

YIHUA 982-III C210

YIHUA 982-III C210 Precision Soldering Station User Manual

Model: YIHUA 982-III C210

1. INTRODUCTION

The YIHUA 982-III C210 is a professional digital precision soldering station designed for electronic repair and work on printed circuit boards with extremely small components. It features a C210 compatible precision soldering iron, rapid heating, precise temperature control, and a full-color LCD display for clear monitoring of settings. This manual provides essential information for the safe and efficient use of your soldering station.

2. SAFETY INFORMATION

WARNING: Failure to follow these safety instructions may result in electric shock, fire, or serious injury.

- Always operate the soldering station in a well-ventilated area to avoid inhaling solder fumes.
- The soldering iron tip reaches high temperatures (up to 450°C). Avoid direct contact with skin or flammable materials.
- Use appropriate personal protective equipment, including safety glasses and heat-resistant gloves.
- Ensure the power supply matches the station's requirements (230V AC for EU models).
- Never leave the soldering station unattended when powered on. Utilize the automatic sleep and shutdown functions.
- Keep the work area clean and free of clutter.
- Do not use the station if the power cord or soldering iron cable is damaged.
- This device is ESD safe, but always follow proper ESD precautions when working with sensitive electronic components.

3. PACKAGE CONTENTS

Verify that all items are present in your package:

- YIHUA 982-III Soldering Station Unit
- C210 Precision Soldering Handpiece
- 3 x C210 Soldering Tips (I, SI, K types)
- Lead-free Solder Wire
- Soldering Iron Holder with Brass Wool Tip Cleaner and Cleaning Sponge
- Power Cord (Type F for EU)
- User Manual
- Optional Attachments: Helping Hands, Solder Wire Dispenser, Cable Guide (may vary by kit)

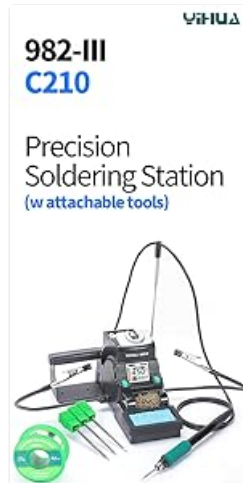


Image: YIHUA 982-III C210 Precision Soldering Station with various attachable tools and tips.

4. PRODUCT OVERVIEW

The YIHUA 982-III C210 soldering station is engineered for high-precision soldering tasks. Key features include:

- **C210 Compatible Handpiece:** Designed for micro-sized SMD components, offering precision for delicate electronic repairs.
- **Rapid Heating:** Reaches operating temperature in approximately 3 seconds.
- **Precise Temperature Control:** Adjustable from 90°C to 450°C with millisecond-cycle temperature regulation.
- **Full-Color LCD Display:** Provides clear visual reference for monitoring temperature settings and operational status.
- **Automatic Sleep Mode:** Activates when the iron is placed in its holder, reducing the tip temperature to a preset value (e.g., 200°C) to prolong tip life and save energy.
- **Automatic Shutdown:** Powers off the iron after a prolonged period of inactivity for safety.
- **°C/°F Conversion:** Allows users to switch between Celsius and Fahrenheit temperature units.
- **ESD Safe Design:** Protects sensitive electronic components from electrostatic discharge.
- **Attachable Features:** Includes provisions for helping hands, a brass wool tip cleaner, a cleaning sponge, a tip change/storage groove, a solder wire dispenser, and a cable guide.

Mini Dynamic LCD

Displays parameters in color contrast for clearer visual reference.



Image: The Mini Dynamic LCD display of the YIHUA 982-III C210, showing actual and set temperatures.

MULTI-FUNCTION



Image: Dimensions of the YIHUA 982-III C210 soldering station, highlighting its compact design.

5. SETUP

5.1 Installing the Soldering Tip

The C210 compatible handpiece uses cartridge-type soldering tips. Proper installation is crucial for performance and safety.

1. Ensure the soldering station is powered off and cool.
2. Gently insert the desired C210 soldering tip into the handpiece.
3. Push the tip firmly until the marking line on the heating element reaches the rim of the handpiece's receptacle. An improperly inserted tip will not heat correctly.
4. To remove, pull the tip straight out. Use a heat-resistant tool if the tip is hot.

Installation Guide

Heating Element / Soldering Tip



Heating Element
not installed correctly
Not fully inserted

NOTE: Please ensure the marking line on the heating element has reached the rim of the handpiece's receptacle.



Heating Element
installed correctly
Insert tip fully to the bottom

Image: Correct installation of the C210 soldering tip, ensuring it is fully inserted into the handpiece.

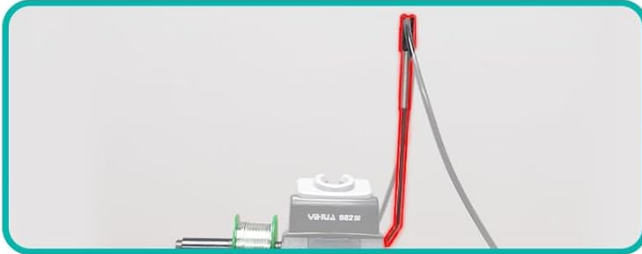
5.2 Connecting Power and Accessories

1. Connect the soldering handpiece cable to the designated port on the soldering station.
2. Place the soldering iron holder in its designated slot on the station. Ensure the brass wool cleaner and sponge are correctly positioned.
3. If using optional assistive tools like helping hands or a solder wire dispenser, attach them to the station as desired.
4. Connect the power cord to the station and then to a suitable 230V AC power outlet.

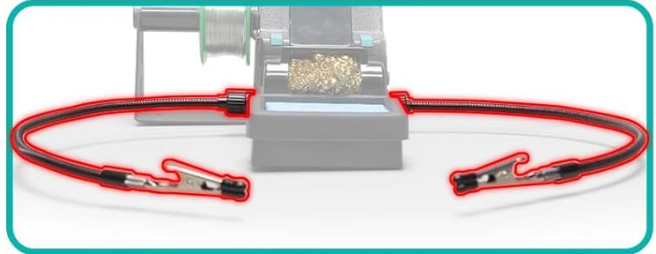
Assistive Soldering Tools

Multiple features to improve your workflow.

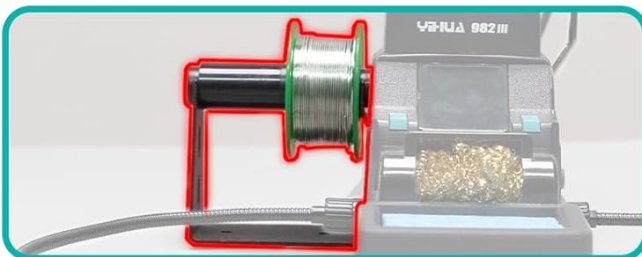
(note: the tools are optional based on user references, you can change the station's setup based on your preference.)



Cable Guide



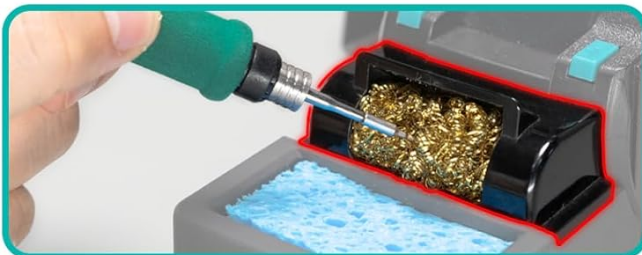
Helping Hands



Solder Wire Dispenser



Tip Change/Storage Groove
(with temperature resistant silicone surround)



Brass Wool Tip Cleaner



Cleaning Sponge
(with temperature-resistant silicone surround)

Image: Overview of the YIHUA 982-III station with optional assistive soldering tools attached.

6. OPERATING INSTRUCTIONS

6.1 Powering On/Off

Press the power button to turn the station on or off. The LCD display will illuminate upon power-on.

6.2 Setting Temperature

Use the control buttons (often piano-key style) to adjust the desired soldering temperature. The temperature range is 90°C to 450°C. The LCD will display both the set temperature and the actual tip temperature. The station heats up very quickly.

Adjustable Temperature

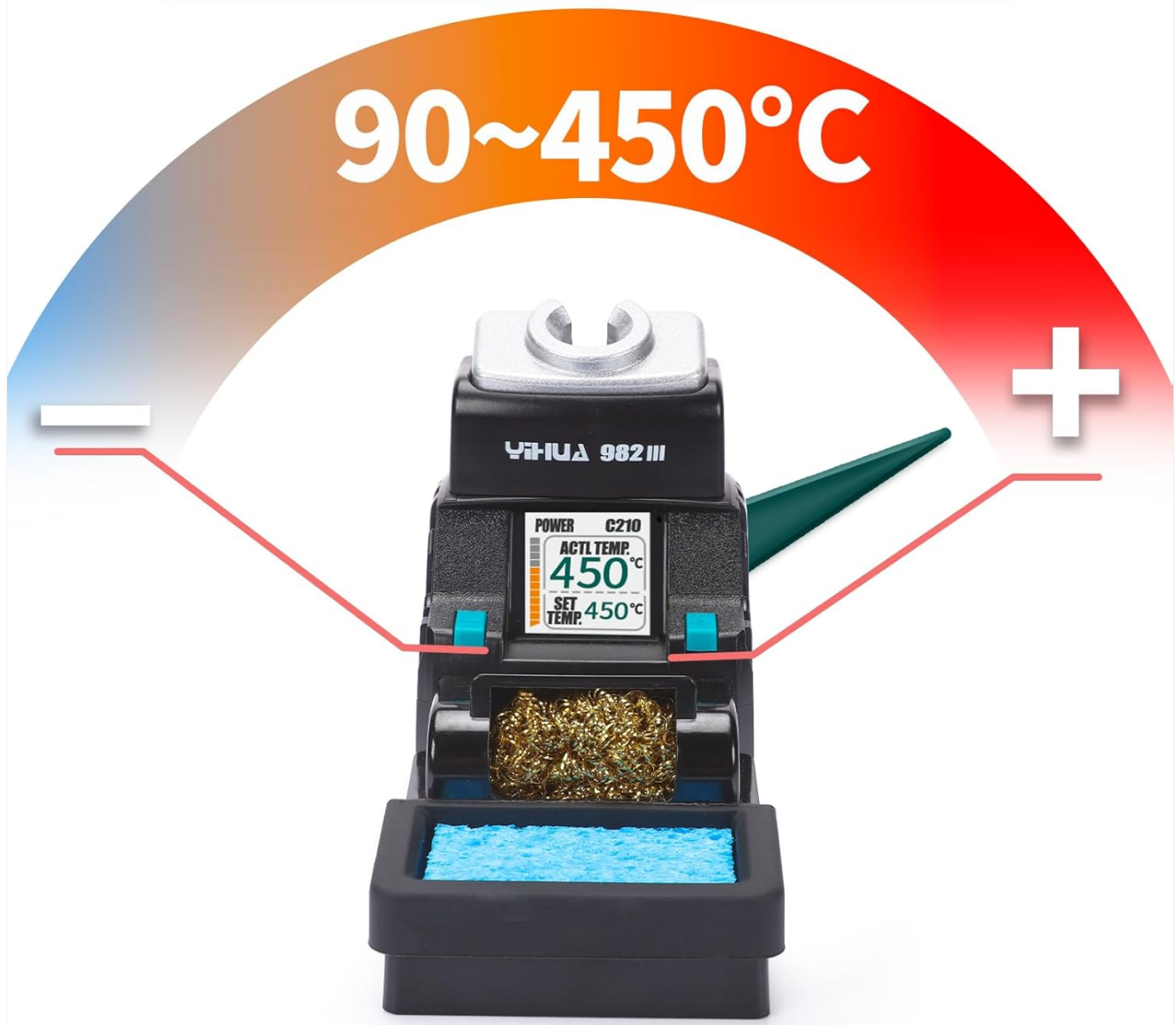


Image: Temperature adjustment interface, showing the range from 90°C to 450°C.

6.3 Automatic Sleep Mode and Shutdown

- **Sleep Mode:** When the soldering iron is placed in its holder, the station automatically enters sleep mode, reducing the tip temperature to a preset value (e.g., 200°C) to prolong tip life and save energy.
- **Automatic Shutdown:** If the iron remains in sleep mode for an extended period (user-configurable), the station will automatically shut down for safety.
- To exit sleep mode, simply pick up the soldering iron. It will rapidly return to the set operating temperature.



Image: The soldering station in an idle state, indicating sleep mode activation.

6.4 °C/°F Conversion

Refer to the station's menu or specific button combination (usually indicated in the on-screen display) to switch between Celsius and Fahrenheit temperature readings.

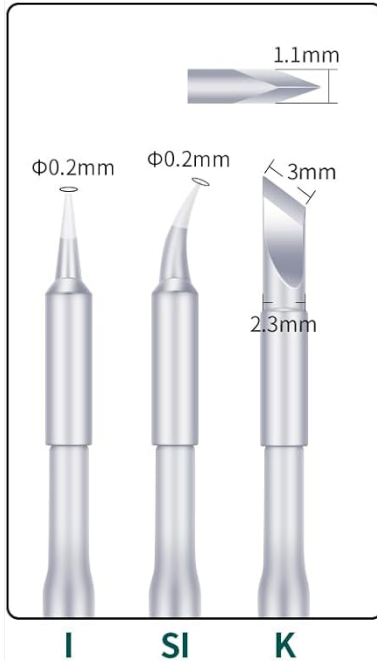
7. MAINTENANCE

7.1 Soldering Tip Care

- **Cleaning:** Regularly clean the soldering tip using the brass wool cleaner or a damp sponge. This removes oxidized solder and flux residue, ensuring efficient heat transfer.
- **Tinning:** Always tin the tip with a fresh layer of solder before storing it or when it's idle. This prevents oxidation and extends tip life.
- **Avoiding Oxidation:** Do not leave the tip at high temperatures for extended periods without use. The automatic sleep mode helps with this.

Tip Size Reference: Cartridge-Type Soldering Tips

C210



AVOID OXIDATION



**Keep the tip
coated with solder**



C245

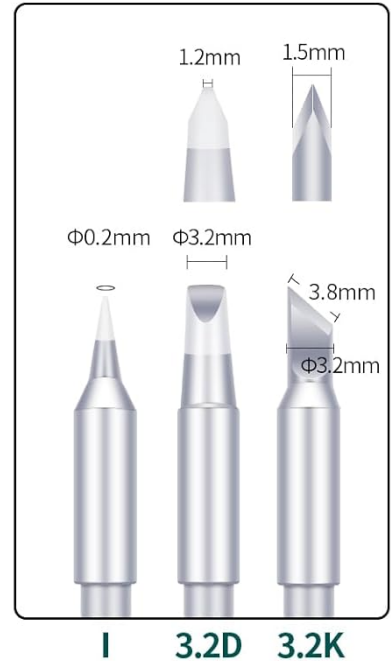


Image: Proper tip care, including cleaning and tinning to prevent oxidation.



Image: Cleaning the soldering tip using the brass wool cleaner.

7.2 General Cleaning

Wipe the station's exterior with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure the station is unplugged and cool before cleaning.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
Soldering iron not heating.	Power not connected. Tip not fully inserted. Faulty tip or handpiece.	Check power connection. Ensure tip is fully inserted (refer to Section 5.1). Try a different tip. Contact support if issue persists.
Temperature display is erratic.	Loose tip connection. Environmental factors.	Re-insert tip firmly. Ensure stable operating environment.
Station does not power on.	Power cord disconnected. Power outlet issue.	Check power cord connection. Test outlet with another device.

9. SPECIFICATIONS

- **Model:** YIHUA 982-III C210
- **Brand:** YIHUA
- **Voltage:** 230 Volts AC
- **Display Type:** LCD (Full Color)
- **Temperature Range:** 90°C - 450°C (194°F - 842°F)
- **Temperature Stability:** High precision, millisecond-cycle control
- **Number of Channels:** 1
- **ESD Safe:** Yes
- **Country of Origin:** China

10. WARRANTY AND SUPPORT

The YIHUA 982-III C210 soldering station comes with a 12-month technical coverage for the EU. For technical assistance, questions, or suggestions, please contact YIHUA EU Official Store support. Our team provides professional technical support.

For further information or to purchase replacement parts and accessories, please visit the official YIHUA store or authorized retailers.