



## Operating the LitePOWER 20K Generator

---

**Warning: The rear lid must be opened prior to starting; and must remain open while the generator is running. NEVER run the generator with the rear electrical compartment cover removed.**

- Make sure generator is on level ground.
- Check oil. The dipstick is located in the left side compartment next to the main breaker. Use only Rotella-T, 15W-40 oil.
- Check radiator coolant. If coolant is visible in the plastic recovery tank, you are OK. If a little is needed, put it in the recovery tank and it will work its way into the system. The coolant recovery tank is mounted inside of the front hood, but can be viewed by opening the top lid and looking through the opening in the front of the compartment.
- Open rear lid.
- Make sure the circuit breaker handle is in the OFF (down) position.
- Set the Power switch to ON.
- Start the engine by setting the OFF/RUN/AUTO switch to RUN. Normally the engine will start immediately. Note that there is no idle or slow speed mode. The engine will go to 1800 RPM. If the engine fails to start, the system will turn off the starter, wait several seconds and automatically resume cranking.
- Allow the engine temperature to rise to about 170 degrees before applying load.
- While the engine is warming up you may connect your cables to the output panel.

### PLEASE FOLLOW THESE SAFETY INSTRUCTIONS:

- A. Make sure that the circuit breaker handle is in the OFF position.
  - B. Connect leads in the following sequence:
    - Ground
    - Neutral
    - Leg 1
    - Leg 2
  - C. DO NOT use circuit breaker to connect or disconnect a load unless it's an emergency disconnect.
- 
- After the engine is at operating temperature, turn the circuit breaker handle to the ON (up) position. **YOUR CABLES ARE NOW LIVE!**



- Adjust Voltage pot at the display panel to desired output voltage.
- After the load has been shut off, continue to run the generator for at least 10 minutes to allow the components to cool down.

**NOTE:** The LitePower 20K generator is wired for Single-Phase. This gives you 83 amps @ 120 volts per leg. The circuit breaker is pre-set at 90 amps.

### Output display and Fault System

- Engine and generator functions are continually displayed in two rows of information. In addition, total running time, time to next service, preset points and sending unit diagnostics are available by placing the RTM switch in the up position.

**CAUTION:** Do not hold the RTM switch in the UP position for more than one scroll at a time of the information. Release the switch after each viewing.

The top row of the display shows generator outputs. Voltage, Amperage and Cycles (Hz) are monitored for each leg. A number will be displayed under the phase sign that tells which leg is being monitored. This display continually cycles reading leg one, leg two, leg three and back to leg one. An individual leg can be continually monitored by placing the RTM switch in the Scroll Lock position. The readings are leg to neutral with one exception. When the generator is running in single phase and the number three is displayed under the phase sign, you are reading the sum total of the voltage on leg one and leg two. No amperage will be displayed at this point.

The bottom row is engine outputs. Oil pressure, percentage of fuel remaining, water temperature and battery voltage are displayed.

**If any of the displays are flashing, a pre-fault condition is present.**

- The generator is equipped with a fault shut down that will turn off the generator if any of the systems go outside the parameters that are set in the software. The preset points may be displayed by placing the RTM switch in the up position. If the generator shuts down because of a fault, the display panel will display the reason. The generator will shut down under the following conditions:
  - A. Low oil pressure
  - B. Low fuel level (00%)
  - C. High coolant temperature
  - D. Over speed
  - E. Over crank
- The generator is also equipped with a pre-fault alarm that will alert the operator of a potential problem in the areas listed below. A pre-fault condition will not shut the generator down. If a pre-fault condition occurs, the appropriate display will flash and the yellow pre-alarm lamp will turn on. Pre-fault conditions are:
  - A. Low oil pressure
  - B. Low fuel level (15%)
  - C. High and low battery voltage
  - D. Oil pressure sending unit failure
  - E. Coolant temperature sending unit failure