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BAKON 601S

BAKON 601S 90W Soldering Station Kit Instruction Manual

Model: 601S | Brand: BAKON

1. INTRODUCTION

Thank you for choosing the BAKON 601S 90W Soldering Station Kit. This electronic rework station is designed for precision soldering tasks, offering rapid heating, stable temperature control, and user-friendly features. It is suitable for a wide range of applications, from DIY electronics to professional circuit board repairs.

This manual provides essential information for the safe and effective operation, maintenance, and troubleshooting of your soldering station. Please read it thoroughly before initial use and retain it for future reference.



Figure 1.1: BAKON 601S Soldering Station Kit and Accessories.

2. SAFETY INFORMATION

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

- **Electrical Safety:** This product is rated for US 110V. Ensure your power supply matches this requirement. Do not operate with wet hands or in damp environments.
- **Heat Hazard:** The soldering iron tip and heating element reach very high temperatures (up to 896°F / 480°C). Always use the provided safety holder and allow the iron to cool completely before handling or storing.
- **Fumes:** Soldering produces fumes. Always work in a well-ventilated area or use a fume extractor to avoid inhaling harmful vapors.

- **Eye Protection:** Always wear safety glasses or goggles to protect your eyes from solder splashes or flying debris.
- **Fire Hazard:** Keep flammable materials away from the soldering area. Do not leave the soldering iron unattended when powered on.
- **Children and Pets:** Keep the soldering station and all accessories out of reach of children and pets.
- **Proper Use:** Use the tool only for its intended purpose. Do not modify the equipment.

3. PACKAGE CONTENTS

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

- BAKON 601S Soldering Station Unit
- Soldering Iron with Ceramic Heater Core
- Soldering Iron Safety Holder
- Cleaning Sponge
- 5 x Interchangeable Soldering Iron Tips
- ESD Tweezers
- Tip Cleaner (Brass Wire Ball)
- Solder Wire
- Desoldering Pump

4. COMPONENTS OVERVIEW

Familiarize yourself with the main components of your BAKON 601S Soldering Station:



Figure 4.1: Main components of the BAKON 601S Soldering Station.

Large Real-time Digital Display: Shows current temperature, set temperature, and other indicators.

Up/Down Keys: Adjust temperature settings.

Function Key (*): Used for menu navigation and settings.

CH1/CH2/CH3 Keys: One-key access to preset temperature channels.

Tin Wire Rack: Convenient storage for solder wire.

Soldering Iron Tip Placement Slot: Holds extra soldering tips.

Cleaning Brass Ball Kit: For cleaning the soldering iron tip.

Cleaning Sponge: For wiping the soldering iron tip.

Heat-resistant Anti-slip Handle: Ergonomic design for comfortable grip.

Heat-resistant Bakelite Threaded Sleeve: Secures the soldering tip.

Stainless Steel Tip Enclosure: Protects the heating element.

Lead-free Soldering Iron Tip: Standard tip for general soldering.

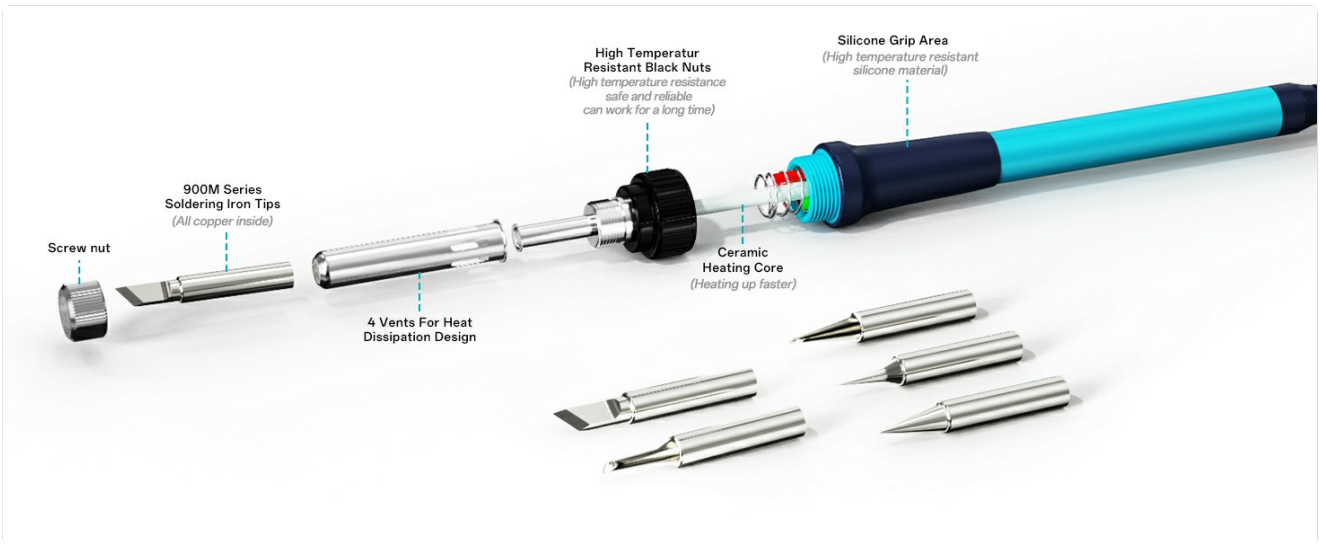


Figure 4.2: Soldering Iron Components. Features include 900M Series Soldering Iron Tips, Screw Nut, 4 Vents for Heat Dissipation, Ceramic Heating Core, High Temperature Resistant Black Nuts, and Silicone Grip Area.



Figure 4.3: Included Desoldering Pump and ESD Tweezers.

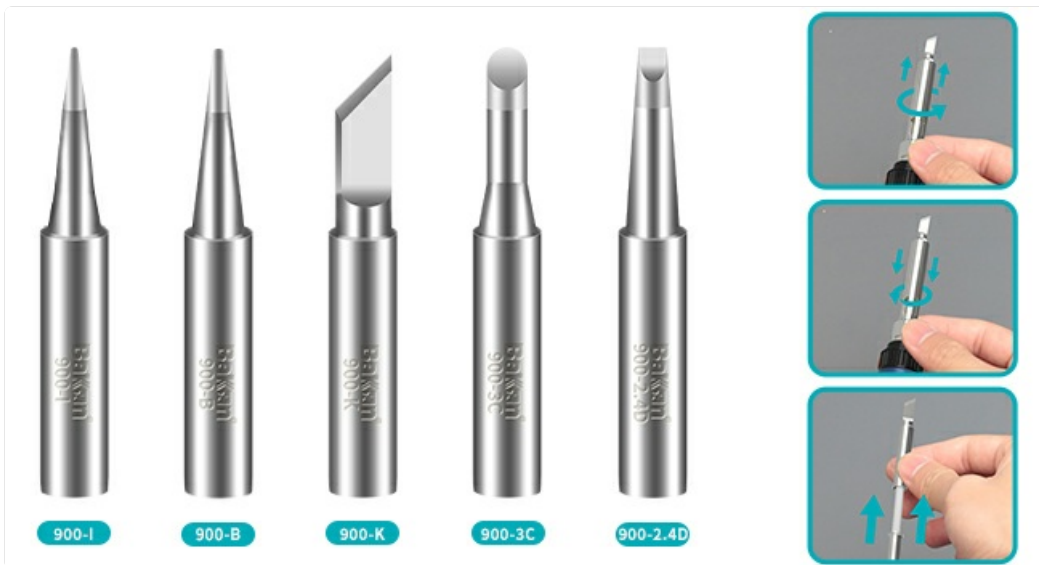


Figure 4.4: Assortment of 5 Soldering Iron Tips (900-I, 900-B, 900-K, 900-3C, 900-2.4D).

5. SETUP INSTRUCTIONS

Follow these steps to set up your soldering station for first use:

1. **Unpack:** Carefully remove all components from the packaging. Inspect for any damage.
2. **Position the Station:** Place the soldering station on a stable, heat-resistant, and non-flammable surface. Ensure adequate ventilation around the unit.
3. **Prepare the Soldering Iron Holder:** Ensure the soldering iron holder is securely placed on the station.
4. **Prepare Cleaning Sponge:** Dampen the cleaning sponge with water (do not soak) and place it in the designated tray on the station. The brass wire ball can be used dry.
5. **Connect Soldering Iron:** Plug the soldering iron cable into the corresponding port on the soldering station unit.
6. **Connect Power:** Plug the power cord into the soldering station and then into a standard 110V AC power outlet.

6. OPERATION

6.1 Power On/Off

To power on the station, press the power switch located on the unit. The digital display will illuminate, showing the current temperature and set temperature. To power off, press the power switch again.

6.2 Temperature Adjustment

The soldering iron has an adjustable temperature range from 356°F to 896°F (180°C to 480°C).

- Use the **Up (▲)** and **Down (▼)** keys to increase or decrease the set temperature.
- The display will show the set temperature and the real-time temperature of the iron tip.

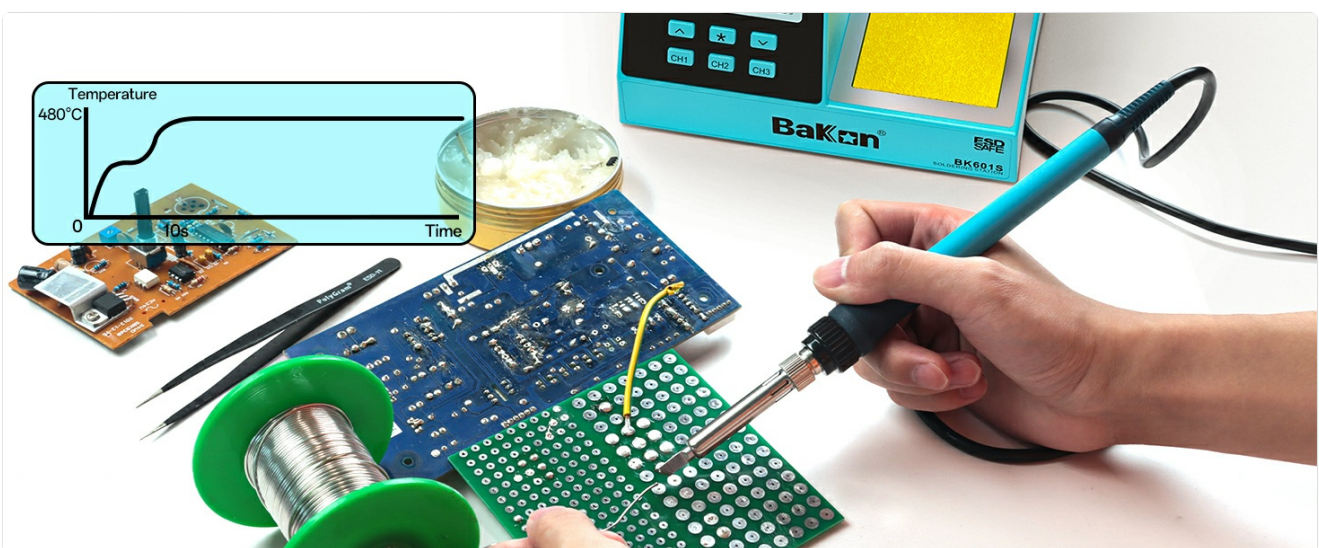


Figure 6.1: PID Temperature Stabilization ensures rapid heating and stable temperature.

6.3 °C/°F Conversion

To switch between Celsius (°C) and Fahrenheit (°F) temperature units:

1. Press the **Function Key (*)** to enter the setting mode.

2. Use the **Up (▲)** or **Down (▼)** keys to navigate to the °C/°F conversion setting (usually indicated by a specific display icon or number, refer to the display image).
3. Press the **Function Key (*)** again to confirm and save the setting.

AUTOMATIC SLEEP

Prevents oxidization of soldering iron tip and prolongs service life

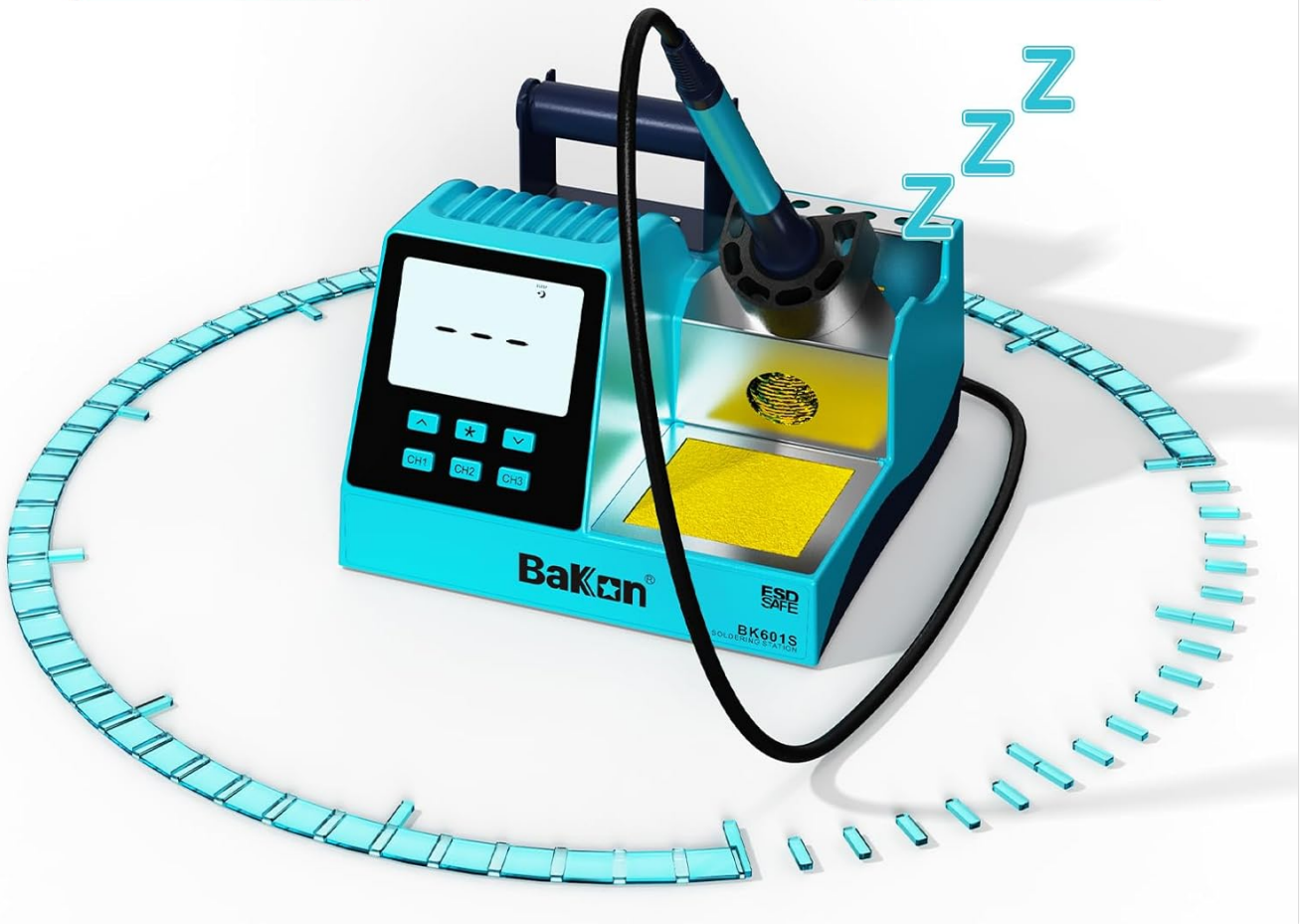
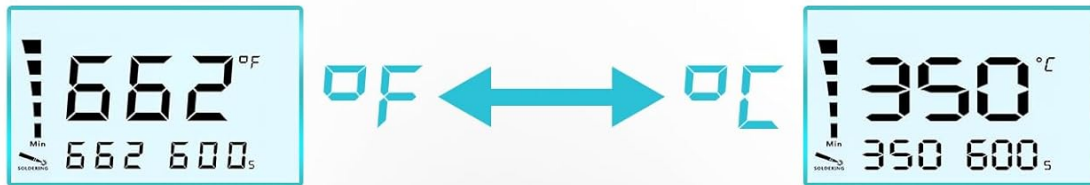


Figure 6.2: Display showing °F to °C conversion.

6.4 3 Preset Modes (CH1, CH2, CH3)

The station allows you to save three frequently used temperature settings for quick access:

1. **Setting a Preset:** Adjust the temperature to your desired value using the Up/Down keys. Then, press and hold the desired preset button (**CH1**, **CH2**, or **CH3**) for more than 1 second until the display indicates the setting is saved.
2. **Recalling a Preset:** Simply press the **CH1**, **CH2**, or **CH3** button to instantly switch to the saved temperature for that channel.

3-SPEED TEMPERATURE PRESET

3 specified temperatures can be set one button to quickly adjust the temperature

662^{oF} CH1
Used for micro welding

698^{oF} CH2
For general welding

716^{oF} CH3
For sensitive components



Figure 6.3: Three preset temperature channels for quick adjustment.

ONE-KEY QUICK SETTING

3-Key Temperature Adjustment

● CH1 ● CH2 ● CH3



Figure 6.4: One-Key Quick Setting for CH1, CH2, CH3.

6.5 Automatic Standby and Sleep Modes

The station features intelligent standby and sleep modes to prolong the lifespan of the soldering iron tip and save energy:

- **Standby Mode:** If the soldering iron is placed in its holder and not used for a set period (e.g., 60-600 seconds, configurable), the station will automatically reduce the tip temperature to a lower, safer level to prevent oxidation.
- **Sleep Mode / Auto Wake:** After a longer period of inactivity in standby mode, the station will enter a deeper sleep mode, further reducing power consumption. Picking up the soldering iron from its holder will automatically wake the station and quickly bring the tip back to the set operating temperature.



Figure 6.5: Sleep Mode and Auto Wake functionality.

6.6 Using the Desoldering Pump

The included desoldering pump is used to remove excess solder from components or circuit boards:

1. **Prime the Pump:** Push the plunger down until it clicks into place.
2. **Melt Solder:** Heat the solder joint you wish to desolder with the soldering iron until the solder melts.
3. **Apply Pump:** 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. **Clear Pump:** Push the plunger down again to expel the collected solder.

6.7 Changing Soldering Tips

Always ensure the soldering iron is cool before changing tips to avoid burns.

1. **Cool Down:** Turn off the soldering station and allow the iron tip to cool completely.
2. **Unscrew:** Carefully unscrew the threaded sleeve at the base of the soldering tip.
3. **Remove Tip:** Gently pull out the old soldering tip.
4. **Insert New Tip:** Insert the desired new tip, ensuring it is fully seated.
5. **Secure:** Screw the threaded sleeve back on firmly.

7. MAINTENANCE

Regular maintenance ensures optimal performance and extends the lifespan of your soldering station.

7.1 Cleaning the Soldering Iron Tip

- **During Use:** Periodically wipe the hot tip on the damp cleaning sponge or gently rub it against the brass wire ball to remove excess solder and oxidation.
- **After Use:** Before turning off the station, apply a small amount of fresh solder to the tip (tinning). This protects the tip from oxidation as it cools.

7.2 Cleaning the Station

- Ensure the station is powered off and unplugged before cleaning.
- Wipe the exterior of the station with a soft, damp cloth. Do not use abrasive cleaners or solvents.
- Regularly clean the cleaning sponge tray and brass wire ball holder.

8. TROUBLESHOOTING

If you encounter issues with your BAKON 601S Soldering Station, refer to the following common problems and solutions:

| Problem | Possible Cause | Solution |
|---|---|--|
| Soldering iron not heating up. | Power switch off; power cord unplugged; faulty heating element or connection. | Ensure power switch is ON and cord is plugged in. Check connection of soldering iron to station. If problem persists, contact support. |
| Temperature display is erratic or inaccurate. | Loose tip; faulty sensor; environmental factors. | Ensure tip is securely installed. Avoid drafts. If issue continues, contact support. |
| Solder does not melt easily. | Temperature set too low; oxidized tip. | Increase set temperature. Clean and re-tin the soldering tip. |
| Desoldering pump has low suction. | Nozzle clogged; plunger seal worn. | Clean the nozzle. Disassemble and clean the pump if necessary. |

9. SPECIFICATIONS

Technical specifications for the BAKON 601S Soldering Station Kit:

| Feature | Specification |
|-----------------------|--|
| Model Number | 601S |
| Wattage | 90 watts |
| Voltage | 110 Volts (AC) |
| Temperature Range | 356°F to 896°F (180°C to 480°C) |
| Temperature Stability | ±400 degrees_celsius (PID controlled) |
| Display Type | Digital |
| Special Features | 3 Memory Channels, Sleep Mode, °C/°F Conversion, Lightweight |
| Item Weight | 2.57 pounds |
| Package Dimensions | 9.37 x 8.15 x 5.55 inches |
| Manufacturer | BAKON |

10. WARRANTY AND SUPPORT

Your BAKON 601S Soldering Station Kit comes with a **1-year product warranty** from the date of purchase.

For technical assistance, troubleshooting, or warranty claims, please contact BAKON's technical support team. They are available to provide 24-hour support to assist you with any questions or issues you may encounter.

Please refer to the product packaging or the official BAKON website for the most current contact information for customer service.