

Startup and Shutdown Procedure (assumes wiring and setpoints have been checked)

STARTUP:

- 1) Keep the water valve to the turbine CLOSED to start.
- 2) Check that all switches on the control panel are OH-. This includes the 3-pole power input from the turbine, the switch connecting the charge control to the battery, and the inverter disconnect (if an inverter is present).
- 3) Turn the Midnite Classic battery switch ON. Wait as the controller powers up. Note battery voltage and other values. All information about system performance is found on this Classic display panel.
- 4) Turn the large inverter battery switch ON (assuming there is an inverter in the system).
- 5) With the water valve CLOSED, turn the 3-pole switch from the turbine to the ON position.

ALWAYS CONNECT CONTROLS BEFORE STARTING THE TURBINE !

- 6) Now open the water valve until the turbine begins to turn at a slow speed. Note the values shown on the Midnite Classic display, particularly the watt output from the turbine and the incoming voltage.
- 7) Open the water valve until the turbine is running at an intermediate speed. Note values as above.
- 8) Open the water valve fully until the turbine is running at highest speed. Note values as above.
- 9) Once the system is operating, you should keep an *eye* on battery voltage for a day or two, to see the maximum battery voltage reached. This should match the BULK voltage setting on the C40 control.
- 10) Over time you may discover that the turbine produces more power than you are using, as evidenced by batteries always at a full charge and the diversion regulator always dumping power to the diversion load. If this is the case, you may wish to close the water valve somewhat to lower output and conserve water.

SHUTDOWN:

- 1) To shut the system down, first slowly close the water valve to stop the turbine. Once the turbine has stopped, you can safely turn OFF the control and/or inverters as needed. *Do not turn controls OFF until the turbine has stopped, or the turbine may overspeed and damage equipment from high voltage !*

ALWAYS STOP THE TURBINE BEFORE DISCONNECTING CONTROLS !

ALWAYS CONNECT CONTROLS BEFORE STARTING THE TURBINE !