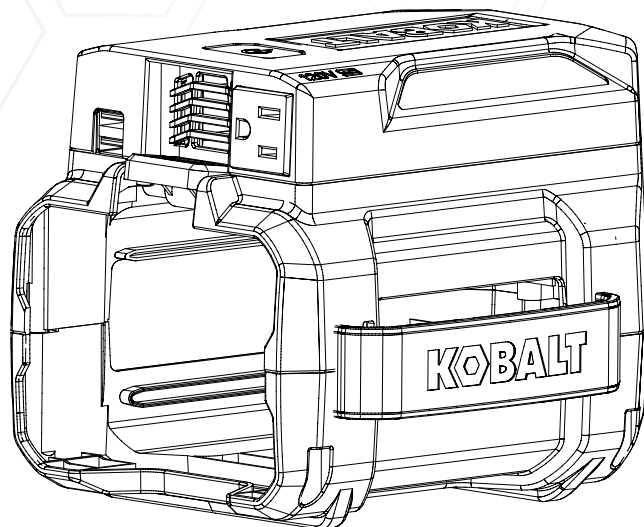


# KOBALT™



ITEM # 1966802

## 80 V MAX LITHIUM-ION POWER INVERTER

MODEL # KIV 3080-06

Español p. 11

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**ATTACH YOUR RECEIPT HERE**

**Serial Number** \_\_\_\_\_ **Purchase Date** \_\_\_\_\_

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**Questions, problems, missing parts?** Before returning to your retailer, call our customer service department at **1-888-3KOBALT** (1-888-356-2258) 8 a.m. - 8 p.m., EST, Monday - Sunday.

XXXXXXX

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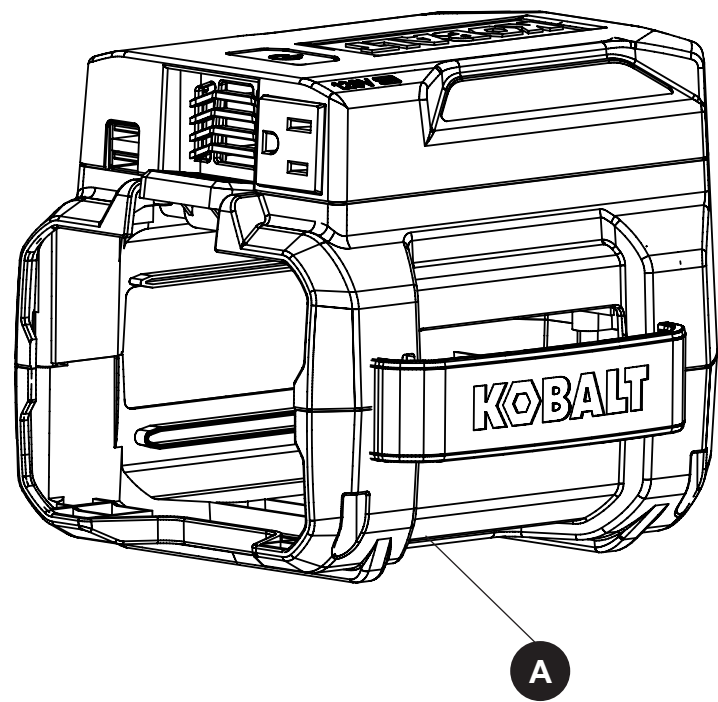
## PRODUCT SPECIFICATIONS

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SPECIFICATIONS	
Input Voltage Range	56-85 volt DC
Rated Input Current	6A
USB Output	5V 2.4A (two USB ports combined)
AC Output	120V $\pm$ 10% AC RMS 60Hz
Weight (Without battery pack)	0.73 Kg
Operation Temperature	14°F-104°F (-10°C to 40°C) at 100% loading
Storage Temperature	-4°F-140°F (-20°C-60°C)
Output Waveform	Modified Sine Wave (filtered)

**PACKAGE CONTENTS**

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PART	DESCRIPTION	QUANTITY
A	80V Power Inverter	1



## SYMBOLS

Some of the following symbols may be used on this product. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the product better and safer.

SYMBOLS	NAME	DESIGNATION/EXPLANATION
V	Volts	Voltage
A	Amperes	Current
Hz	Hertz	Frequency (cycles per second)
W	Watts	Power
min	Minutes	Time
~	Alternating Current	Type of current
≡	Direct Current	Type or a characteristic of current
/min	Per Minute	Revolutions, strokes, surface speed, orbits etc., per minute
	Safety Alert	Precautions that involve your safety.
	Read The Operator's Manual	To reduce the risk of injury user must read and understand operator's manual before using this product.



## SAFETY INFORMATION

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This manual contains important information regarding safety, operation, maintenance and storage of this product. Before use, read and understand all cautions, warnings, instructions and product labels, plus your kobalt's battery manufacturer guidelines. failure to do so could result in injury and/or property damage.

To ensure reliable service, your power inverter must be installed and used properly. Please read the installation and operating instructions thoroughly prior to installation and use. Pay particular attention to the **WARNING** and **CAUTION** statements in this manual. The **CAUTION** statements advise against certain conditions and practices that may result in damage to your inverter. The **WARNING** statements identify conditions or practices that may result in personal injury. Read all instructions before using this power inverter!

### TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, EXPLOSION OR INJURY:

- Do not connect to AC distribution wiring.
- Remove appliance plug from outlet strip or turn off inverter before working on the appliance. Multiple outlet power strips with switches and circuit breakers only interrupt power to the “hot” receptacle terminals. The “neutral” terminals remain powered with respect to the “ground” terminals.
- Do not make any electrical connections or disconnections in areas designated as IGNITION PROTECTED.
- This is not a toy - keep away from children.
- DO NOT install object into air vents.
- Reverse polarity connection will cause the unit to malfunction and may permanently damage the inverter.
- Grounding the neutral will damage the inverter. Do not operate this inverter if it is wet. Do not install in engine compartment – please install in a well ventilated area.
- This inverter is not tested for use with medical devices.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

### CAUTIONS:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



## SAFETY INFORMATION

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### POWER SOURCE REQUIREMENTS

The power source must be able to supply the necessary current to operate the load. The Kobalt 80V battery is the only DC power source to be used with this product.



### WARNING

Keep ventilation when using batteries.

Power Inverter should only be used with 80V Kobalt battery pack.

### CONNECTION TO LOAD

The inverter is equipped with a AC power receptacle. Plug the cord from the equipment you wish to operate into an AC receptacle. The green LED indicator lights to indicate that the inverter is functioning. Make sure the combined load requirement of your equipment does not exceed inverter's output rating. The inverter is engineered to be connected directly to standard electrical and electronic equipment in the manner described above.

Do not connect the power inverter to household or RV AC distribution wiring.

Do not connect the power inverter to any AC load circuit in which the neutral conductor is connected to ground (earth) or to the negative of the DC (battery) source.

### OPERATING ENVIRONMENT

For best operating results, the inverter should be placed on flat surface, such as the ground, car floor, or other solid surface. The inverter should only be used in locations that meet the following criteria:

**DRY-** Do not allow water and/or other liquids to come into contact with the power inverter.

**COOL** – Do not place the inverter on or near a heating vent or any piece of equipment which is generating heat above room temperature. Keep the inverter away from direct sunlight, if at all possible.

**SAFE** – Do not use the inverter near flammable materials or in any locations that may accumulate flammable fumes of gases.

## PROTECTIVE FEATURES OF THE INVERTER

Your inverter monitors the following potentially hazardous conditions:

**OVER TEMPERATURE PROTECTION** – If the temperature inside the inverter is too high, the unit will automatically shut down. Allow the unit to cool for at least 15 minutes before restarting after a heat-related shutdown. Unplug unit while cooling.

**LOW BATTERY VOLTAGE PROTECTION** – This condition is not harmful to the inverter but could damage the power source. The inverter automatically shuts down when input voltage drops to 56 volts. When the condition is corrected, the unit may be restarted.

**OVER VOLTAGE PROTECTION** – The inverter will automatically shut down when the input voltage exceeds 85 volts DC.

**OVERLOAD PROTECTION** – The inverter will automatically shut down when the continuous draw exceeds rated watts.

**SHORT CIRCUIT PROTECTION** – The inverter will shut down. Remove the short circuit and restart the inverter after 5 minutes.

The LED lights indicate the working condition of the power inverter as follows:

Work condition	Green	Red	
Normal	●	○	
High-voltage protection	○	○	Inverter automatically shuts off when the voltage is too high.
Battery error	○	●	
Low battery voltage	⏏	○	
Short-circuit protection	○	⏏	Red light flashes in intervals of 4.
Overload protection			
Low-voltage protection	○	⏏	Red light flashes in intervals of 5.
Over temperature protection	○	⏏	Red light flashes in intervals of 6.

●	ON
○	OFF
⏏	BLINKING

## WORKING PRINCIPLES

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### HOW YOUR INVERTER WORKS

The inverter converts low voltage DC (Direct Current) from a Kobalt 80V lithium battery to standard 120 volt AC (Alternating Current) household power.

### PRINCIPLE OF OPERATION

The inverter converts power in two stages.

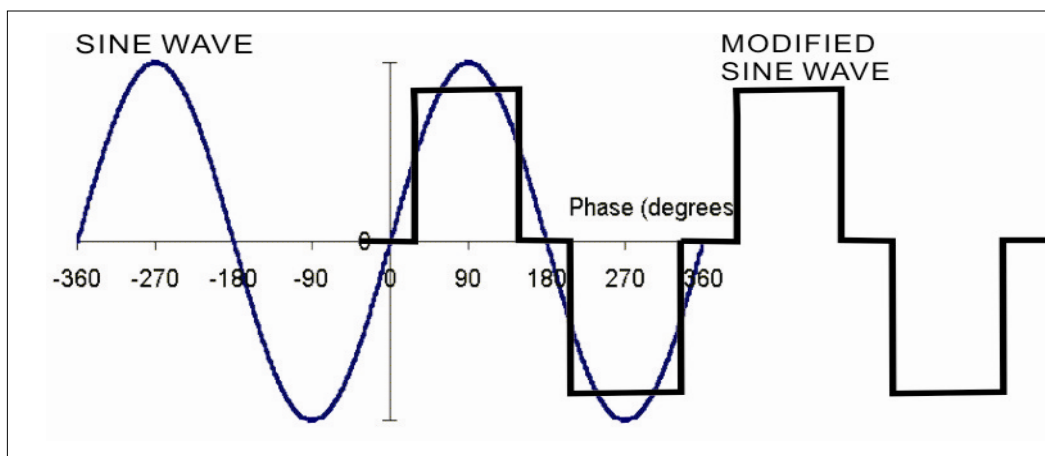
- The first stage is a DC to DC conversion process that raises the low voltage DC at the inverter input to high volts DC.
- The second stage is the actual inverter stage that converts the high voltage DC into AC.

**NOTE:** The DC-to-DC converter stage uses modern high frequency power conversion techniques that have replaced the bulky transformers found in less technologically-advanced models. The inverter stage uses advanced power MOSFET transistors in a full bridge configuration.

### THE OUTPUT WAVEFORM

The AC output waveform of the KIV 3080-06 inverter is known as “modified sine wave”. It is a waveform that has characteristics similar to the sine wave shape of utility power. This type of waveform is suitable for most AC loads, including linear and switching power supplies used in electronic equipment, transformers, and motors.

The modified sine wave produced by the KIV 3080-06 inverter has an RMS (root mean square) voltage of 120 volts, which is the same as standard household power. Most AC voltmeters (both digital and analog) are sensitive to the average value of the waveform rather than the RMS value. They are calibrated for RMS voltage under the assumption that the waveform measured will be a pure sine wave. These meters will not read the RMS voltage of a modified sine wave correctly. They will read about 20 to 30 volts low when measuring the output of the inverter. For accurate measurement of the output voltage of this unit, use a true RMS reading voltmeter.





## OPERATION INSTRUCTIONS

### WARNING

Shut off the power source, or disconnect the battery when the power inverter is not in use.

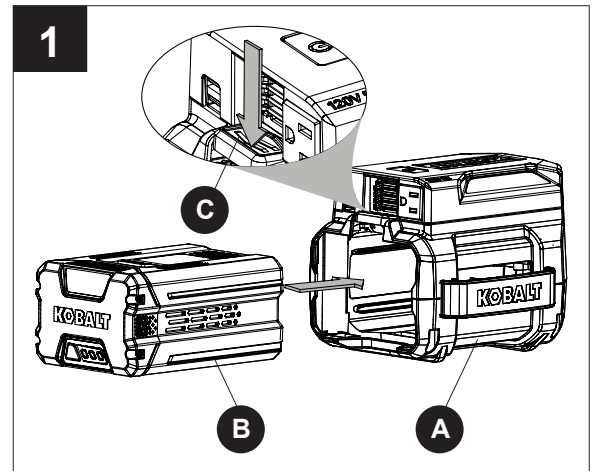
### BATTERY

#### a. To install the battery:

- Align the battery (B) with the cavity in the power inverter (A).
- Hold the power inverter (A) firmly.
- Insert the battery in the opening until the battery release button (C) locks into place. You should hear a “click” once it is installed.

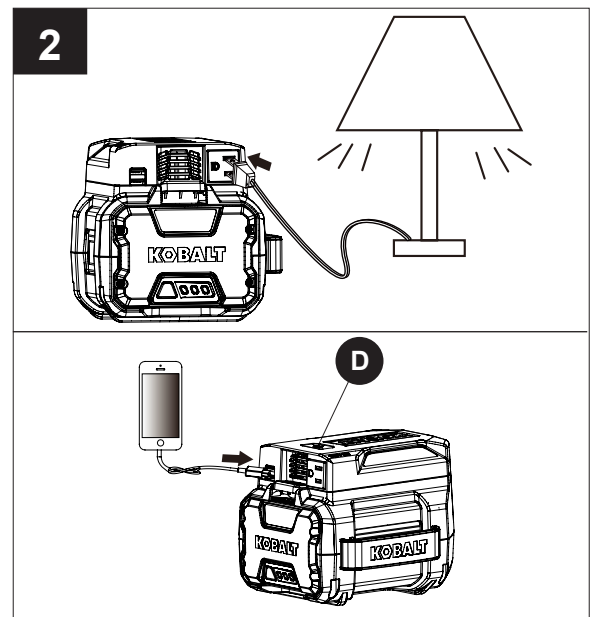
#### b. To remove the battery:

- Press the battery release button (C). This will cause the battery to raise out of the tool.
- Hold the power inverter (A) firmly. Pull the battery pack out of the power inverter.



### OPERATE THE POWER INVERTER

1. Insert the battery pack into the power inverter.
2. Connect the plug or USB to the receptacle.
3. Press the power switch (D) to start the power inverter.



## CARE AND MAINTENANCE

### WARNING

In order to avoid personal injury and the risk of fire and electric shock, remove the battery pack before inspecting or cleaning the power inverter.

### CLEANING

- Remove the battery pack.
- Brush or blow dust and debris out of the air vents using compressed air or a vacuum. Keep the air vents free of obstructions, sawdust, and wood chips. Do not spray, wash, or immerse the air vents in water.
- Wipe off the housing and the plastic components using a moist, soft cloth. Do not use strong solvents or detergents on the plastic housing or plastic components. Certain household cleaners may cause damage, and may cause a shock hazard.

### TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Some AC appliances won't start.	The power needed to start some AC appliances may be as much as 2 to 8 times its continuous wattage requirements.	Read the information panel on each AC appliance carefully to accurately determine the tool's input wattage.
"BUZZING" sound in audio systems.	The power supply in the electronic device does not adequately filter the modified sine wave produced by the inverter.	Use a higher quality sound system that incorporates a higher quality power amplified supply.
Television interference.	The inverter is shielded to minimize interference with TV signals. The problem may not be with the inverter. However, in some instances, some interference may still be visible, particularly with weak TV signals.	Position the inverter as far as possible from the television, the antenna and the antenna cables. Use an extension cable, if necessary.
		Adjust the orientation of the inverter, the antenna cables and the TV power cord to minimize interference.
		Make sure that the antenna feeding the television provides an adequate ("snow free") signal and that high quality, shielded antenna cable is used.
		Do not operate high-power appliances or tools when you are watching TV.

WARRANTY

5-YEAR LIMITED WARRANTY

This 80 V Lithium-Ion power inverter is warranted to the original purchaser from the original purchase date for five (5) years subject to the warranty coverage described herein. This 80 V Lithium-Ion power inverter is warranted for the original user to be free from defects in material and workmanship.

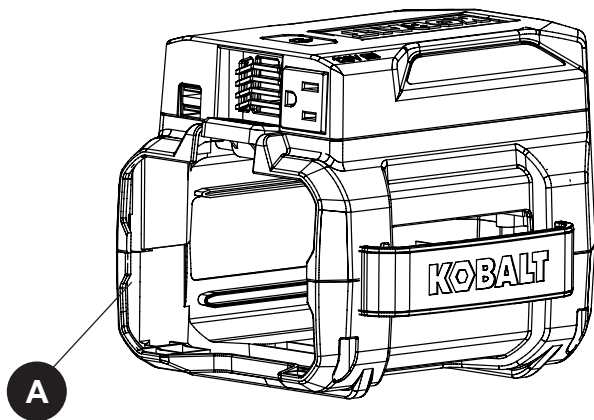
If you believe that the 80 V Lithium-Ion power inverter is defective at any time during the specified warranty period, simply return the 80 V Lithium-Ion power inverter along with proof of purchase to the place of purchase for a free replacement or refund, or call **1-888-3KOBALT** (1-888-356-2258) for warranty service.

This warranty is void if: defects in materials or workmanship or damages result from repairs or alterations which have been made or attempted by others or the unauthorized use of nonconforming parts; the damage is due to normal wear, damage is due to abuse (including overloading of the tool beyond capacity), improper maintenance, neglect or accident; or the damage is due to the use of the tool after partial failure or use with improper accessories or unauthorized repair or alteration.

This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

REPLACEMENT PARTS LIST

For replacement parts, or if you have any questions or issues with this product or would like to speak to a Kobalt product expert, please call our customer service department at 1-888-3KOBALT (1-888-356-2258), 8 a.m. - 8 p.m., EST, Monday - Sunday.



PART	DESCRIPTION	PART#
A	80 V Power Inverter	2912303T