

Subject: AC Generators – Lessons Learned the Hard Way
Date: 10 Sep 06

Gasoline and diesel engine AC generators can cause one annoying problem. They can frequent burn out sensitive lighting equipment. If for example one finds that the ballast in florescent lighting is burning out frequently, then measure the AC Voltage of your generator under a typical load. More than likely you will find the voltage is well above normal.

The speed of the engine must then be adjusted at the carburetor. Some times a tab (with spring going to the throttle valve) needs bending other times it can be adjusted by a screw. Loosen lock nut and adjust throttle running speed screw for a speed that gives the normal voltage. This screw typically has a spring that goes to the throttle butterfly valve. The voltage should be between 115volts to 120 Volts for USA power.

Don't worry about frequency. Most items are not sensitive to frequency. If you want to measure frequency then compare an AC clock to a battery operated clock over 100 minutes and compare the times of both. Running slow on AC would indicate lower than normal frequency.

Example: Of the 3 small backup gasoline generators at our remote survival site only one was adjusted from the factory close to 120 volts. One was found to be as high as 135 volts and was knocking out florescent shop light ballasts frequently. What we found was the surging of the engine when the generator was running out of gasoline, along with the higher running voltage of 135 volts, was enough to knock out the florescent light ballasts.

One should attempt to shut off the generator before it runs out of gasoline. One can set a timer to remind when to shut it down. The surging that goes on when it runs out of gasoline is not good for all items turned on at the time. However, if one keeps the voltage at or below 120 Volts at the generator then in most cases most items will not burn out if occasionally you run out of gasoline.