

1. Will the gyro affect my engines in any way or the warranty?
 - a. Operating the gyro from the house batteries through a true sine inverter will not harm the engines or charging system. For specific questions about compatible batteries and warranty, check with your engine manufacturer.
2. Do the engines have to be running at speed to create power or can they be idled?
 - a. The engine alternators will produce power at low idle speed. Increasing the idle speed, trolling or running at higher speeds will increase the alternator output. The gyro display will indicate the battery voltage at the gyro, so you can determine if the house batteries are being charged or discharged. For AGM batteries, voltages above 12.1 indicate charging. For Lithium Iron Phosphate batteries, voltages above 13.1 indicate charging.
3. Will the batteries charge from the shore power or will they drain and have to be recharged solely from engines?
 - a. Shore power charging is recommended between uses to fully charge the house batteries. Leaving AGM batteries in a discharged state for extended periods of time will decrease their capacity and life. An appropriate battery charger for the house battery must be installed for shore power charging.
4. What additional parts do I need to complete the gyro installation?
 - a. Refer to 90358 SEAKEEPER 3DC Common Electrical Installation Parts for a complete list, please note that the parts list contains parts for various installation options and not all parts on the list are required. The main parts are:
 - i. True Sine Inverter 1000W or higher
 - ii. Additional house batteries
 - iii. Seawater pump and strainer
5. How do I determine how many house batteries to install?
 - a. Typical installations require two additional 92AH batteries for the gyro installation. The house battery size should be determined based on the charging system, electrical loads and intended use. Depending on sea state, the gyro will consume between 580 and 1030 W (45-85 A at 13.5V DC) from house battery when operating on a true sine wave inverter.
6. Should I use AGM or Lithium Iron Phosphate house batteries?
 - a. Most installations will work well with AGM batteries. If there are requirements to operate the gyro for more than 3 or 4 hours from the batteries without any alternator charging, then Lithium Iron Phosphate should be considered for the house battery. When considering Lithium Iron Phosphate, check with your engine manufacturer for compatibility and warranty coverage.

7. Can I spool the gyro up on battery power only?

- a. The gyro can be spooled up on battery power, or with the engines on and operating at any speed, or when connected to shore power. Spool up on shore power or with the engines running will reduce the amount that the batteries are discharged.

8. Why do I need to add a seawater strainer?

- a. The seawater strainer is required to keep debris from plugging up the passages in the gyro's heat exchanger. Operation without a strainer will eventually cause a failure of the cooling system.

9. Can I power other equipment with the inverter?

- a. If the inverter will power more equipment than just the Seakeeper gyro, the inverter must be sized to handle the total power requirement.

10. Why won't a Modified Sine Inverter work with the Seakeeper gyro?

- a. The Seakeeper gyro's AC electronics require a pure sine wave input, just like the AC power from a land-based grid, or it will not operate.

11. What happens if house battery gets fully discharged?

- a. The gyro will automatically reduce its power consumption when it detects a battery voltage below 11.1V DC. The voltage can be increased by turning the engines on, increasing the engine RPM and or reducing other electrical loads on the boat. If the voltage remains low for over an hour, an alarm indicating low DC voltage will be displayed. The gyro can be started again once the batteries are charged and the battery voltage increases.

12. Should I raise the idle speed of my engines if the battery is discharging?

- a. Yes, increasing the engine idle speed to 1000 RPM will significantly increase the alternator output compared to low idle.