

# **BlackJack SolderWerks BK3080 LF Desoldering Station**

## **INSTRUCTION MANUAL**

Thank you for purchasing the BlackJack BK3080LF Desoldering Station.  
Please read this manual before operating the equipment.  
Keep manual in accessible place for future reference.

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## SPECIFICATIONS

	<b>Desoldering</b>
Power consumption	60W
Temperature range	200°C - 450°C
Heating Element	Ceramic Heater
Pump Type	Piston Pump (80KPA)
Voltage	24V

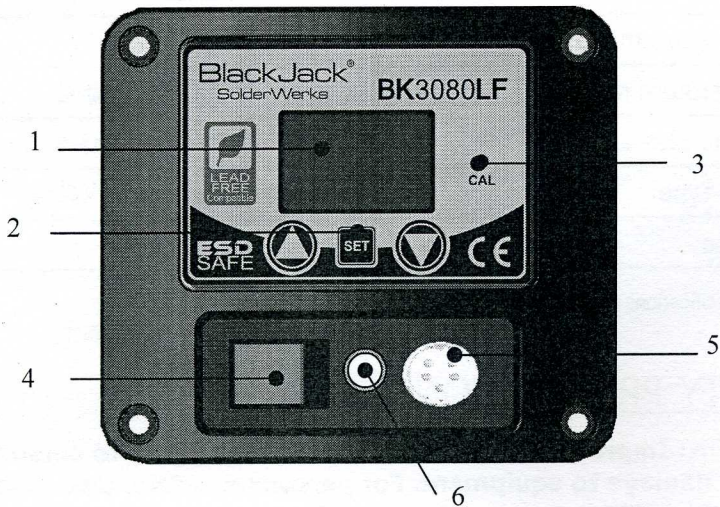
\*Specifications are subject to change without prior notice

## 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 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 450°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.
- Desoldering process produces smoke — use on well ventilated place.
- Do not try to alter or repair unit, bring to qualified service center for repairs.

# CONTROL PANEL GUIDE

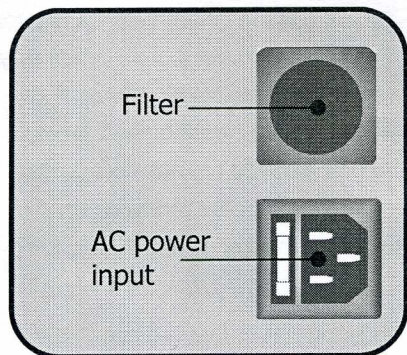


## **LEGEND:**

- 1 — Temperature Display
- 2 — Desoldering Gun Temperature Control Buttons
  - ▲ Increase temperature
  - ▼ Decrease temperature
  - Set
- 3 — Calibration adjustment
- 4 — Main Power Switch
- 5 — Desoldering Gun Receptacle
- 6 — Vacuum pump connector

Note:  
Change Filter if  
Suction becomes  
weak.


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## NORMAL OPERATION

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

1. Plug the device to the main power source.
2. Make sure power switches are deactivated.
3. Attach Desoldering Gun and vacuum tubing to its receptacle.
4. Turn on the unit.
5. The Digital display will then display the current set temperature, after a few seconds it would switch to displaying the actual temperature.
6. Pressing ▲ the button increases the desired (SET) temperature settings, while ▼ pressing the button decreases the desired (SET) temperature settings. The display would increase and decrease accordingly showing the SET temperature. If the buttons are all depressed, the display would switch from showing the SET temperature to showing the actual temperature.  The button with the label is a multipurpose button used for various adjustments.
7. During normal operation pressing the set button will make the system switch to either of the two pre-programmed quick set temperature levels.
8. The display will show "UUU" if the unit has detected that the desoldering gun and the main unit are not connected securely or is not connected. If this is displayed, turn off the unit and reattach firmly the desoldering gun to the receptacle at the main unit.

## CELSIUS AND FAHRENHEIT SCALE

To program switch between Celsius and Fahrenheit scale

1. Plug the device to the main power source.
2. Make sure power switches are deactivated.
3. Attach desoldering gun and vacuum tubing to its receptacle.
4. Hold both ▲ and ▼ button while turning on the unit.
5. The Digital display will show a °C or °F indicating we are in the temperature scale selection mode.
6. Switch between °C or °F scale by pressing the up or down arrow buttons.
7. To save the selected temperature scale press the set button.
8. System will save the selected temperature scale into memory and begin normal operation.

## PROGRAMMABLE QUICK SET

To program the two quick set levels

First Quick Set level :

1. Plug the device to the main power source.
2. Make sure power switches are deactivated.
3. Attach desoldering gun and vacuum tubing to its receptacle.
4. Hold the ▲ button while turning on the unit. The system will enter quick set adjustment mode.
5. The Digital display will show a number indicating the quick set level. Use the up and down arrow keys to adjust the desired quick set level.
6. To save this quick set level and exit from the first quick set level adjustment mode press the set button.

System will save the first quick set level settings into memory and begin normal operation.

## PROGRAMMABLE QUICK SET

Second Quick Set level :

1. Plug the device to the main power source.
2. Make sure power switches are deactivated.
3. Attach desoldering gun and vacuum tubing to its receptacle.
4. Hold the ▼ button while turning on the unit. The system will enter into second quick set adjustment mode.
5. The Digital display will show a number indicating the quick set level. Use the up and down arrow keys to adjust the desired quick set level.
6. To save this quick set level and exit from the quick set level adjustment mode press the set button.
7. System will save the second quick set level settings into memory and begin normal operation.

To switch between the programmed quick set level press the set button during normal operation mode.

# DIGITAL CALIBRATION

To digitally calibrate tip temperature

## Calibrating the Tip Temperature

1. Plug in station and turn it on, we need to be in normal operation mode.
2. Set temperature to desired calibrating temperature.
3. Wait for display to reach the desired temperature.
4. Use an external sensor and place it on the desoldering tip. And write down the actual desoldering tip temperature.
5. Press and hold both the up and down button to enter the digital calibration mode. A display like "000" indicates that the digital calibration is currently set at neutral.
6. Press the increase and decrease button to adjust the digital calibration. A negative number denotes we are decreasing the actual tip temperature and a positive number means we are increasing the tip temperature. Adjust the calibration number until the external temperature sensor reading is equal to our set temperature.
7. To save the new calibration number and exit from the digital calibration mode press the set button.
8. System will save the new calibration settings , exit from digital calibration mode and begin normal operation.

## CARE and MAINTENANCE

- The desoldering gun tip should be cleaned after use by wiping excess solder. This is to get rid of burnt solder or fluxes that causes oxidation on the tip
- Maintain a thin layer of solder over the tip when gun is not being used. This maintains the tinning on the tip, and the tip will last much longer.



# CARE and MAINTENANCE

## Changing TIP

1. Always turn the power OFF when removing or inserting a tip.
2. When the tip is hot, hold it with heat resistant pads.
3. Lock the tip securely.

## Checking, Cleaning and Tinning the Tip

1. Set temperature to 250° C (482° F)
2. After real temperature reaches the set temperature, use a damp sponge to clean the tip and check for damages.
3. If the tip has oxidation, apply solder and wipe using the damp sponge, repeat these steps until oxidation is removed.
4. After cleaning, coat tip with a thin layer of solder and set it aside ready for the next usage.
5. If the tip shows disfiguration or has rust on it. Change the tip.

## Analog calibration of the Tip Temperature

1. Plug in station and turn it on.
2. Set temperature to desired calibrating temperature.
3. Wait for display to reach the desired temperature.
4. Use an external sensor and place it on the solder tip.
5. Use a screwdriver, one that fits the CAL hole, to adjust the CAL point.
6. Adjust until the external sensor reading is equal to the displayed temperature.

## Checking the fuse

1. The Fuse can be found at the back of the unit, it is incorporated into the AC power receptacle. If fuse is blown replace with same type fuse only.

# **BASIC TROUBLESHOOTING GUIDE**

## **PROBLEM 1: THE UNIT HAS NO POWER /MAIN POWER LED DOES NOT LIGHT UP**

1. Check if the unit is switched ON.
2. Check the fuse. Replace with the same type of fuse if blown.
3. Check the power cord and make sure there are no disconnections.
4. Verify that the unit is properly connected to the power source.

## **PROBLEM 2: DESOLDERING GUN DOES NOT RISE IN TEMPERATURE**

**Description:** Led digital display lights up but desoldering gun temperature remains low and is not heating up. Actual temperature display remains in the low value range.

### **SOLUTION:**

Heating element might have reached the end of its life. Heating element may be damaged. Replace heating element.

## **PROBLEM 3: DESOLDERING GUN DISPLAY DOES NOT RISE IN TEMPERATURE**

**Description:** Actual temperature display remains in the low value range. But the soldering iron tip is already glowing hot red.

### **SOLUTION:**

Desoldering gun sensor has been reversed, if desoldering gun heating element has recently been changed it is possible that the heating elements' sensor wire have been connected in reverse.

## **PROBLEM 4: SOLDER WOULD NOT STICK TO THE TIP**

**Description:** Desoldering gun is able to quickly melt solder but cannot cause the solder to attach to the tip.

### **SOLUTION:**

- ♦ Desoldering gun tip may already be too dirty or oxidized. Please see the solder tip maintenance guide on page 9 on how to clean soldering tips.
- ♦ Temperature could be set too high causing solder to quickly burn away. Please adjust to a more suitable lower temperature range.

# **BASIC TROUBLESHOOTING GUIDE**

## **PROBLEM 5: DESOLDERING GUN DOES NOT PRODUCE ENOUGH HEAT**

**Description:** Desoldering gun cannot melt solder fast enough, or actual temperature does not reach the desired set temperature.

### **SOLUTION:**

- ♦ The system may need to be recalibrated.
- ♦ Desoldering gun may already be too dirty or oxidized .

## **PROBLEM 6: UNIT DISPLAYS "UUU"**

**Description:** The unit displays "UUU".

### **SOLUTION:**

- ♦ Desoldering gun is not properly connected to its receptacle.
- ♦ Turn off unit and reattach soldering iron.

## **PROBLEM 7: DISPLAY PROBLEMS**

**Description:** Display shows unreadable characters.

### **SOLUTION:**

- ♦ Press the turn the unit off and then back on after a few seconds.

