

Technical Note

Link 2000

512-0095-01-01 Rev 1

Monitoring a House Bank and an Engine Battery

Introduction

A popular design for primary DC electrical systems consists of a single large deep cycle house bank and a dedicated engine starting battery/bank, with an emergency parallel switch for starting the engine from the house bank if necessary. In this type of system, all the house DC loads are placed on the house bank, and the engine start battery is isolated and reserved for engine starting only. This type of system has several advantages including simplicity of design, ease of use, and reliable operation. The Link 2000 is designed to monitor two deep cycle battery banks, but can also be installed and used to properly monitor both banks in this type of system.

Installation

The attached wiring diagram shows how to install a Link 2000 for monitoring this type of system. To ensure complete charging of the house bank and for proper regulation of the charger, the house bank needs to be considered as Bank #1 as far as the Link is concerned. Also, Bank #2 needs to be disabled as a control input for charger control. To set this parameter on Links below serial number 4000, refer in the manual to a feature called "defeating battery #2 for control." On Links with serial numbers above 4000, set function F-11 (battery #2 used for control) to OFF.

In this system the inverter is connected directly to the house bank through a fuse. The house DC distribution system is also connected directly to the house bank through a master breaker and possibly a battery switch. For charging both banks from an alternator, a battery isolator can be used as shown. To charge both banks from either the alternator or the charger, a battery combiner or slave charger such as the Xantrex echo-charge can be used. In this case, the alternator would be connected directly to the house bank since this is where most of its current needs to go anyway, and the BC will take care of getting some of the charging current from either the alternator or the charger over to the engine bank.

The emergency start switch is only closed when starting the engine from the house bank is required. This switch can be a manually actuated one or can be eliminated by using the boost start solenoid in the PathMaker instead.

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Contact information:

Phone: 1-800-670-0707 (toll-free in North America)

Fax: 1-604-420-2145 (outside North America)

Email: CustomerService@xantrex.com

Web: www.xantrex.com