

**BlackJack SolderWerks  
BK2050+  
Soldering Station with  
Working platform and  
Fume Extractor**

**INSTRUCTION MANUAL**

Please read this manual before operating the  
equipment.

Keep manual in accessible place for future  
reference.

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# **PRODUCT DESCRIPTION**

The BK2050+ is a soldering station with a working platform and attachable smoke absorber.

The soldering iron uses a highly efficient compounded tip design allowing fast heat up and heat response. It also allows changing of hot tips easily.

The station is equipped with a digital LCD read out and tactile button allowing easy monitoring and adjustment of temperature.

The metal working platform protect against damage to your work surface, allows attachment of magnetic helping hands and magnetic PCB holders.

An attachable smoke absorber directs harmful fumes away from the work area. An LED Lamp is fixed on the smoke absorber to light up the work area.

## **PACKAGE INCLUSION**

- Working platform with metal surface.
- Soldering Iron
- One Composite tip
- One Heat resistant Pad ( to change tips)
- Soldering iron stand
- Solder spool holder (solder spool not included)
- Cleaning sponge tray
- Smoke absorber with LED lamp
- Exhaust duct with securing ring
- Carbon Filter
- Magnetic PCB holders

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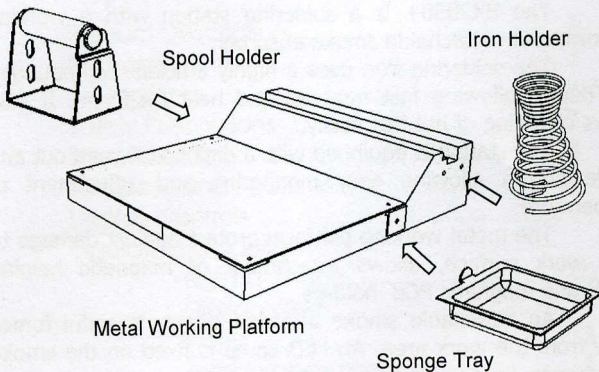
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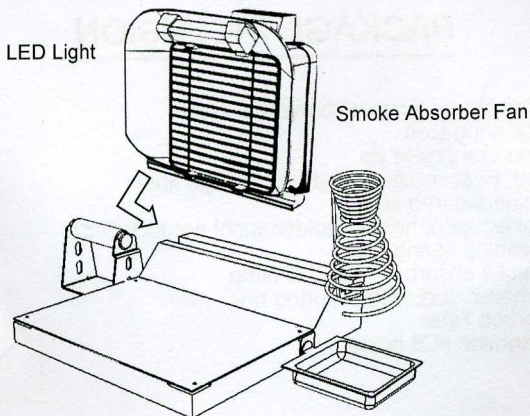
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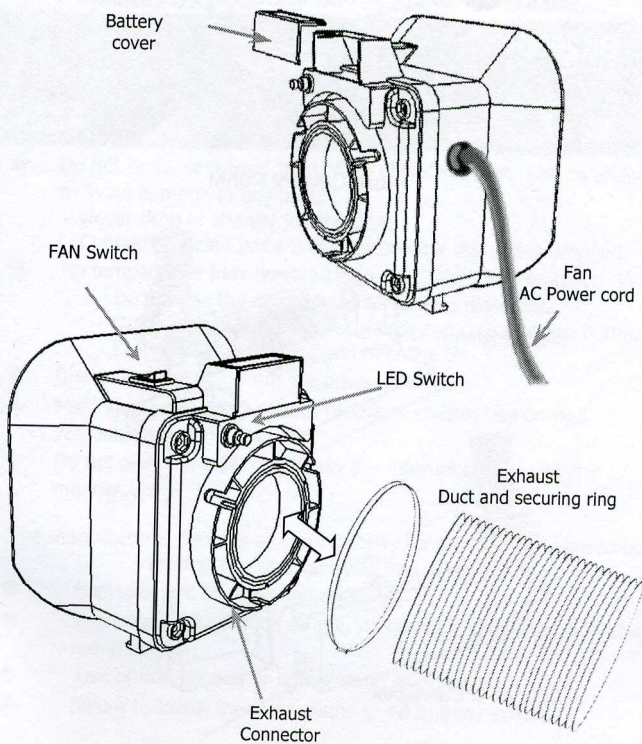
# ASSEMBLY GUIDE



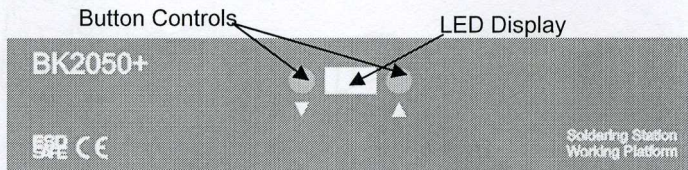
## **If With Smoke Absorber :**



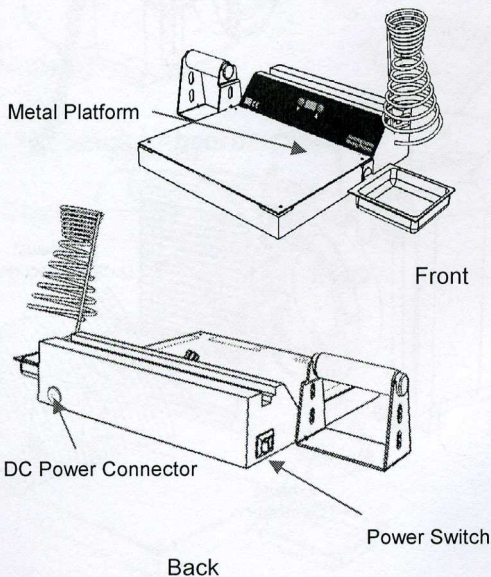
# ASSEMBLY GUIDE



# ASSEMBLY GUIDE



## Front Control Panel



# SAFETY PRECAUTIONS

**CAUTION:** Improper usage can cause serious injury to personnel and/or damage to equipment and work area. For your own safety please observe the following precautions.

- Check each component after opening the package to make sure everything is in good condition. If there are any suspected damage, do not use the item and report the issue to your vendor.
- Do not strike or subject the unit to physical shock. Use carefully to avoid damage to any part.
  - Never drop or sharply jolt the unit.
  - Contains delicate parts that may break if the unit is dropped.
- 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 can cause severe burns.
  - Do not touch metallic parts near the tip.
- Disconnect the plug from the power after use.
- Melting or retouching plastics produces smoke, use on well ventilated places.
- Do not alter the unit, specifically the internal circuitry, in any manner.

The manufacturer declines all responsibility for any damage caused by incorrect or unreasonable use, such as:

- Improper use by untrained persons;
- Technical modifications or operations not recommended by the manufacturer;
- use of non-original or non-specific spare parts;
- failure to follow the instructions given in this manual.



# **SPECIFICATION**

MAIN STATION	
Voltage Input :	18V 3A DC
Station Dimensions:	200w) x 218 (h) x 58 (d) mm
Weight:	720 grams
Power Consumption:	50W
Temperature Range:	200°C - 480°C
Heating Element	Composite Ceramic heater
Smoke Absorber Voltage:	110 or 220 VAC
Heater voltage:	18V 3A DC

## **FUNCTIONS and FEATURES**

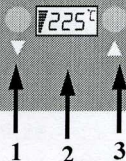
- Composite tip with quick change design.
- Composite ceramic heating element.
- LCD display for easy monitoring.
- Auto sleep function.
- Digital Offset.
- Switch between Centigrade and Fahrenheit Scale.
- With sponge tray, spool holder , solder iron holder
- Smoke absorber attachment.
- Magnetic PCB holders.

# DISPLAY AND CONTROL

BK2050+

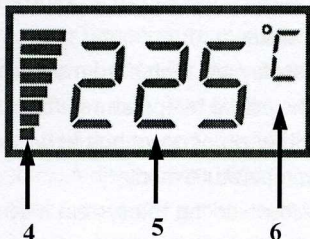


Soldering Station  
Working Platform



- 1 — Down Button
- 2 — LCD Display
- 3 — Up Button

- 4 — Heating power
- 5 — Mode Display
- 6 — Temperature Scale



**Warning:** Never leave tool unattended while in operation. Tip temperature may reach as high as 480 degrees. Only place tool on non-flammable surface. Keep away from flammable and combustible objects and surfaces.

# **OPERATING GUIDELINES**

## **NORMAL OPERATION**

1. Plug in the unit the display would show "OFF" indicating it is in the stand by mode, the heating element would not be powered.
2. Press the up or down button to turn on heating element
3. Wait for 3—6 seconds, the power level meter will start moving indicating the system is now powering the heater.
4. The actual temperature may be adjusted according to needs, temperature is adjustable from 100 to 480 degrees Celsius.
5. Display will switch from showing the set temperature to the actual temperature after a few seconds, pushing either up or down button will revert display to set temperature mode.
6. After working the system may be put in standby mode by simultaneously pressing both up and down buttons.
7. Unplug from power source if tool will not be used for long periods.

# **OPERATING GUIDELINES**

## **DIGITAL OFFSET MODE**

The unit is provided with a digital offset feature for tip calibration.

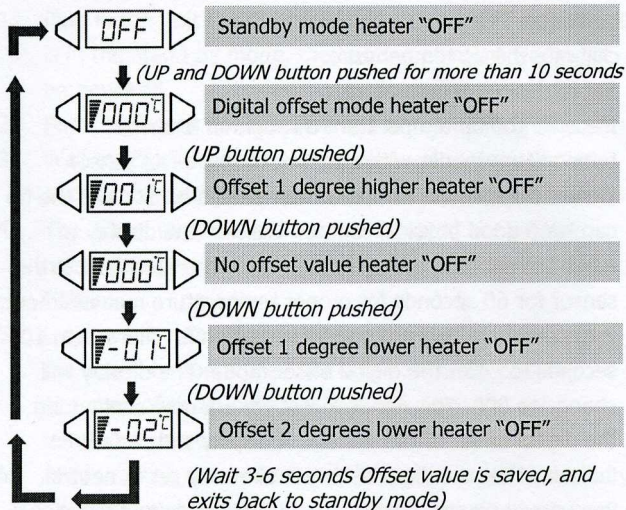
To calibrate the tip temperature:

1. Set to desired temperature.
2. Measure the tip temperature through an external temperature reader with a thermocouple as its sensor. Ensure the external temperature reader's sensor and the tip can keep good physical contact. Wait for the display to reach the set temperature , then allow the tip to idle at the sensor for 60 seconds for proper temperature measurement.
3. Press and hold both up and down button for more than 10 seconds to enter the digital offset mode. The display will change to 000. This denotes that we are now configuring the digital offset of the system. A display with "000" indicates that the digital offset is currently set at neutral.
4. Press the increase and decrease button to adjust the digital offset. A negative number denotes a negative offset and a positive number denotes a positive offset. Adjust the offset number depending on the difference between the measured value of the external sensor and the displayed value of the tool.



# OPERATING GUIDELINES

## From Main Menu to Digital offset Mode



### **Example:**

1. Set temperature is 200.
2. Measured temperature by external temperature probe is 220.
3. We need to offset by -20.

# **OPERATING GUIDELINES**

## **SLEEP MODE**

The system is equipped with a sleep function, the internal vibration sensor would be able to sense if tool is being used or not. It will enter sleep "SLP " if the system has detected tool has not be used after a preset time. Timer can be set from 1 to 60 minutes.

When system is in sleep mode the display would show the letters "SLP " shaking or picking up the tool will immediately wake the system up and return to the previously working settings.

### **Adjusting the Sleep:**

1. Press the down button while turning on the power switch . The display would show a number "030" indicating this is the current set sleep timer. (default 30 minutes)
2. Press the up or down button to adjust sleep timer settings. Wait for 3—5 seconds, the system will save the new sleep settings and enter standby mode.

# OPERATING GUIDELINES

## From off to Sleep timer adjustment

*Press and hold **DOWN button** while turning on the power switch*

◀ 030 ▶ Sleep timer 30 minutes heater "OFF"



*(UP button pushed)*

◀ 031 ▶ Sleep timer 31 heater "OFF"



*(DOWN button pushed)*

◀ 030 ▶ Sleep timer 30 heater "OFF"



*(Wait 3-6 seconds, Offset value is saved, )*

◀ OFF ▶ Goes to standby mode heater "OFF"

*After idling for the preset time, tool goes into sleep mode*

◀ SLP ▶ In sleep mode heater "OFF"



# OPERATING GUIDELINES

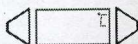
## TEMPERATURE SCALE

The system's temperature scale can be switched between Centigrade or Fahrenheit. To switch the display scale press the up button while plugging in the unit the display would show the Celsius sign, press the up or down button to switch between Celsius or Fahrenheit scale. Wait for 3—5 seconds, the display will save the new settings and revert to standby mode.

### **From off to temperature scale selection**

*Press and hold*

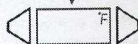
**UP button** while turning on the unit.



Scale Set to Centigrade heater "OFF"



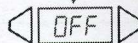
*(DOWN button pushed)*



Scale Set to Fahrenheit heater "OFF"



*(Wait 3-6 seconds, Scale is saved )*



Goes to standby mode heater "OFF"