



Portable Generators

A portable generator can be a good temporary power supply for lighting, vital medical equipment, refrigerators, sump pumps and essential appliances — provided it's installed and operated properly. When using a portable generator, it's important to follow the manufacturer's instructions to avoid injuring someone or damaging your generator or appliances. Read through these important safety tips and learn how to select, connect and operate a portable generator.

SELECTING A GENERATOR

Determine the "constant wattage."

When you use a portable generator, you can only operate a limited number of appliances and lights. Determine what items you need to operate and add up that wattage. That total is your "constant wattage" – the energy you will constantly need to keep the selected items running. Need help determining the wattage of your appliances? See our wattage reference guide below.

Determine the "start-up wattage."

Motor-driven appliances, such as refrigerators, freezers, air conditioners and furnace blowers require up to three times their normal wattage to start or to periodically cycle a compressor. Choose a generator that meets or exceeds your "constant wattage" needs and that also has a surge rating that meets or exceeds your "start-up wattage" needs.

Match voltage ratings.

The generator's voltage rating must also match the voltage ratings of the items you want to operate. Portable generators may be rated for 120 volts only or a combination of 120 and 240 volts. Most household appliances are rated at 120 volts. Some larger electric appliances, such as ranges, dryers and well pumps, are rated at 240 volts. These appliances cannot be operated on a 120-volt generator.

CONNECTING A GENERATOR

Get some expert advice.

If you purchase a generator, have a qualified electrician properly size and install it. If you install the generator yourself, have a local electrical inspector check the installation for compliance with safety codes. A permit may be required for installation. If you're renting a generator for temporary use, choose equipment that is properly sized for your needs and that comes with complete operating instructions.

Prevent backfeed.

Backfeed occurs when an improperly connected generator begins feeding electricity back into the power lines. Protect repair crews and your neighbors. Backfeed can seriously injure, or even kill. It can also cause damage to

the generator when electric service is restored. To prevent backfeed and operate your generator safely, we recommend you use one of the following hookup methods:

- **Use a transfer switch.** Have a qualified electrician install a transfer switch. This is the best form of protection from backfeed. The transfer switch closes the path of electricity between our lines and your main electrical panel and opens the path between the generator and the panel.
- **Use a direct hookup.** If you do not install a transfer switch, plug the appliances you want to operate directly into the generator. For an extra measure of safety, switch your main fuses or circuit breakers to the "off" position.

WATTAGE REFERENCE GUIDE FOR PORTABLE GENERATORS

APPLIANCE	AVERAGE WATTAGE*
Air Conditioner (6,000 Btu)	750-1,200
Air Conditioner (12,000 Btu)	1,700
Freezer	500
Furnace** (1/3 HP)	1,200
Lamp	Check bulb wattage
Microwave	700
Radio	50-200
Refrigerator**	600
Space Heater	1,300
Sump Pump	250-600
Television	200-500
Window Fan	200

*Appliance wattages vary. These figures represent averages only. **Allow up to three times the normal running watts for starting these appliances or cycling their compressors.



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Portable Generators (cont.)

HOW TO CALCULATE WATTAGE

If you are unable to easily locate the appliance wattage, you can calculate it yourself. Look for labels inside or on the back of the appliance, check operating manuals or contact the manufacturer. Find the AMP and VOLT listings for the appliance.

AMPS X VOLTS = the constant wattage of your appliance

Remember, motor-driven appliances like refrigerators, freezers, air conditioners and furnace blowers, require up to three times their normal wattage to start or periodically cycle a compressor.

OPERATING A GENERATOR

Read all instructions.

Be sure you understand them before hooking up the generator. Follow the manufacturer's instructions to properly ground the generator.

Maintain adequate ventilation.

Generators emit carbon monoxide. Never operate a generator in your home, garage or other enclosed building. Place it in a dry, outside location.

Handle fuel carefully.

Turn the generator off to refuel. Gasoline and its vapors may ignite if they come in contact with hot components or an electrical spark. Store fuel in a properly designed container in a secure location.

Water conducts electricity.

Avoid dangerous electric shocks. Make sure that your hands are dry and you're standing in a dry place whenever you operate the generator.

Protect your appliances.

Turn off or disconnect all appliances and lights before you begin operating the portable generator. Once the generator is running, turn your appliances and lights on one at a time to avoid overloading the unit.

Share the power.

If your electric load is greater than your generator's capacity, temporarily disconnect some appliances and lights and connect others. This shared approach may help maintain temperatures in freezers and refrigerators while alternately operating sump pumps or furnaces until power is restored.

Use the right extension cord.

Use only UL-listed, three-prong extension cords. Be sure the extension cord is the proper size (wire-gauge) to handle the electric load that will be plugged into it.

WHEN POWER IS RESTORED

If you hooked up your generator using a transfer switch, shut the generator off in accordance with the manufacturer's instructions. Then turn the transfer switch off to resume normal power supply from our lines.

If you have used a direct hookup, first turn off or unplug all lights and appliances operated by the portable generator. Next, disconnect the generator in accordance with the manufacturer's instructions. Return the main fuses or circuit breakers to the normal "on" position. Finally, plug in and turn on your lights and appliances.



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