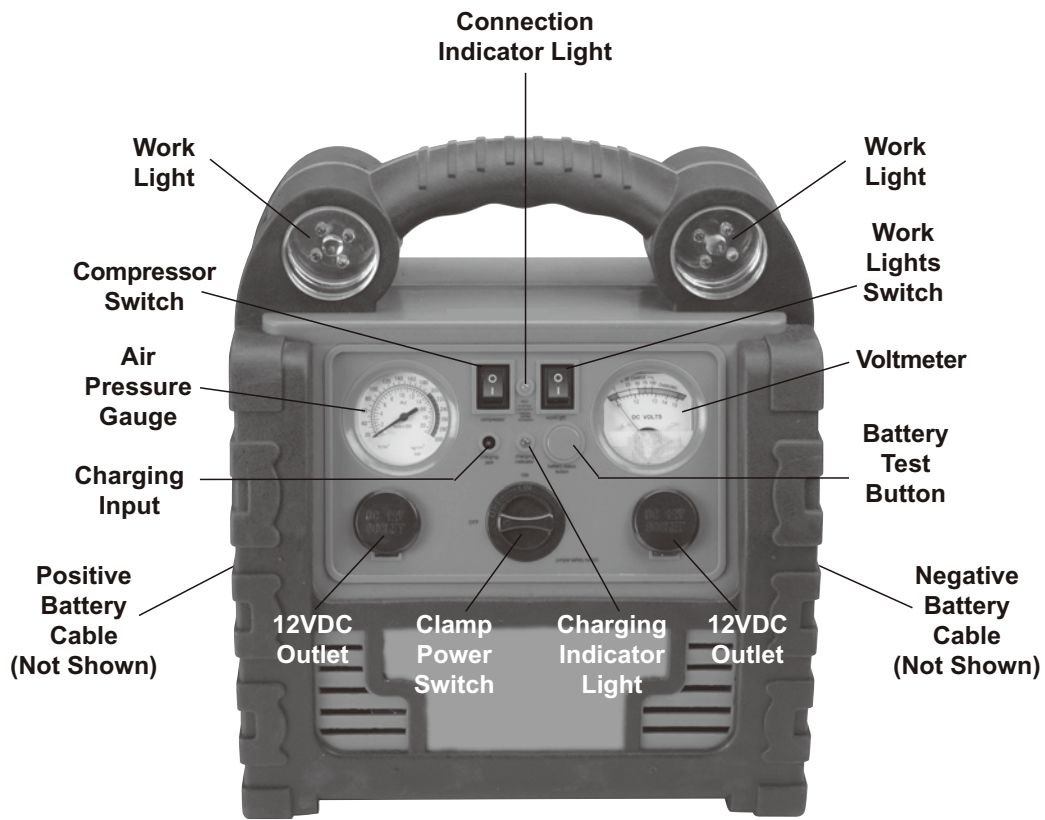
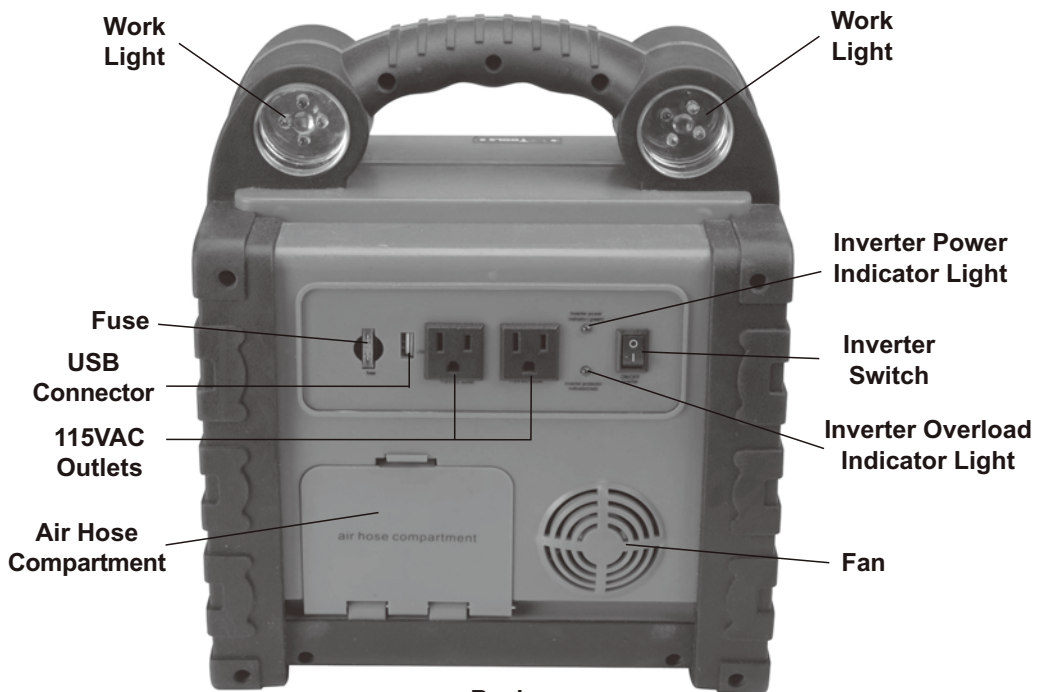


# FUNCTIONS



Front



Back

Figure A

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## CHARGING THE POWER PACK

**WARNING!** Always charge on a non-flammable surface.

1. Press and hold the Battery Test Button on the front of the unit to check the battery power level.
  - a. 13-15 volts is ready for use.
  - b. 12 volts needs to be charged.
  - c. Less than 12 volts should be charged **immediately**.
2. Turn the Clamp Power Switch on front of unit to the OFF position.
3. Plug the 120VAC Adapter into a 2 or 3-prong outlet. (**See Figure B.**)
4. Plug the Adapter cord into the Charging
5. Allow the time needed to charge, periodically checking the Voltmeter. Input on the front of the unit.

**Note:** Before initial use, completely charge the Power Pack as indicated for Initial Charge. (**See Figure C.**)



Figure B

AC Charge Time
Initial Charge: 48 hours
Recharge: 34 hours

Figure C

**NOTE: FAILURE TO RECHARGE POWER PACK WILL VOID WARRANTY.**

6. When the Power Pack is fully charged, unplug the Adapter from the outlet and the Power Pack.
7. Recharge for length of time as indicated for Recharge: (**See Figure C.**)
  - a. When voltage drops to 12 volts.
  - b. After each Jump-Start..
  - c. Once a month.
8. The Charging Indicator light will illuminate when the unit is charging. The Charging Indicator light will turn off when the charging is complete. The Voltmeter must be checked periodically when charging and the Power Pack must be unplugged when the unit is fully charged.

**DO NOT EXCEED MAXIMUM CHARGING TIME.**

## AC APPLIANCE COMPATIBILITY

The Power Pack has two Outlets for AC appliances. The total load from both outlets must not exceed the AC Outlet power listed in the Specifications Chart.

Some appliances may have a high initial surge which may make them incompatible with this unit. Calculate the total wattage needed to start up the appliances, and the total wattage needed to run the appliances before operation.

<b>AC Output Power</b>	<b>Continuous</b>	200W
	<b>Peak</b>	400W
	<b>Voltage</b>	115V
	<b>Frequency</b>	60Hz
	<b>Wave Form</b>	Modified Sine Wave (non-sinusoidal)

Figure D

<b>Typical AC Appliances &amp; Run Times</b>		
<b>Appliance (120VAC)</b>	<b>Estimated Power (Watts)</b>	<b>Estimated Lifetime (Hours)</b>
• Fluorescent Lantern	15	7 hr.
• Electric Bug Killer	40	2 hr. 30 min.
• DVD player	60	1 hr. 45 min.
• Laptop • Radio	75	1 hr. 25 min.
• Electric Blanket	100	1 hr.

Figure E

To calculate the size of the load you plan to use with the Power Pack, use the following formula:

### **Amps x Volts = Watts**

For example, if you have two appliances whose running amps total 1.5 amps, you will need 180 watts of power (**1.5 amps x 120V = 180 Watts**) to run the items continuously. This figure is within the capacity of the unit per “**Continuous**”. (See Figure D.)

However, if the peak power for the items is 4 amps (**4 amps x 120V = 480 Watts**), then the appliances are not suited to this unit. They will draw too much power for the unit to start the items per “**Peak**”. (See Figure D.)

Always calculate the power needed to start up the appliances and to run them before attempting to use the Power Pack for AC appliances.

The following chart shows the estimated power to run some common appliances.

### **Note: Use this chart as a guideline only.**

The actual power usage may vary based on the model or brand of the appliance. Check the actual wattage of your appliances and calculate the amount of power needed to start and run them. (See Figure E.)

The wattage rating of AC appliances is the average amount of power used by the unit. Items such as computer monitors, televisions and appliances with motors draw more power when they are first turned on than the amount of power that they use continuously.

The Power Pack supports a startup surge of up to 600 W, but some appliances exceed this level and will trigger the Inverter’s power overload shut off feature, and cannot be used with this Inverter.

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## Modified Sine Wave

The Inverter can only power AC appliances which are compatible with a Modified Sine Wave (non-sinusoidal).

**Note:** Only multimeters identified as “TRUE RMS” will read Modified Sine Wave voltage accurately.

Modified Sine Wave power is suitable for most AC devices and power supplies used in electronic equipment, transformers, and motors.

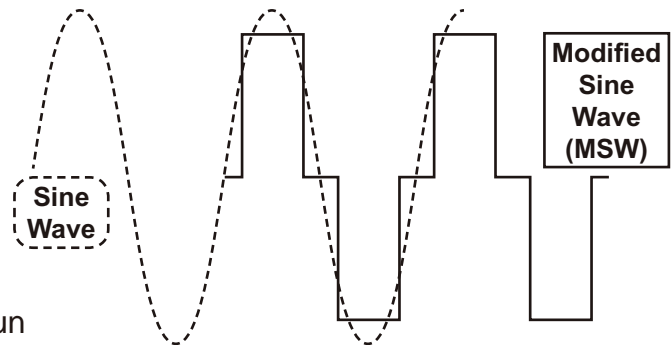
**Note:** Do not use to power sensitive devices such as medical equipment.

Some audio equipment may perform poorly if run on Modified Sine Wave power. Some appliances

can be damaged if used with this Inverter if they are not compatible with a Modified Sine Wave unit. Do not use with the following appliances:

- Electronic appliances which modulate RF (radio frequency).
- Chargers for batteries.
- Metal Halide arc lamps.
- Incompatible speed controllers in fans, power tools and kitchen appliances.

**Note:** if you are not sure if your appliance is compatible with this Modified Sine Wave Power Pack, check with the appliance manufacturer



## DC APPLIANCE COMPATIBILITY

The Power Pack can power a 12VDC auto, RV, marine, or other portable item that draws 12 amps or less. The lower the amount of watts the appliance uses, the longer the Power Pack can power it before needing to be recharged.

The Power Pack has two 12VDC Outlets. The total load from both outlets must not exceed 12 amps or 144 watts. Calculate the total wattage needed to run the appliances before operation. You do not need to calculate startup or surge wattages.

To calculate the size of the load you plan to use with the Power Pack, use the following formula:

**Amps x Volts = Watts**

For example, if you have two appliances whose running amps total 7 amps, you will need 84 watts of power (**7 amps x 12V = 84 Watts**) to run the items. This figure is within the capacity of the unit.

## INVERTER OVERLOAD INDICATOR

The Power Pack is equipped with an Inverter Overload Indicator Light which will illuminate when the battery reaches 11.3V, signalling that the battery is low and the unit will soon shut down to prevent damage to the battery.

If this happens, disconnect any loads in use and recharge the Power Pack.

**Note: When the battery reaches 9.4V, power to the Outlets is automatically shut down.**

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## USING THE WORK LIGHTS

1. To turn the Work Lights on, push the Work Lights Switch to the “I” (ON) position.
2. To turn the Work Lights off, push the Work Lights Switch to the “O” (OFF) position.

## JUMP STARTING A VEHICLE

**Note:** Read the vehicle owner’s manual pertaining to jump starting prior to using the Power Pack.

1. Press the Battery Test Button to verify that the Power Pack is fully charged. Recharge as needed, following the instructions in the Setup section under “Charging the Power Pack” on page 6.

2. Turn off the vehicle ignition switch and all accessories (lights, radio, climate control, etc.).
3. Turn all switches on the Power Pack to their OFF positions.

**WARNING! DO NOT TOUCH POSITIVE AND NEGATIVE BATTERY CLAMPS TOGETHER.**

3. Connect the red Positive Battery Cable to vehicle’s positive battery terminal. Connect the black Negative Battery Cable to a nonmoving metal part of the vehicle.

**WARNING! DO NOT CONNECT TO THE NEGATIVE TERMINAL OF THE BATTERY.**

4. The Connection Indicator Light will illuminate green if a correct connection has been made. If the Connection Indicator Light illuminates red, review and change the connections.
5. When the correct connection has been made, turn the Clamp Power Switch to the ON position.
6. **WAIT FIVE MINUTES**, then start the vehicle. If the vehicle does not start, wait an additional 3 minutes before trying again.

**WARNING! THE VEHICLE WILL NOT START IF YOU DO NOT WAIT AT LEAST 5 MINUTES.**

7. After the vehicle is started, turn the Clamp Power Switch to the OFF position. Remove the black Negative Battery Cable first, and then the red Positive Battery Cable.

## USING THE AIR COMPRESSOR

1. Press the Battery Test Button to verify that the Power Pack is fully charged. Recharge as needed, following the instructions in the Setup section under “Charging the Power Pack” on page 6.
2. Open the Air Hose Compartment on the back of the unit and pull out the air hose.
3. Check the proper inflation level for the object that is being inflated.

## TIRE INFLATION

1. Position the Tire Inflator over the valve stem and push down firmly, making sure it is fully seated.
2. Press down the lever.  
(See Figure F.)
3. Push the Compressor Switch to the “I” (ON) position.  
**Note:** Monitor the Air Pressure Gauge on the front of the unit to avoid over-inflation.
4. When the proper inflation level has been reached, push the Compressor Switch to the “O” (OFF) position.
5. Lift the lever and remove the hose.

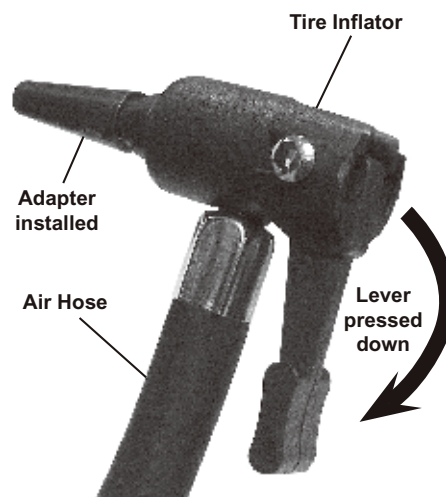


Figure F

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## Using Hose Adapters

1. Three adapters are included with the Power Pack that can be attached to the Tire Inflator.  
(See Figure G.)
2. Attach the proper adapter to the Tire Inflator for the object to be inflated.
3. Insert the adapter into the object's receptacle and press down the lever.
4. Push the Compressor Switch to the "I" (ON) position.  
**Note:** Monitor the Air Pressure Gauge on the front of the unit to avoid over-inflation.
5. When the proper inflation level has been reached, push the Compressor Switch to the "O" (OFF) position.
6. Lift the lever and remove the hose.  
**WARNING!** Do not overinflate any object

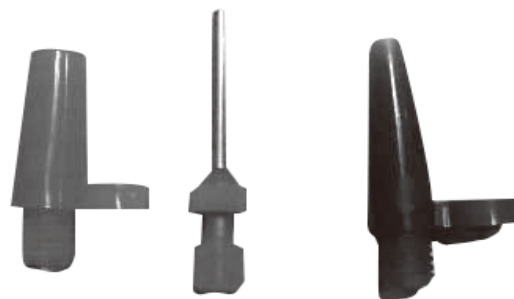


Figure G

## POWERING AC APPLIANCES

1. Press the Battery Test Button to verify that the Power Pack is fully charged. Recharge as needed, following the instructions in the Setup section under "**Charging the Power Pack**" on page 6.
2. Check to make sure the appliance or appliances are compatible with the Power Pack Inverter and the total wattage is within the range of the Power Pack. See Setup section under "**AC Appliance Compatibility**" on page 7.
3. Before connecting appliances, make sure the Inverter Switch is in the "O" (OFF) position.
4. Make sure that the appliance is off.
5. Plug the appliance into one of the 120VAC Outlets.
6. Push the Inverter Switch to the "I" (ON) position. If the Inverter is working correctly, the Inverter Power Indicator Light will illuminate.
7. Turn on the appliance, if the Inverter Power Indicator Light remains on, the system is functioning normally.
8. When finished using appliance, push the Inverter Switch to the "O" (OFF) position and unplug the appliance.

## POWERING DC APPLIANCES

1. Press the Battery Test Button to verify that the Power Pack is fully charged. Recharge as needed, following the instructions in the Setup section under "**Charging the Power Pack**" on page 6.
2. Make sure the total wattage of the appliance or appliances is within the range of the Power Pack. See Setup section under "**DC Appliance Compatibility**" on page 8.
3. Before connecting appliances, make sure the Inverter Switch is in the "O" (OFF) position. Make sure that the appliance is off.
4. Plug the appliance into one of the 12VDC Outlets.
5. Push the Inverter Switch to the "I" (ON) position. If the Inverter is working correctly, the Inverter Power Indicator Light will illuminate.
6. Turn on the appliance, if the Inverter Power Indicator Light remains on, the system is functioning normally.
7. When finished using appliance, push the Inverter Switch to the "O" (OFF) position and unplug the appliance

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## CHARGING USB DEVICES

1. Press the Battery Test Button to verify that the Power Pack is fully charged. Recharge as needed, following the instructions in the Setup section under “**Charging the Power Pack**” on page 6.
2. Before connecting the device, make sure the Inverter Switch is in the “O” (OFF) position.
3. Plug the device into the USB Connector.
4. Push the Inverter Switch to the “I” (ON) position. If the Inverter is working correctly, the Inverter Power Indicator Light will illuminate.
5. When the device is finished charging, push the Inverter Switch to the “O” (OFF) position and remove the device.

## MAINTENANCE AND SERVICING



Procedures not specifically explained in this manual must be performed only by a qualified technician.

### **!WARNING**

**TO PREVENT SERIOUS INJURY: Unplug the Power Pack, turn the Power Switch off and allow Power Pack to cool completely before performing any inspection, maintenance, or cleaning procedures.**

1. **BEFORE EACH USE**, inspect the general condition of the Power Pack. Check for:
  - loose hardware,
  - cracked or broken parts,
  - damaged electrical wiring or cable insulation, and
  - any other condition that may affect its safe operation.
2. Keep unit clean and clamps free of dirt, debris, or grease.
3. For longer working life, protect Power Pack from sunlight and moisture.
4. Replace fuse with same type and rating only.
5. **AFTER USE**, wipe external surfaces of the Power Pack with clean cloth.

## BATTERY DISPOSAL

**WARNING! CONTAINS SEALED LEAD BATTERY. BATTERY MUST BE RECYCLED.**

1. Remove all screws from case and open. Cut wires from battery with insulated wire clippers and remove.
2. Disposing of Power Pack must comply with standards for hazardous waste disposal in your area. Contact your local city government office for the nearest hazardous waste disposal area in your community.