YIHUA 948-II

YIHUA 948-II 4-in-1 Soldering and Rework Station

Model: 948-II | Brand: YIHUA

1. Introduction

The YIHUA 948-II is a versatile 4-in-1 electronic repair station designed for a wide range of soldering, desoldering, and rework tasks. This unit integrates a soldering iron, a hot air rework station, a desoldering gun, and a suction pen into a single compact device. It features precise temperature control, multiple memory channels, and safety functions to ensure efficient and reliable operation.

Figure 1: Overview of the YIHUA 948-II 4-in-1 Soldering and Rework Station, highlighting its integrated functions.

2. Safety Information

Please read and understand all safety instructions before operating the YIHUA 948-II station. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- Always operate the unit in a well-ventilated area to avoid inhaling fumes from soldering and desoldering.
- Wear appropriate personal protective equipment (PPE), including safety glasses and heat-resistant

gloves.

- Do not touch the hot tip of the soldering iron, desoldering gun, or hot air nozzle. Temperatures can reach up to 480°C.
- Ensure the unit is properly grounded.
- Unplug the unit from the power outlet when not in use or before performing maintenance.
- Keep flammable materials away from the work area.
- Do not use the unit near water or in damp conditions.
- Keep out of reach of children.

3. Package Contents

Verify that all items listed below are included in your package:

- YIHUA 948-II 4-in-1 Repair Station
- 4 x Desoldering Nozzles
- 4 x Suction Pen Nozzles
- 2 x Suction Pen Adapters
- 4 x Hot Air Nozzles
- ESD-Safe Tweezers
- Cleaning Pins
- 2 x Rubber Retainers
- 10 x Filter Absorbers
- 2 x Ceramic Filters
- 2 x Filter Springs
- Heat-Resistant Pad

4. Setup

1. **Unpacking:** Carefully remove all components from the packaging. Inspect for any damage during transit.
2. **Placement:** Place the main unit on a stable, heat-resistant, and non-flammable surface. Ensure adequate clearance for ventilation.
3. **Connecting Tools:** Connect the soldering iron, hot air gun, and desoldering gun to their respective ports on the front panel of the main unit. Ensure connections are secure.
4. **Power Connection:** Connect the power cord to the unit and then to a grounded 230V AC power outlet.
5. **Initial Inspection:** Before powering on, ensure all accessories are correctly placed and no loose connections are present.

5. Operating Instructions

5.1 General Operation

1. **Power On/Off:** Use the main power switch on the front panel to turn the unit on or off. The LCD display will illuminate upon power-on.
2. **Temperature Adjustment:** Use the up/down arrow buttons next to each tool's display to adjust the temperature.

3. **Memory Channels:** The unit features 6 preset memory channels (3 for soldering/desoldering, 3 for hot air). Press the 'Memory' button to cycle through or save settings.

Figure 2: The control panel showing the customizable memory channels for quick access to preferred temperature settings.

5.2 Soldering Station

The soldering iron offers precise temperature control for various soldering applications.

- **Temperature Range:** 200°C to 480°C.
- **Operation:** Set the desired temperature using the controls. Allow the iron to heat up. Apply solder to the joint while touching the tip to the component lead and pad.
- **Sleep Mode:** The soldering iron features a sleep mode (0-99 minutes) to minimize wear and allow for quick startup.

Figure 3: The display indicating sleep mode and automatic shutdown functions for the soldering iron and hot air gun.

5.3 Hot Air Rework Station

Ideal for SMD component rework, heat shrinking, and plastic welding.

- **Temperature Range:** 100°C to 480°C.
- **Automatic Mode:** When the hot air gun is placed in its holder, it will cool down below 100°C and then turn off, reducing wear and saving energy.
- **Manual Mode:** The hot air gun continues operating even when placed in its holder, useful for continuous work.

Figure 4: Illustration of the hot air gun's automatic mode (cooling down in holder) and manual mode (continuous operation).

5.4 Desoldering Station

The desoldering gun provides efficient removal of solder from through-hole components.

1. **Temperature Range:** 380°C to 480°C.
2. **Preheat:** Set the desired temperature and allow approximately 3 minutes for preheating. The buzzer will beep when ready.
3. **Desoldering:** Cover the solder joint with the nozzle, allow the solder to melt completely, then press the trigger to extract the molten solder.

Figure 5: Step-by-step guide on how to use the desoldering gun, from setting temperature to extracting solder.

5.5 Suction Pen

The suction pen utilizes the built-in vacuum motor to assist in lifting larger integrated circuits (ICs) after desoldering with hot air.

- **Operation:** Attach an appropriate suction nozzle to the pen. After heating the IC with the hot air gun until the solder melts, place the suction cup onto the IC and activate the vacuum to lift it.
- **Nozzles:** Various sizes of suction pen nozzles are included to accommodate different component sizes.

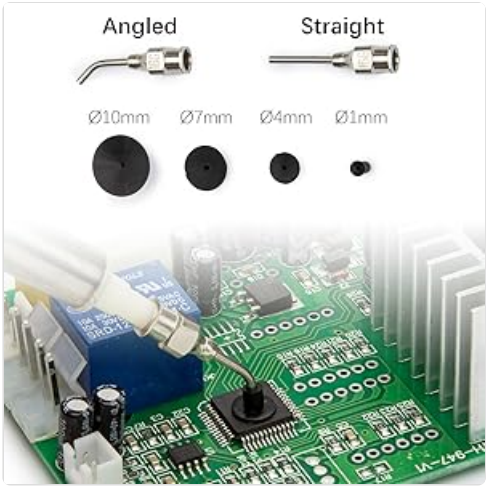

Figure 6: Various sizes of angled and straight suction pen nozzles and adapters for different applications.

6. Maintenance

Regular cleaning and maintenance ensure optimal performance and longevity of your YIHUA 948-II station.

1. **Clean Solder Chamber:** Regularly clean the solder collection chamber of the desoldering gun to prevent blockages.
2. **Clean Filter Spring:** Remove and clean the filter spring to maintain proper suction.
3. **Clean Nozzles:** Use the provided cleaning pins to clear any solder residue from the desoldering nozzles.
4. **Clean Vacuum Receptacle:** Ensure the vacuum receptacle is free of debris.
5. **Soldering Tip Maintenance:** Clean the soldering iron tip after each use and re-tin it with a layer of fresh solder to prevent oxidation.

Figure 7: Visual guide for regularly cleaning the desoldering gun components, including the solder chamber, filter spring, nozzles, and vacuum receptacle.

6.1 Nozzle Care

All desoldering nozzles come pre-tinned to protect against oxidation. This is a protective design and does not indicate a blocked nozzle.

1. Turn ON the station and allow it to preheat for approximately 5 minutes.
2. Once preheating is complete, press the desoldering trigger to extract the pre-tinned solder on the nozzle.
3. It is recommended to use the desoldering station at 380-400°C for most applications.
4. Avoid keeping the nozzle on the solder pad for too long when using a high-temperature setting to prevent damaging the pad.

Figure 8: A visual comparison of desoldering nozzles, illustrating their appearance before and after initial use and cleaning.

7. Troubleshooting

This section provides solutions to common issues you might encounter.

- **No Power:** Check the power cord connection and the main power switch. Ensure the outlet is functional.
- **Tool Not Heating:** Verify the tool is securely connected to the main unit. Check the temperature setting and ensure it's not in sleep mode.
- **Poor Desoldering Suction:** Clean the desoldering gun's solder chamber, filter spring, and nozzle. Ensure the suction pen is properly attached and free of blockages.
- **Inconsistent Temperature:** Allow sufficient preheating time. Ensure the heating element is not damaged. If issues persist, contact customer support.

8. Specifications

Feature	Specification
Brand	YIHUA

Feature	Specification
Model Number	948-II
Voltage	230 Volts AC
Soldering Iron Wattage	60 Watts
Display Type	LCD
Soldering Temperature Range	200°C - 480°C
Hot Air Temperature Range	100°C - 480°C
Desoldering Temperature Range	380°C - 480°C
Temperature Stability	Excellent over a wide range
Memory Channels	6 (3 for soldering/desoldering, 3 for hot air)
Country of Origin	China

9. Warranty and Support

The YIHUA 948-II comes with a 12-month technical coverage for the EU. For any technical assistance, questions, or suggestions, professional technical support is available 24/7. Spare parts and accessories can be purchased from authorized retailers or the official YIHUA store.
For support, please refer to the contact information provided with your purchase or visit the official YIHUA website.