

Generator Safety

Generators are used by many amateur radio operators to power their homes and radio stations when commercial power is disrupted. When generators are needed they are often set up and used in an improvised manner. Careful planning is required to operate generators safely and efficiently and to avoid problems that can result in damage to the generator itself, connected devices, wiring and nearby structures as well as physical harm to persons and pets.

Generators, like any internal combustion engine, produce carbon monoxide that is harmful or fatal to living beings. Generators should be operated outdoors, away from buildings occupied by persons, pets or livestock. Generators should not be operated inside unoccupied structures such as a detached garage, shed or other outbuilding as these structures trap and concentrate deadly gases.

Generators produce heat and should be operated a safe distance away from combustible materials.

Generators should be permitted to cool before refueling. Gasoline has an ignition point of -45 F and an autoignition point of approximately 500 F. Spills on a hot engine may easily produce a deadly fire. Proper handling and storage of fuel is also of the utmost importance.

Careful calculations must be made regarding the generator's electrical rating, including surge and continuous load capacities, and the equipment connected to the generator.

Another important consideration is the use of appropriately rated, three wire extension cords for the loads connected to your generator.

The NEC prohibits connecting generators directly to the wiring of any structure unless there is an approved open-transition transfer switch to prevent the structure from being fed by both the generator and the commercial power grid and to prevent the generator from backfeeding electricity into the commercial power grid.