BAKON BK852MX

BAKON 852MX C210 Hot Air Rework Station User Manual

Model: BK852MX | Brand: BAKON

1. Introduction

This manual provides detailed instructions for the safe and effective operation, setup, maintenance, and troubleshooting of your BAKON 852MX C210 Hot Air Rework Station. This versatile 1000W station is designed for precise SMD soldering, desoldering, and general electronics repair tasks, featuring dual LED displays for temperature control and rapid heating capabilities.

Figure 1: BAKON 852MX C210 Hot Air Rework Station with included tools.

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2. Safety Instructions

Always adhere to the following safety guidelines to prevent injury and damage to the equipment:

- **Read the Manual:** Familiarize yourself with all instructions before operating the device.
- **Work Area:** Ensure your workspace is well-ventilated, clean, and free of flammable materials.
- **Personal Protective Equipment (PPE):** Always wear safety glasses to protect against solder splashes and fumes. Consider heat-resistant gloves.
- **Hot Surfaces:** The soldering iron tip and hot air nozzle reach very high temperatures. Avoid direct contact. Allow components to cool before handling.
- **Power Off:** Disconnect the power cord from the outlet when not in use, before cleaning, or when changing accessories.
- **Proper Use:** Use the station only for its intended purpose. Do not modify the unit.
- **Fumes:** Solder fumes can be harmful. Use a fume extractor or work in a very well-ventilated area.
- **Grounding:** Ensure the unit is properly grounded to prevent electrical shock.

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3. Product Overview and Components

The BAKON 852MX C210 is a dual-function rework station featuring a soldering iron and a hot air gun, each with independent controls and digital displays.

Key Features:

- **Dual LED Displays:** Separate displays for soldering iron and hot air gun temperature.
- **Precise Temperature Control:** Soldering iron range 180°-480°C (356°-896°F); Hot air gun range 100°-500°C (212°-932°F).
- **1000W High Power:** Ensures rapid heating and efficient operation.
- **Interchangeable Heating Elements:** Plug-and-play heating cores for easy replacement.
- **Adaptive Heating Technology:** Soldering iron automatically adjusts to different heating cores.
- **Smart Sleep Mode:** Automatic power reduction when idle, extending component lifespan.
- **Auto Cooling System:** Ensures safe cooldown of the hot air gun after use.

Figure 2: Dual LED displays for independent temperature control of the hot air gun and soldering iron.

Included Components:

- Control Unit
- Hot Air Rework Station (integrated with control unit)
- Soldering Iron
- Soldering Iron Stand & Sponge
- Sleep Mode Trigger Cable
- Round Nozzles (2)
- Integrated Heating Cartridges (2)
- Anti-Static Tweezers
- Desoldering Braid
- Solder Paste
- Solder Wire

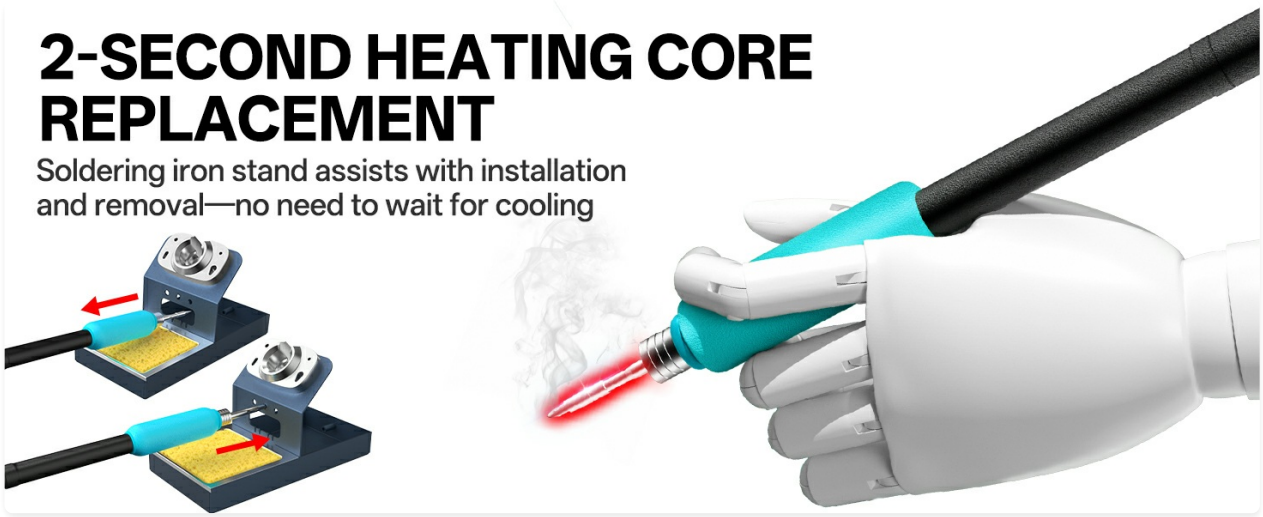

Figure 3: Complete package contents of the BAKON 852MX C210.

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4. Setup

Follow these steps for initial setup:

1. **Unpack:** Carefully remove all components from the packaging.
2. **Placement:** Place the control unit on a stable, heat-resistant, and level surface in a well-ventilated area.
3. **Connect Hot Air Gun:** Securely connect the hot air gun cable to its designated port on the control unit.
4. **Connect Soldering Iron:** Securely connect the soldering iron cable to its designated port on the control unit.
5. **Install Soldering Iron Stand:** Assemble the soldering iron stand and place the sponge in its tray. Dampen the sponge with water.
6. **Connect Sleep Mode Cable:** Attach the sleep mode trigger cable from the soldering iron stand to the control unit if desired for automatic sleep functionality.
7. **Power Connection:** Ensure the ON/OFF switches for both the rework and soldering sections are in the OFF position. Connect the main power cord to the unit and then to a grounded electrical outlet.

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5. Operating Instructions

5.1. General Operation

1. Turn on the main power switch on the control unit.
2. Individually switch ON the 'REWORK' (hot air gun) and/or 'SOLDERING' (soldering iron) sections as needed.
3. Adjust temperature and airflow using the respective control knobs. The digital displays will show the current settings.

5.2. Soldering Iron Operation

- **Temperature Setting:** Use the 'SOLDERING' temperature knob to set the desired temperature (180°-480°C / 356°-896°F). The iron heats rapidly.
- **Tip Tinning:** Before first use and periodically during operation, clean the soldering iron tip on the damp sponge and apply a small amount of solder to the tip. This prevents oxidation and improves heat transfer.
- **Soldering:** Apply the heated, tinned tip to the joint to be soldered, ensuring contact with both the component lead and the PCB pad. Feed solder onto the joint, not directly onto the iron tip. Remove solder and then the iron once a good joint is formed.
- **Smart Sleep Mode:** When the soldering iron is placed in its stand and the sleep mode cable is connected, the unit will automatically enter sleep mode after a set period of inactivity, reducing tip wear and saving energy. Moving the iron will reactivate it.

5.3. Hot Air Gun Operation

- **Temperature Setting:** Use the 'REWORK' temperature knob to set the desired temperature (100°-500°C / 212°-932°F).
- **Airflow Adjustment:** Use the 'REWORK' airflow knob to adjust the air volume. Start with lower airflow for smaller components and increase as needed.
- **Nozzle Selection:** Choose an appropriate nozzle for the component size and application.
- **Desoldering/Rework:** Direct the hot air stream evenly over the component to be removed. Once the solder melts, carefully lift the component with tweezers.
- **Auto Cooling System:** After turning off the hot air gun, the system will continue to blow cool air until the nozzle temperature drops to a safe level, protecting the heating element and handle.

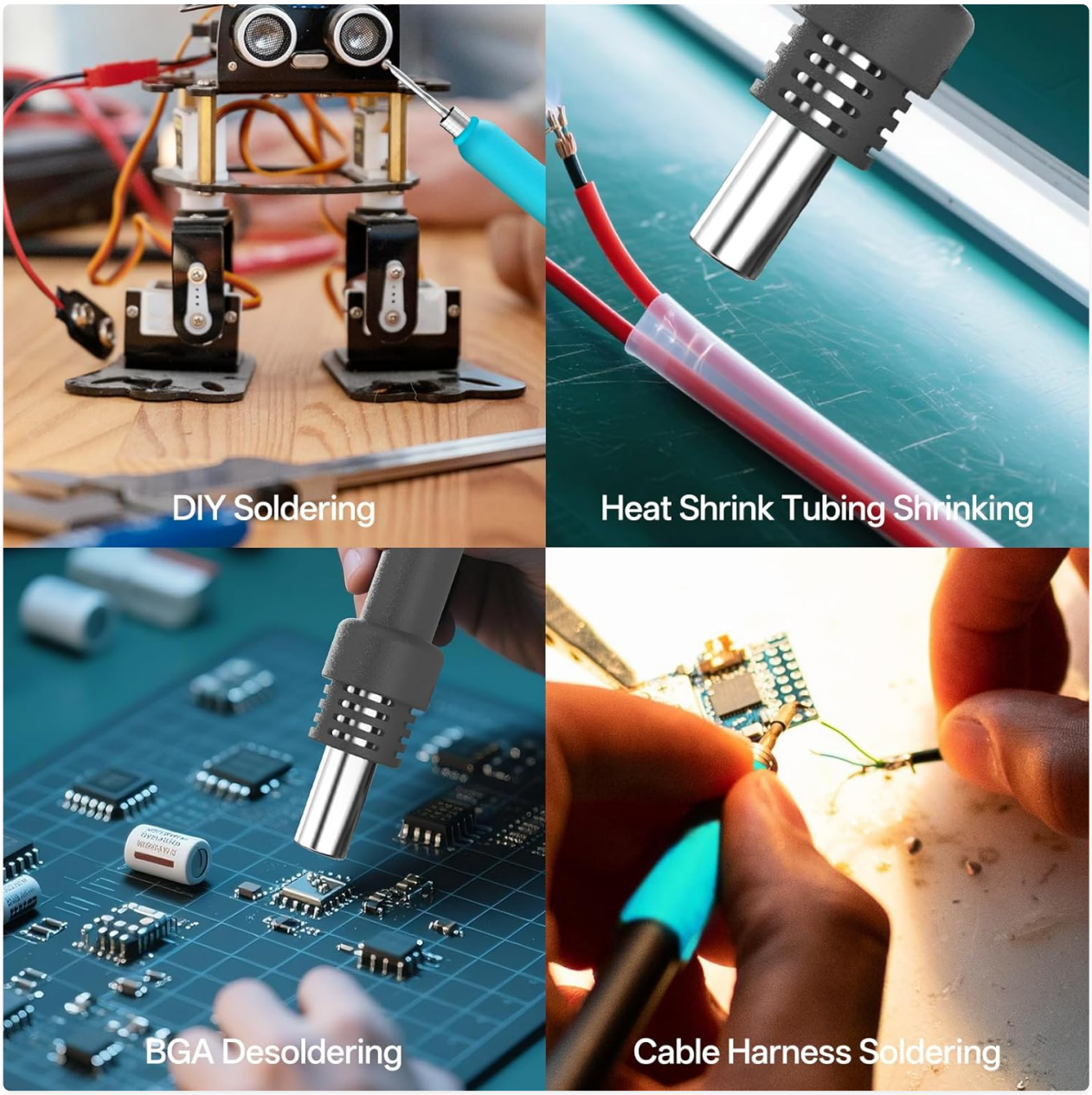

Figure 4: Versatile applications of the BAKON 852MX C210.

6. Maintenance

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

- **Cleaning Soldering Iron Tip:** Regularly clean the soldering iron tip with the damp sponge or brass wool to remove excess solder and oxidation.
- **Tip Replacement:** Replace worn or damaged soldering tips promptly.
- **Heating Core Replacement:** The station features a 2-second quick-change system for heating cores. Refer to Figure 5 for the process. Ensure the unit is cool before attempting replacement.
- **General Cleaning:** Keep the control unit and tools clean and free of dust and debris. Use a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Air Nozzle Cleaning:** Ensure hot air nozzles are clear of obstructions.

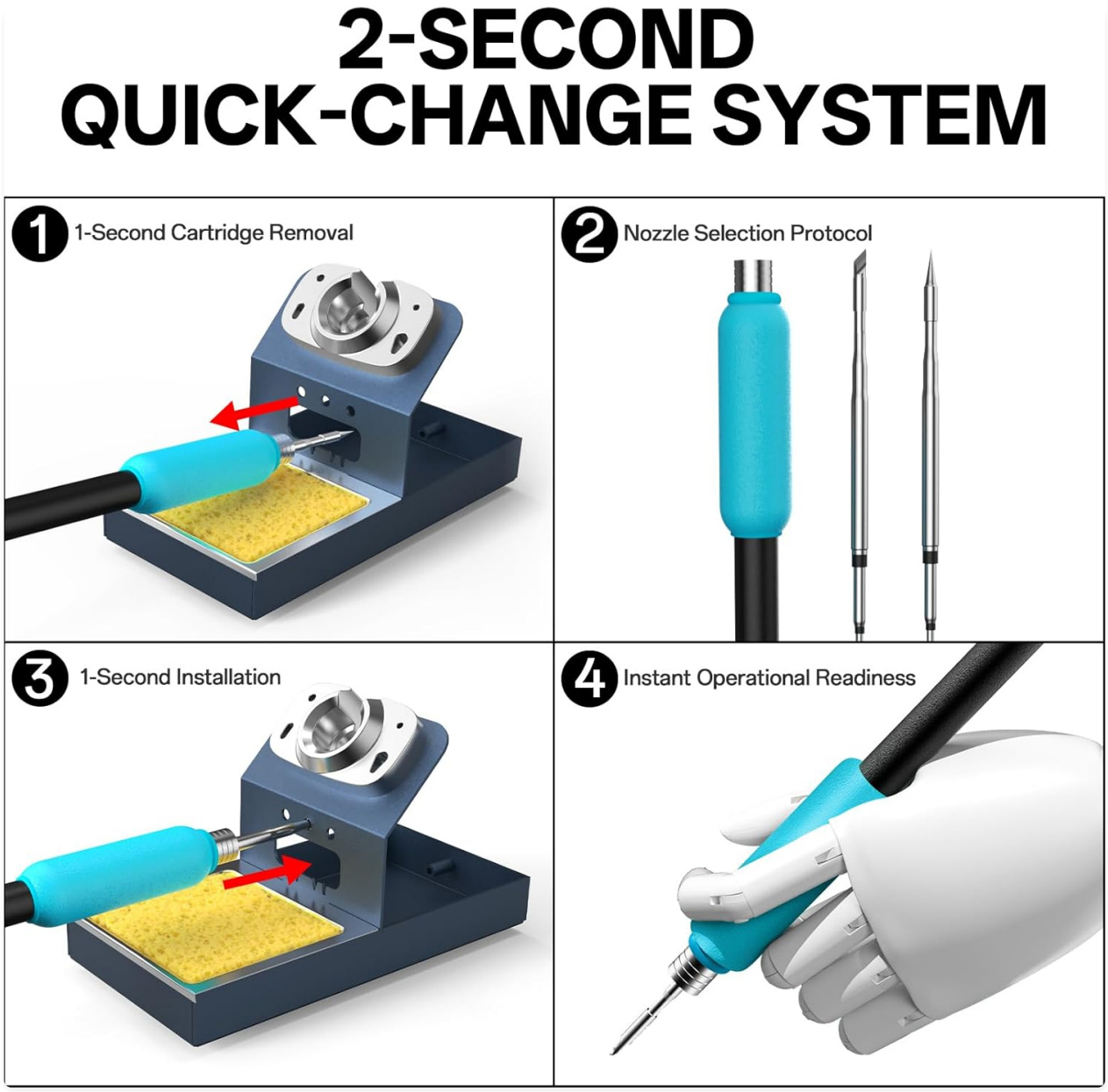

Figure 5: Quick-change system for soldering iron heating core replacement.

7. Troubleshooting

If you encounter issues, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Unit does not power on	Power cord disconnected; Main switch off; Blown fuse	Check power connections; Turn on main switch; Replace fuse (refer to specifications for fuse type).
Soldering iron/Hot air gun not heating	Section switch off; Temperature set too low; Heating element failure; Sensor error	Turn on section switch; Adjust temperature; Check for 'H-E' (Heater Error) or 'S-E' (Sensor Error) on display. If error persists, contact support.
Display shows 'H-E'	Heater Error	Indicates a problem with the heating element. Power off the unit, check connections, and if the error persists, contact customer support.

Problem	Possible Cause	Solution
Display shows 'S-E'	Sensor Error	Indicates a problem with the temperature sensor. Power off the unit, check connections, and if the error persists, contact customer support.
Poor heat transfer (soldering iron)	Oxidized or dirty tip; Incorrect tip type	Clean and re-tin the tip; Ensure you are using appropriate tips for the task.
Hot air gun has weak airflow	Airflow setting too low; Nozzle obstruction	Increase airflow setting; Check and clear any obstructions in the nozzle.

For issues not listed here or if solutions do not resolve the problem, please contact BAKON customer support.

8. Specifications

Feature	Specification
Model Number	BK852MX
Brand	BAKON
Total Wattage	1000 watts
Voltage	110 Volts (AC)
Soldering Iron Temperature Range	180°C - 480°C (356°F - 896°F)
Hot Air Gun Temperature Range	100°C - 500°C (212°F - 932°F)
Temperature Stability	±1°C (Static)
Display Type	LED
Item Weight	7.92 pounds
Package Dimensions	12.13 x 10.51 x 7.05 inches

9. Warranty and Support

The BAKON 852MX C210 Hot Air Rework Station comes with a**1-year warranty** from the date of purchase. Additionally, a **30-day return or exchange policy** is available. For any technical assistance, operational questions, or warranty claims, please contact BAKON customer support. **24/7 customer support** is available to provide reliable assistance.