


HOW WE TESTED

Field Testing e-Power

In order to get an accurate feel for the relationship between the amperes consumed and the thrust developed, testers installed a new 48-volt DC North Star Energy 1 battery bank on a Cape Dory Typhoon daysailer (14 feet LWL, 2,000 pounds displacement). The system was equipped with amp- and volt-meters, and a portable GPS was used to measure the boat's speed over ground (SOG). (For more on the battery bank setup, see "The Battery Tank," page 21.)

Test runs were made in calm conditions during times of slack water. Each measured run was made over 0.25 nautical miles, and the test boat entered the run at a specific speed and maintained that velocity for the quarter mile. The ampere

 VALUE GUIDE	SOLID NAV TRAVELER					
AMPERES	10	20	30	40	50	60
BOAT SPEED (KNOTS)	1.4	3.6	4.2	4.6	4.8	4.9
RUN TIME (HOURS)	7.1	3.3	2	1.2	1	0.8
FINAL VOLTAGE (VOLTS)	43	43	43	43	43	43

consumption was noted, and a speed-versus-current draw relationship determined.

Engine tilt and vessel trim were experimented with and held constant in their optimized position during final testing. Prior to each set of evaluations, batteries were charged overnight and the "no load" voltage at the start of each test was stabilized at 50.5 volts DC (+ or - .2 volts).