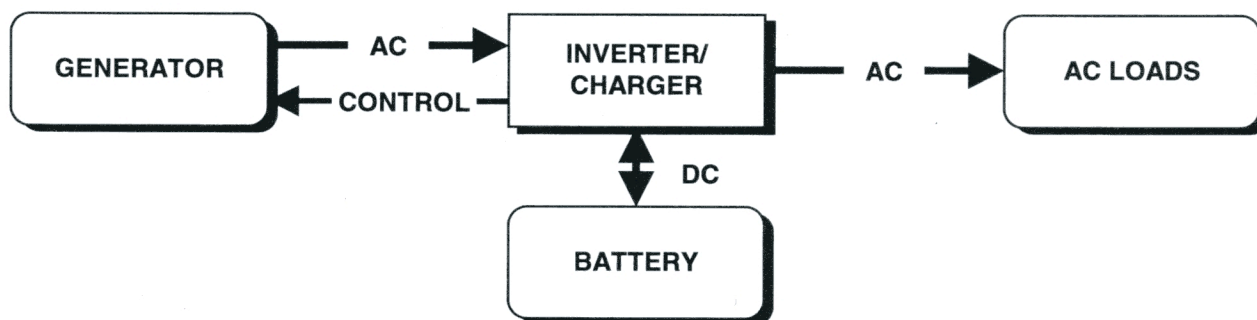


AUTOMATIC GENERATOR CONTROL MODE



IN BRIEF

Automatic start/stop control of a back-up generator can be used with any of the other operating modes. If used with an application that includes utility power, the generator will be started only if the utility power is not available. It is not possible to use both generator and utility power at the same time. If the generator is manually started while the inverter is connected to utility power, the inverter will ignore the generator and not connect to it. With utility power connected to the **AC HOT IN 1** terminals, the automatic generator start and stop control is disabled.

Extensive control of automatic generator operation is available through the items under the menu headings **GEN AUTO START SETUP (12)**, **GEN STARTING DETAILS (13)** and **GENERATOR TIMER (7)**. The generator can be set to start based on four different low battery voltage levels with different delay times for each. A quiet time period can be set that restricts the generator from starting during defined hours of the day. The generator will be started during the quiet time period only if the battery voltage reaches the setting of the **SET LOW BATTERY CUT OUT VDC MENU ITEM** for a continuous 30-second period of time.

To operate in this mode the system must be set-up as follows:

- Connect the generator AC output to the inverter's **AC HOT IN 2** and **NEUTRAL IN 2** terminals.
- Connect the AC loads to the inverter's **AC HOT OUT** and **NEUTRAL OUT** terminals.
- Select **AUTO** from the **SET GENERATOR** menu item, accessed by pressing the green **GEN MENU** button. The **AUTO** mode is disabled if the **CHG** mode under **INVERTER MODE (1)** menu heading is selected.
- Adjust the battery charger parameters to match the requirements of the batteries connected (if the factory defaults listed in the technical section are not satisfactory).
- Adjust the **SET GEN (AC2) AMPS AC** menu item, located in the **AC INPUTS (11)** menu heading, to the continuous output ability of the generator. This allows the generator support feature to function correctly, preventing the generator from being overloaded. The generator's output should be derated for altitude and if propane or natural gas is powering it. It is best to error on the low side for this setting, or to experiment with higher settings after the system has been operational.
- Adjust the **SET INPUT LOWER LIMIT VAC** menu item, located in the **AC INPUTS (11)** menu heading, to the lowest AC voltage that the AC loads can tolerate. If the generator is pulled down to this level while powering a load, the inverter will back-off its battery charging or even operate in parallel to reduce the load on the generator. Keep in mind that when the inverter supports the generator it uses energy from the batteries to power the AC loads. Therefore, when generator support occurs, the batteries can be discharging instead of recharging even though the generator is running.
- Adjust the **SET INPUT UPPER LIMIT VAC** menu item, located in the **AC INPUT (11)** menu heading, to the highest voltage that the generator will be allowed to operate without being considered out of tolerance. At this voltage the inverter will disconnect to protect the AC loads. When the voltage returns to the operating window, the inverter will require a minimum of 20 seconds to re-synchronize and connect the generator to the loads.