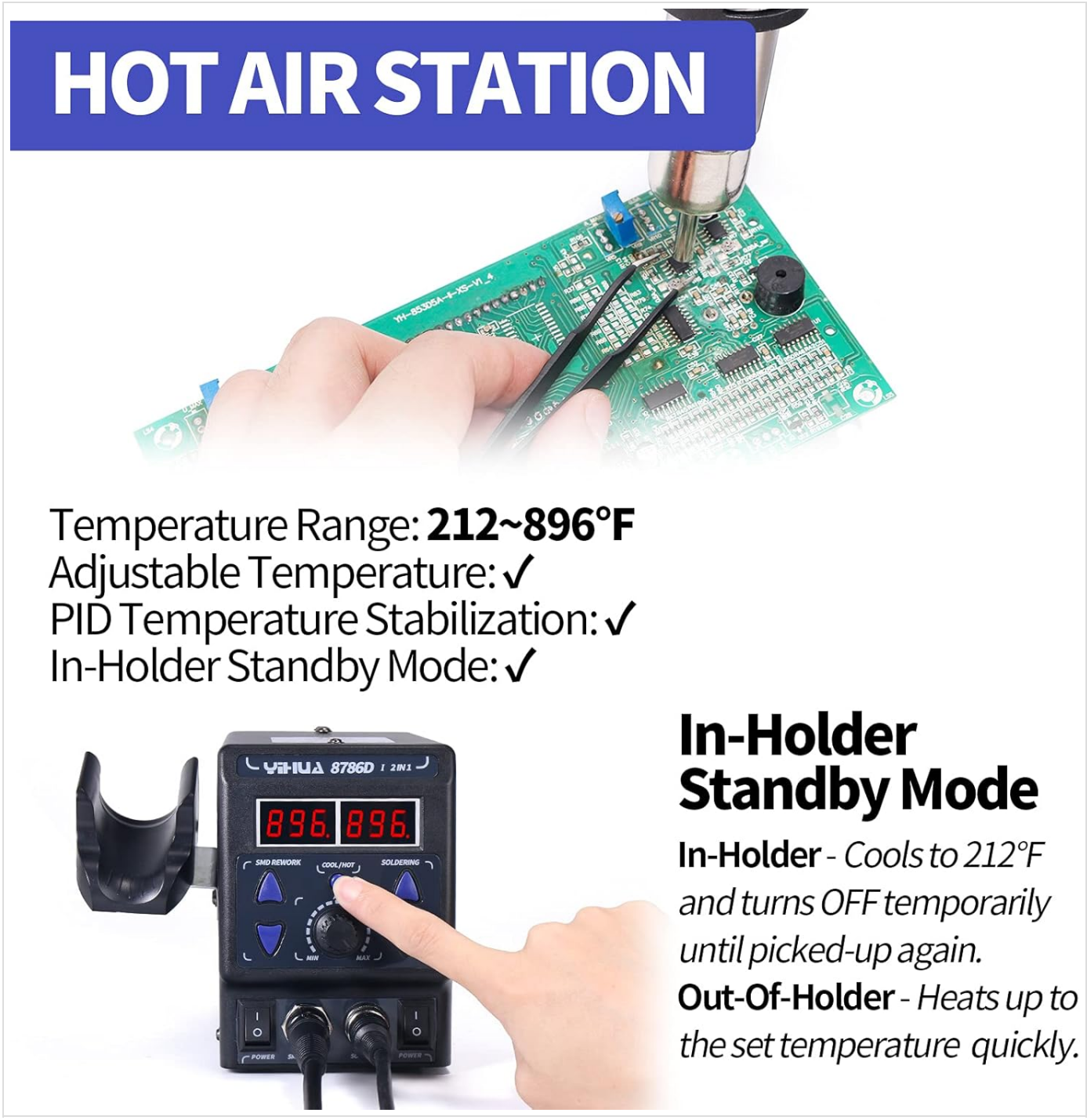

Figure 5: Hot Air Rework Station Operation

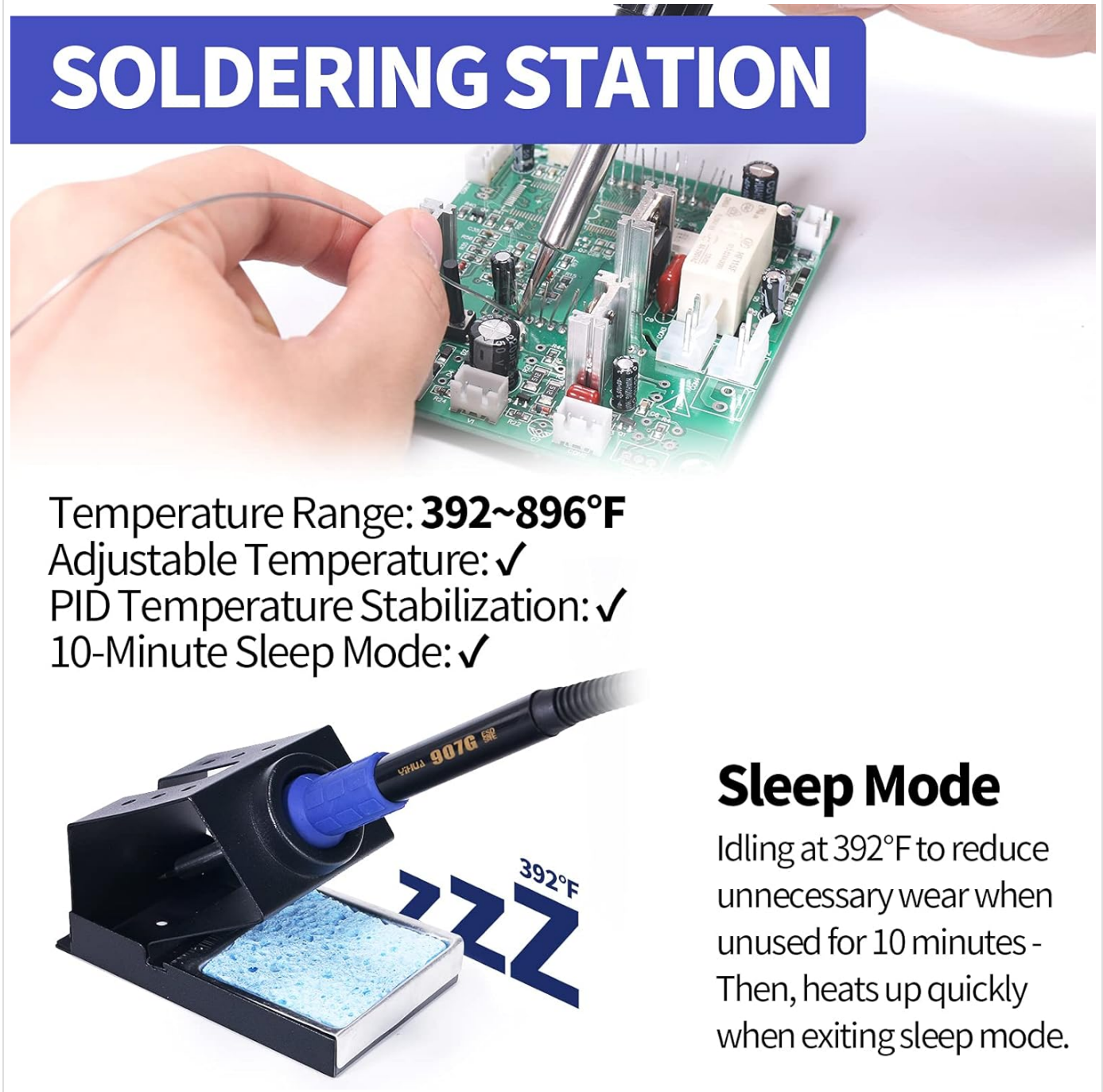

Figure 6: Soldering Station Operation

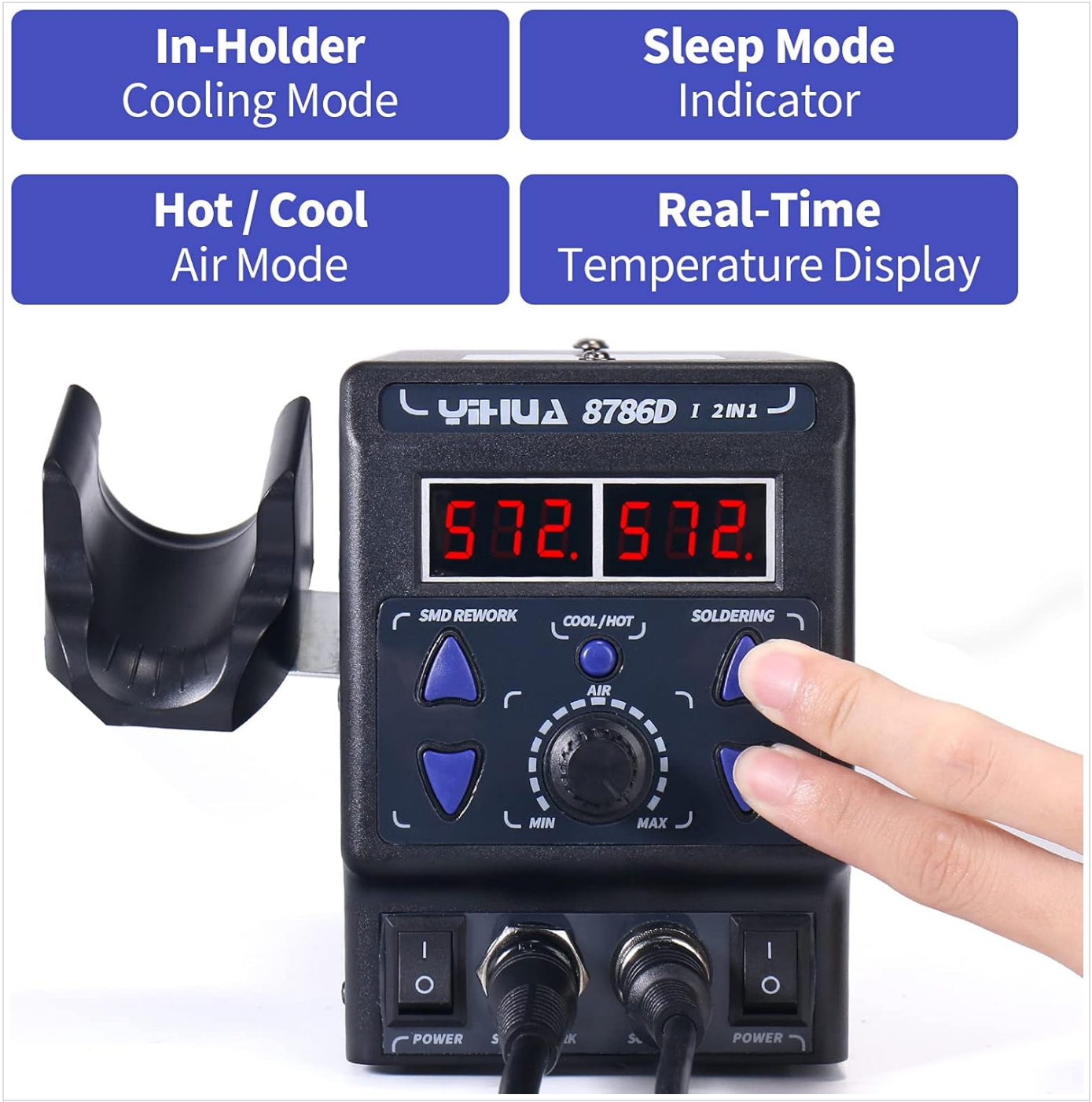

Figure 7: Control Panel and Display Features

5.2 YIHUA 305D-IV Regulated DC Lab Power Supply

1. **Power On:** Press the 'POWER' button to turn on the unit. The LCD display will illuminate.
2. **Adjust Voltage:** Use the 'VOLTAGE' coarse and fine adjustment knobs to set the desired output voltage (0-30V). Observe the voltage reading on the LCD display.
3. **Adjust Current Limit:** Use the 'CURRENT' coarse and fine adjustment knobs to set the desired current limit (0-5A). This protects your circuit from overcurrent.
4. **Constant Voltage (CV) / Constant Current (CC) Mode:** The unit automatically switches between CV and CC modes depending on the load. 'CV' indicates Constant Voltage mode, and 'CC' indicates Constant Current mode.
5. **Protection Features:** The unit includes Over Voltage Protection (OVP) and Over Current Protection (OCP) to safeguard connected devices and the power supply itself.
6. **Power Off:** Press the 'POWER' button to turn off the unit.

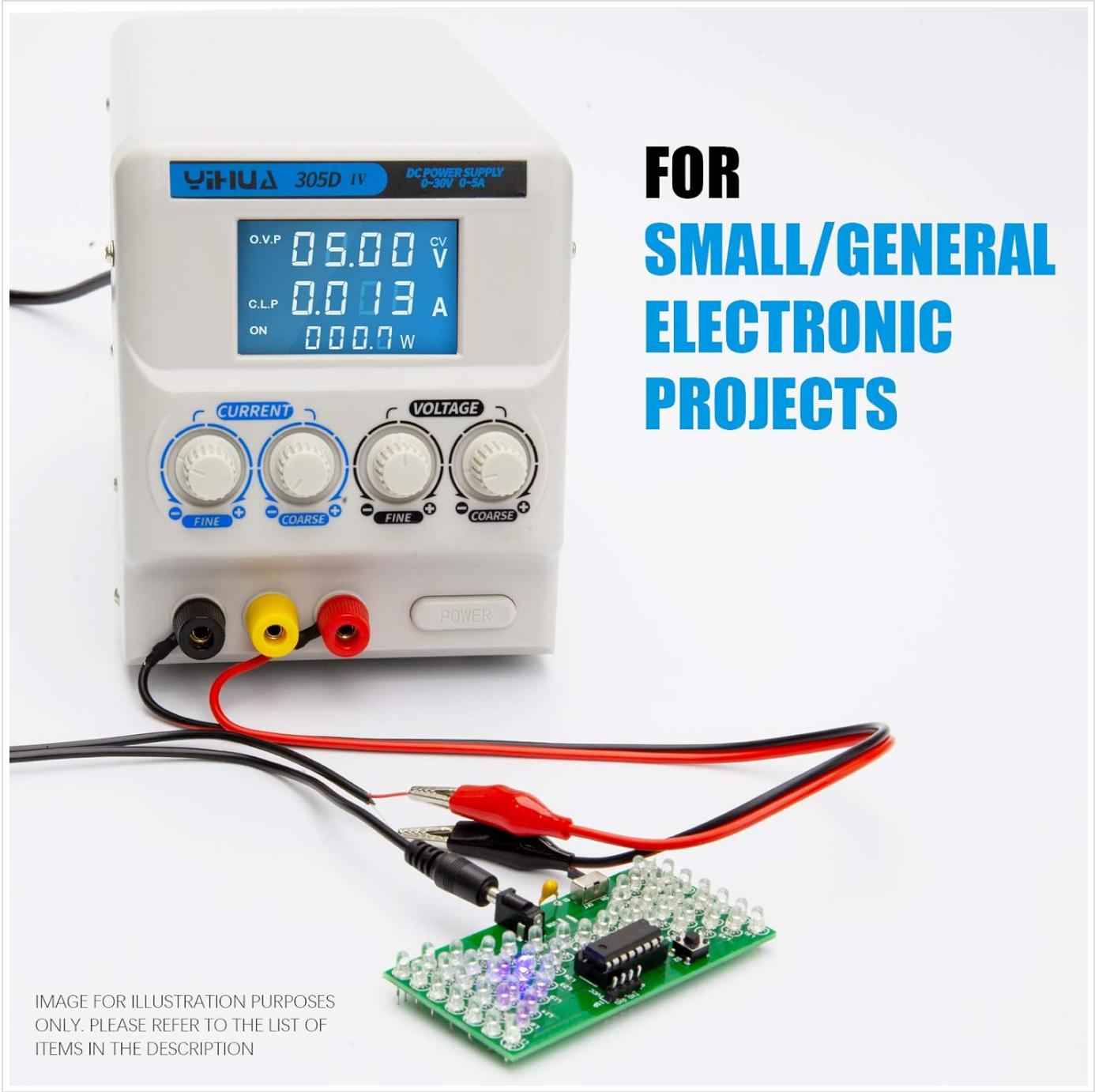

Figure 8: YIHUA 305D-IV Power Supply in use

6. Maintenance

6.1 Soldering & Rework Station Maintenance

- **Soldering Tip Cleaning:** Regularly clean soldering iron tips using the wet sponge or brass wool provided. This prevents oxidation and ensures efficient heat transfer. Replace tips when they become excessively worn or corroded.
- **Hot Air Nozzle Cleaning:** Ensure hot air nozzles are free from debris. Clean gently with a soft brush if necessary.
- **General Cleaning:** Keep the main unit and accessories clean and free of dust and solder splatter. Use a soft, dry cloth. Do not use abrasive cleaners or solvents.

6.2 DC Lab Power Supply Maintenance

- **Ventilation:** Ensure the ventilation openings are clear of obstructions to prevent overheating.

- **General Cleaning:** Wipe the unit with a soft, dry cloth. Avoid liquid cleaners near electrical components.

7. Troubleshooting

7.1 Soldering & Rework Station Troubleshooting

- **No Power:** Check the power cord connection and the main power switch. Ensure the outlet is functional.
- **Soldering Iron Not Heating / Poor Heat Transfer:**
    a. Ensure the soldering iron is properly connected and its power switch is on.
    b. Check the set temperature.
    c. Clean the soldering tip. A dirty or oxidized tip will not transfer heat effectively.
    d. If the tip is severely worn, replace it.
- **Hot Air Gun Not Heating / Weak Airflow:**
    a. Ensure the hot air gun is properly connected and its power switch is on.
    b. Check the set temperature and airflow settings.
    c. Ensure the nozzle is not blocked.

7.2 DC Lab Power Supply Troubleshooting

- **No Output Voltage/Current:**
    a. Ensure the power supply is turned on.
    b. Check the output connections to your load.
    c. Verify that the voltage and current limit knobs are adjusted to desired values.
    d. If OVP or OCP indicators are active, disconnect the load and check for short circuits or excessive current draw.

8. Specifications

8.1 YIHUA 8786D-I Soldering & Rework Station

- **Hot Air Temperature Range:** 212-896°F (100-480°C)
- **Soldering Iron Temperature Range:** 392-896°F (200-480°C)
- **Temperature Stability:** PID controlled
- **Display Type:** LCD

8.2 YIHUA 305D-IV Regulated DC Lab Power Supply

- **Output Voltage:** 0-30V DC (Adjustable)
- **Output Current:** 0-5A (Adjustable)
- **Operating Modes:** Constant Voltage (CV), Constant Current (CC)
- **Protection:** Over Voltage Protection (OVP), Over Current Protection (OCP), Short-Circuit Protection
- **Display Type:** LCD

9. Warranty and Support

YIHUA provides a 12-month US-exclusive manufacturer technical coverage for this product. For professional assistance, please contact YIHUA customer support. Refer to the official YIHUA website or your purchase documentation for contact details.