ANALYTIC SYSTEMS
Power Conversion Solutions
Quality Since 1976
main • (604) 543-7378
toll free • (800) 668-3884
fax • (604) 543-7354
#207 12448 82nd Ave
Surrey, BC V3W 3E9 Canada
www.analyticsystems.com

Inverters and Navigation Computers

By JIM HARGROVE <info@analyticsystems.com>

Navigation Computers are becoming very popular as the major source of chart and navigation data for commercial and pleasure vessels alike. These computers typically need AC power to function. A common mistake is to plug the computer and monitor into a large Inverter or Inverter/Charger usually found on board. Two problems arise.

The First Problem is a momentary loss of power when some large load such as a fridge compressor starts, someone uses an electric drill, or simply places a cup of coffee in the microwave. The result: a crash! If the computer is interfaced to the autopilot, there is also a loss of control. Windows is very sensitive to crashes and rebooting including disk repair is very time consuming. The navigator is concerned with getting the computer back on-line and not paying proper attention to his surroundings. All of these are navigation hazards that should be avoided.

The Second Problem occurs when shore power is connected to the vessel. The Inverter/Charger changes to its charging function, and shoreside AC is permitted onto the vessel. If the vessel is the last on the dock, the AC is very poor, full of sags, spikes and waveform distortion from the loads applied by the other vessels. The possibility of damage to the expensive navigation computer is very high.

The Wrong Solution around these hazards is to purchase an inexpensive UPS from your local computer store. These UPS's were designed for use on sine-wave AC from the local power company. As the vast majority of inverters in service are Modified Sine-Wave, the UPS cannot correctly identify loss of AC and can even be damaged by the inverter. Nor are they made of materials intended for the Marine Environment. They are NOT a good solution for marine applications.

The Right Solution is to use an Analytic Systems 300 or 600 watt PureSine or Q'Sine Inverter as a dedicated source of power for your navigation computer. This guarantees clean correct power to your computer at all times whether at sea or at the wharf. With a PureSine inverter, you are guaranteed to eliminate power related problems with your computer due to the extremely pure AC waveform and crystal controlled frequency. And our Q'Sine inverters are of such good quality that many users have had great success using this series for their computer power at a significant savings.

300 Watts provides sufficient power for the typical computer-monitor combination, and also enough for a small ink-jet printer. 600 Watts provides extra power for a 2nd computer or a laser printer.