Saved from manuals.plus.
Open the live page for links to other documents and user manuals.

szdealhola DT9205A

szdealhola DT9205A Digital Multimeter and 60W Electric Soldering Iron Starter Tool Kit User Manual

1. Introduction

This manual provides comprehensive instructions for the safe and effective use of your szdealhola 10-in-1 DT9205A Digital Multimeter and 60W Electric Soldering Iron Starter Tool Kit. This kit is designed for various electronic repair, DIY, and hobbyist projects, offering essential tools for measurement and soldering tasks. Please read this manual thoroughly before operation and retain it for future reference.

2. Safety Instructions

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

- Always wear appropriate personal protective equipment, including safety glasses, when soldering.
- Ensure adequate ventilation in your workspace to avoid inhaling solder fumes.
- Never touch the hot tip of the soldering iron. Temperatures can exceed 400°C (750°F).
- Place the soldering iron securely in its stand when not in use.
- Do not use the soldering iron near flammable materials or gases.
- Verify the correct voltage (110V) for the soldering iron before plugging it in.
- When using the multimeter, always select the correct function and range before connecting the test leads to the circuit.
- Do not attempt to measure voltage or current exceeding the multimeter's specified maximum ratings.
- Inspect all tools, especially power cords and test leads, for damage before each use. Do not use damaged equipment.
- Keep tools out of reach of children.
- Disconnect power from the circuit before performing any soldering or desoldering work.

3. Package Contents

Upon opening your szdealhola kit, please verify that all the following items are present and undamaged:



Image 1: Overview of the complete 10-in-1 kit, including the soldering iron, multimeter, desoldering pump, stand, and various accessories.

1. 1 x Electronic 60W (110V) Soldering Iron
2. 1 x Insulated Soldering Stand
3. 1 x Solder Desoldering Pump
4. 1 x Stainless Steel PCB Fine Pointed Tweezers
5. 1 x Cleaning Sponge
6. 1 x Solder Wire
7. 1 x Rosin
8. 1 x Digital Multimeter (DT9205A)
9. 2 x Screwdrivers (various types)
10. *Note: A 9V battery for the multimeter is not included and must be purchased separately.*



Image 2: The kit components displayed with their approximate dimensions in centimeters for reference.

4. Setup

4.1. Digital Multimeter Setup

1. **Battery Installation:** Open the battery compartment on the back of the DT9205A multimeter. Insert a new 9V battery, ensuring correct polarity. Close the compartment securely.
2. **Test Lead Connection:** Insert the red test lead into the "VΩmA" jack and the black test lead into the "COM" jack for most measurements (voltage, resistance, small current). For high current measurements (up to 20A), insert the red lead into the "20A" jack.



Image 3: Front panel of the DT9205A Multimeter.



Image 4: DT9205A Multimeter with kickstand.

4.2. Soldering Iron Setup

1. **Soldering Stand Assembly:** Place the coiled metal spring onto the base of the insulated soldering stand. Ensure it is stable.
2. **Sponge Preparation:** Dampen the cleaning sponge with water. It should be moist, not soaking wet. Place it in the designated tray on the soldering stand.
3. **Placement:** Position the soldering stand on a heat-resistant, stable surface in a well-ventilated area.
4. **Power Connection:** Plug the 60W soldering iron into a standard 110V AC outlet. The iron will begin to heat up immediately.



Image 5: The 60W Electric Soldering Iron.

5. Operating Instructions

5.1. Digital Multimeter Operation

The DT9205A multimeter can measure various electrical parameters. Always ensure the correct function and range are selected before making a measurement.

- **Power On/Off:** Turn the rotary switch to any desired function to power on. Turn to "OFF" to power off. The multimeter features an auto-power-off function to conserve battery.
- **DC Voltage Measurement (V-):**
    a. Set the rotary switch to the desired DC Voltage range (e.g., 20V, 200V).
    b. Connect the red test lead to the positive (+) point and the black test lead to the negative (-) point of the circuit or component.
    c. Read the voltage value on the display.
- **AC Voltage Measurement (V~):**
    a. Set the rotary switch to the desired AC Voltage range (e.g., 200V, 750V).
    b. Connect the test leads across the AC voltage source.
    c. Read the voltage value on the display.
- **DC Current Measurement (A-):**
    a. **IMPORTANT:** Current measurements require the multimeter to be connected in series with the circuit. Ensure the circuit is powered off before connecting.
    b. Set the rotary switch to the desired DC Current range (e.g., 2mA, 200mA, 20A). For 20A, use the "20A" jack for the red lead.
    c. Break the circuit and connect the multimeter in series.
    d. Power on the circuit and read the current value.
- **Resistance Measurement (Ω):**
    a. Ensure the component is de-energized and isolated from the circuit.
    b. Set the rotary switch to the desired Resistance range (e.g., 200Ω, 2kΩ).
    c. Connect the test leads across the component.
    d. Read the resistance value.

- **Diode Test:** Set the rotary switch to the diode symbol. Connect the red lead to the anode and black lead to the cathode. A forward voltage drop will be displayed. Reverse the leads; an open circuit (OL) should be displayed.
- **Transistor hFE Test:** Use the hFE socket on the multimeter. Insert the transistor leads (E, B, C) into the corresponding holes. Set the rotary switch to hFE. The hFE value will be displayed.

5.2. Soldering Iron Operation

1. **Pre-heating:** After plugging in, allow the soldering iron approximately 3-5 minutes to reach its operating temperature.
2. **Tinning the Tip:** Once hot, melt a small amount of solder onto the tip. This "tins" the tip, improving heat transfer and preventing oxidation. Wipe excess solder on the damp sponge.
3. **Soldering Technique:**
    a. Clean the components to be soldered.
    b. Apply the hot soldering iron tip to both the component lead and the PCB pad simultaneously.
    c. After 1-2 seconds, apply solder to the junction of the tip and the components. Do not apply solder directly to the iron tip.
    d. Allow the solder to flow and form a shiny, conical joint.
    e. Remove the solder wire, then remove the soldering iron. Hold the components still until the solder solidifies (a few seconds).
4. **Cool Down:** When finished, unplug the soldering iron and place it securely in its stand. Allow it to cool completely before storing.

5.3. Solder Desoldering Pump Operation

The desoldering pump is used to remove excess solder from components or PCBs.

1. **Prepare the Pump:** Push the plunger down until it locks into place.
2. **Heat the Solder:** Heat the solder joint you wish to desolder with the soldering iron until the solder melts.
3. **Remove Solder:** Quickly place the nozzle of the desoldering pump over the molten solder and press the release button. The pump will create a vacuum, sucking up the molten solder.
4. **Repeat:** Repeat the process if necessary until most of the solder is removed.
5. **Clean:** Periodically unscrew the nozzle and clean out any accumulated solder from the pump.



Image 6: The Solder Desoldering Pump.

6. Maintenance

6.1. Soldering Iron Maintenance

- **Tip Cleaning:** Regularly wipe the soldering iron tip on the damp sponge to remove oxidation and old solder. This helps maintain good heat transfer.
- **Tip Tinning:** Always re-tin the tip with a small amount of fresh solder after cleaning and before storing to prevent oxidation.
- **Tip Replacement:** If the tip becomes heavily pitted or corroded, it may need to be replaced. Ensure the iron is cool before attempting to change the tip.
- **Storage:** Store the soldering iron in a dry place, ideally in its stand, once completely cooled.

6.2. Digital Multimeter Maintenance

- **Cleaning:** Wipe the multimeter casing with a dry, soft cloth. Do not use abrasive cleaners or solvents.
- **Battery Replacement:** Replace the 9V battery when the low battery indicator appears on the display to ensure accurate readings.
- **Test Leads:** Inspect test leads for cracks, frayed wires, or damaged insulation before each use. Replace damaged leads immediately.
- **Storage:** Store the multimeter in a cool, dry place, away from direct sunlight and extreme temperatures. Remove the battery if storing for extended periods.

6.3. Desoldering Pump Maintenance

- **Cleaning:** Periodically unscrew the nozzle and plunger assembly to remove accumulated solder and debris.
- **Lubrication:** A small amount of silicone grease can be applied to the plunger's O-ring to maintain smooth operation and suction.

7. Troubleshooting

7.1. Digital Multimeter Issues

Problem	Possible Cause	Solution
No display / Faint display	Dead or low battery	Replace the 9V battery.
"OL" (Overload) displayed	Measurement exceeds selected range; Open circuit (for resistance/continuity)	Select a higher range; Check for proper connection or if the circuit is truly open.
Incorrect readings	Incorrect function/range selected; Damaged test leads; Poor contact	Verify function/range; Inspect and replace test leads if damaged; Ensure firm contact with measurement points.
No auto-power-off	Multimeter is actively measuring or recently used	This is normal. The auto-power-off activates after a period of inactivity.

7.2. Soldering Iron Issues

Problem	Possible Cause	Solution
Iron not heating	Not plugged in; Faulty outlet; Internal element failure	Check power connection; Test outlet; If still not heating, the iron may be faulty and require replacement.
Solder not melting or poor joints	Tip is oxidized/dirty; Insufficient heat transfer; Incorrect solder type	Clean and re-tin the tip; Ensure tip makes good contact with both components; Use appropriate solder for electronics.
Excessive smoke	Burning flux; Contaminants on tip/board	Ensure good ventilation; Clean tip and work area.

8. Specifications

Feature	Detail
Product Name	10 in 1 DT9205A Digital Multimeter 110V 60W Electric Soldering Irons Starter Tool Kit Set
Brand	szdealhola
Model Number	DT9205A
UPC	708478004307
Soldering Iron Wattage	60 watts
Soldering Iron Voltage	110 Volts
Multimeter Power Source	9V Battery (not included)
Multimeter Special Feature	Auto Power Off
Multimeter Display	Digital LCD
Included Components	Soldering Iron, Soldering Stand, Desoldering Pump, Tweezers, Cleaning Sponge, Solder Wire, Rosin, Digital Multimeter, 2x Screwdrivers
Material	Metal (for tools), Plastic (for multimeter casing)
Color	Blue (Soldering Iron), Orange/Black (Multimeter)

9. Warranty and Support

Specific warranty details for the szdealhola DT9205A Digital Multimeter and 60W Electric Soldering Iron Starter Tool Kit are not provided within the product information. For any warranty claims, technical support, or inquiries regarding your product, please contact the seller or manufacturer directly through your purchase platform.
It is recommended to retain your proof of purchase for any potential support needs.

© 2023 szdealhola. All rights reserved.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Open the live page

https://manuals.plus/asin/B01LIWIIOS

More documents and user manuals: **https://manuals.plus/**