

BlackJack SolderWerks BK5000 Repairing System

INSTRUCTION MANUAL

Thank you for purchasing the BlackJack BK5000 Repairing System.
Please read this manual before operating the equipment.
Keep manual in accessible place for future reference.

NOTE: Please remove the screw located at the center of the bottom part of the main unit. This screw holds the pumps in place during shipping. Failing to remove this screw prior to use can cause damage to the unit

TABLE OF CONTENTS

Product Description	2
Specifications	2
Safety Precautions	3
Initial Setup	4
Control Panel Guide	5
Operating Guidelines	6
Special Functions and Features	7
Care and Maintenance	7
Basic Troubleshooting Guide	8

PRODUCT DESCRIPTION

The BlackJack BK5000 Repairing System is a multipurpose reworking system that incorporates a Hot-Air Gun and Soldering Iron.

The Hot air gun is equipped with our BlackJack SolderWerks Hot-air protection system, which provides **System cool-down**, and **Overheat Protect**. The **System cool-down** feature removes the residual heat from the nozzle when the Hot-air function is switched off, this will let the nozzle cool down more rapidly and extend the life of the heating element. The **Overheat Protect** feature effectively shuts off power to the heater when an overheat in the handle has been detected. The hot air gun is designed to have different SMD nozzles attached to achieve better SMD reworking.

The Soldering iron incorporates a replaceable tip design to allow easy soldering of any job.

SPECIFICATIONS

Main Station	
Power input:	110V/ 50hz-60Hz
Station Dimensions:	188(w)x126(h)x250(d)mm
Hot air gun:	
Power consumption:	500W peak
Temperature range:	100°C - 500°C
Heating element:	Metal Heating Core
Pump Type/ Capacity:	Diaphragm Pump, 23L/min. (max)

Soldering Iron:	
Temperature range:	200°C - 480°C
Heating Element	Ceramic Heater
Voltage	24V

Specifications are subject to change without prior notice

SAFETY PRECAUTIONS

CAUTION: Improper usage can cause serious injury to personnel and/or damage to equipment. For personnel safety, please follow these precautions:

- Check each component after opening the package to make sure everything is in good condition. Do not use this item if visible damage is seen, report the issue to your vendor.
- Power off unit and unplug the device when moving the device from one location to another.
- Do not subject the main unit to physical shock
 - Never drop or sharply jolt the unit.
 - Contains delicate parts that may break if the unit is dropped.
- Always connect power to a grounded receptacle.
- Tip temperature may reach as high as 480°C when switched ON.
 - Do not use the device near flammable materials.
 - Do not touch heated parts which may include tips, nozzles, barrels.
- Disconnect from power source if the unit will not be used for a long periods. Switch off power during short breaks.
- Use only genuine replacement parts.
- Soldering process produces smoke — use on well ventilated place.
- Do not try to alter or repair unit, bring to a qualified service center for repairs.

IMPORTANT:

REMOVE THE SCREW located at the center of the bottom part of the main unit. This screw holds the pump in place during transportation. Failing to remove the screw before using the equipment can cause damage to the system.

Initial Setup

1. Main Unit

REMOVE THE SCREW located at the center of the bottom of the main unit. This screw holds the pump in place during transportation. It should be replaced in the event that you ever ship your BK5000 system

WARNING: Failure to remove the screw before using the equipment can cause damage to the unit

2. Soldering Iron

1. Install the solder wire to the soldering iron holder as seen.



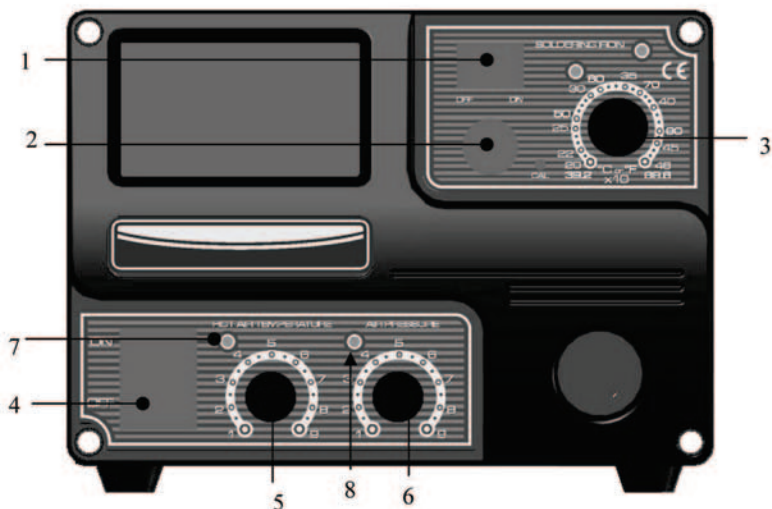
2. Connect the soldering iron cord assembly to the 6-pin output terminal found at the lower middle portion of the main unit.
3. Place the soldering iron to the soldering iron stand as shown above.

3. Mechanical Arm

Attach the mechanical arm to the top left side of the unit. Three square nuts are available for the mechanical arm expansion. To attach the mechanical arm follow these steps:

1. Slide all three nuts to the back.
2. Match the first hole to the first nut, Attach the first screw but do not tighten it.
3. Slowly slide the mechanical arm platform until the second hole matches with the second nut. Again attach the second screw but do not tighten it.
4. Slowly slide the mechanical arm platform until the third hole matches with the third nut. Attach the screws and tighten all three screws.
5. Attach the hot air gun to the mechanical arm. For easy hands free re-working.

CONTROL PANEL GUIDE



LEGEND:

- 1 — Solder Iron Power Switch
- 2 — Soldering Iron Receptacle
- 3 — Soldering Iron Temperature Control knob
- 4 — Hot Air Gun Power Switch
- 5 — Hot Air Gun Temperature Adjustment knob
- 6 — Hot Air Gun Airflow Adjustment knob
- 7 — Hot Air Gun Heater Lamp
- 8 — Air Flow Lamp

IMPORTANT:

Make sure the equipment is placed on a flat stable surface and all the heat-generating components placed on their respective holders or stands. Ensure all terminal connections are properly secured.

OPERATING GUIDELINES

Please refer to the **CONTROL PANEL GUIDE** page for buttons and display panel directory.

1. INITIAL PROCEDURES

1. Plug the device to the main power source.
2. Make sure all power switches in the OFF position

2. HOT AIR GUN

1. Follow "INITIAL PROCEDURES".
2. Turn on the Hot air gun power switch (**4**). The lamp (**7**) will blink continuously indicating that power is being applied to the heating element and the air flow lamp (**8**) will illuminate.
3. Adjust the air flow level and hot air gun temperature using the AIR PRESSURE ADJUSTMENT Knob (**6**), and the HOT AIR GUN TEMPERATURE ADJUSTMENT knob (**5**).
4. When the desired hot air temperature and airflow level are achieved reworking may be started.
5. When reworking is complete, return the Hot Air Gun to its holder.
6. Switch hot air gun power switch to OFF. This will activate our Black-Jack SolderWerks **System cool-down** process. The system will start to blow air at a fast rate to reduce heat from the hot air gun. Once the temperature drops to approximately **90°C** the system will turn off the pump .
7. Unplug the device from the main power source.

IMPORTANT: It is strongly advised to increase the airflow level when a higher temperature is needed. This is to protect the heating element inside the handle from excessive heat .

3. SOLDERING IRON

1. Connect the Soldering Iron to the receptacle located at the front of the control panel ("2" from the CONTROL PANEL GUIDE).
2. Follow the initial procedures.
3. Then activate the "SOLDER IRON" power switch ("1" from control panel).
4. Adjust the soldering iron temperature using the SOLDER/DESOLDER TEMPERATURE ADJUSTMENT knob ("3" from the control panel).
5. Start Soldering iron when the desired temperature is reached.

SPECIAL FUNCTIONS AND FEATURES

BlackJack SolderWerks® Hot Air Triple Protection System

1. **System cool-down** — This feature draws the heat out of the nozzle before turning off the pump. By decreasing the residual heat of the nozzle we prolong the life of the heating element and eliminate potential heat damage to other equipments .

Activating the automated system cool down feature

- Place the Hot air gun on its holder.
 - Switch OFF the Hot air gun power switch (“4” from the control panel).
 - The unit will immediately blow maximum air at room temperature this will quickly cool down the nozzle.
 - It will then turn off the pump when the temperature at the nozzle has fallen below 100 degrees Celsius.
2. **Overheat Protect**— This offers automatic protection in case overheating in the handle is detected, There is a built in heat sensitive fuse that unlatches when overheating is detected. When it is activated the power to the heating element is cut off. It will wait for the handle and nozzle to cool down before it deactivates. It is recommended to activate the **System cool-down** feature and wait for the entire hand piece to cool to room temperature before using the equipment if the Overheat Protect feature becomes active.

CARE and MAINTENANCE

Soldering Iron Tip

Always keep the solder-plated section of the tip/nozzle coated with a small amount of solder. Oxide coating on the tip of the nozzle reduces its heat conductivity. Coating the tip with a small amount of fresh solder ensures maximum heat conductivity is obtained.

BASIC TROUBLESHOOTING GUIDE

PROBLEM 1: THE UNIT HAS NO POWER

1. Check if the unit is switched ON.
2. Check the fuse. Replace with the same type if fuse is blown.
3. Check the power cord.
4. Verify that the unit is properly connected to the power source.

PROBLEM 2: THE UNIT IS VIBRATING TOO MUCH

SOLUTION: Check if the 4 rubber stubs that hold the pump in place are properly and tightly connected. Unplug the system from the main power source before opening the case to check inside the station.

PROBLEM 3: THE UNIT IS VERY NOISY

SOLUTION:

Make sure the screw at the center of the base of the main unit has been removed. This holds the pump in place during transportation and needs to be removed before using the equipment.

PROBLEM 4: AIR PRESSURE LEVEL IS SIGNIFICANTLY LOW NO MATTER HOW HIGH THE AIRFLOW LEVEL IS CALIBRATED

Case 1: Check the mains voltage (AC power source). If the voltage level falls significantly low, about 15-20% lower than the standard, there will also be a noticeable drop in the air pressure level.

SOLUTION:

Please refer to your local power service provider.

ADDITIONAL SOLUTION: Check for any tangles in the tube of the hot air gun that can cause the air blockage.

OTHER PROBLEMS NOT MENTIONED:

Contact your vendor.