

# **BlackJack SolderWerks BK2000+ Soldering Station**

## **INSTRUCTION MANUAL**

Thank you for purchasing the BlackJack BK2000+ Soldering Station.  
Please read this manual before operating the equipment.  
Keep manual in accessible place for future reference.

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## SPECIFICATIONS

	<b>Soldering Iron</b>
Power consumption	35W peak
Temperature range:	200°C - 480°C
Heating Element	Ceramic Heater
Voltage	24V

Specifications are subject to change without prior notice

## SAFETY PRECAUTIONS

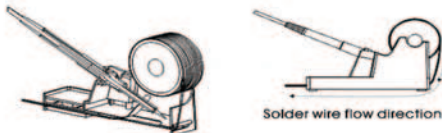
**CAUTION: Improper usage can cause serious injury to personnel and/or damage to equipment. For personnel safety, please follow these precautions:**

- Check each component after opening the package to make sure everything is in good condition. Do not use 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 qualified service center for repairs.

## Initial Setup

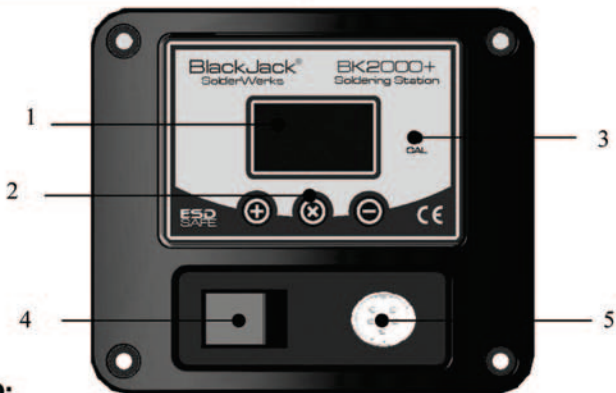
### **Soldering Iron**

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.
4. Dampen the sponge and place into sponge tray.

## CONTROL PANEL GUIDE



### **LEGEND:**

- 1 — Temperature Display
- 2 — Soldering Iron Temp Control Buttons
  - + Increase temperature
  - Decrease temperature
  - X Reset
- 3 — Calibration adjustment
- 4 — Main Power Switch
- 5 — Soldering Iron Receptacle

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 Solder iron to its receptacle.
4. Turn on the unit.
5. The Digital display will initially 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 at the tip of the soldering iron. The button with the asterisk x marking is used to quickly reset the device to the default temperature setting.
7. When the display temperature reaches the set temperature, wait about 30 seconds before starting, this is to allow the heating element to pass the appropriate heat to the tip.
8. The display will show "UUU" if the unit has detected that the soldering iron and the main unit are not connected securely or is not connected. If this is displayed, turn off the unit and reattach firmly the soldering iron to the receptacle at the main unit.

## CARE and MAINTENANCE

- Use lowest \*possible\* tip temperature when soldering.
- The soldering iron tip should be cleaned after use by wiping it on the damp sponge found in the soldering iron stand. This is to get rid of burnt solder or fluxes that causes oxidation on the tip

## CARE and MAINTENANCE

- Maintain a thin layer of solder over the tip when iron is not being used. This maintains the tinning on the tip, and the tip will last much longer.
- 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.
- Calibrating 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: SOLDERING IRON DOES NOT RISE IN TEMPERATURE**

**Description:** Main power LED lights up and so does the heater LED but soldering iron temperature remains low and is not heating up.

### **SOLUTION:**

Soldering iron cord may be damaged and needs to be replaced or repaired. Heating element may be damaged and needs to be replaced.

## **PROBLEM 3: SOLDERING IRON TEMPERATURE IS INTERMITTENT**

**Description:** Main power LED lights up and so does the heater LED but soldering iron temperature rises and falls uncontrollably.

### **SOLUTION:**

- ❑ Soldering iron plug may be loose from the receptacle unplug the soldering iron and reattach.
- ❑ Soldering iron cord may be damaged or loose and needs to be replaced or repaired. See trouble shooting soldering iron cords section of this manual.

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

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

### **SOLUTION:**

- ❑ Soldering iron tip may already be too dirty or oxidized . Please see the solder tip maintenance guide on page 5 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: SOLDERING IRON DOES NOT PRODUCE ENOUGH HEAT**

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

#### **SOLUTION:**

- The system may need to be recalibrated.
- Soldering iron tip may already be too dirty or oxidized .

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

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

#### **SOLUTION:**

- Soldering iron 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 reset button or turn the unit off and then back on after a few seconds.

