

Wednesday, July 28. 2010

Second thoughts about the batteries

Current draw (@ 12V) Radar 2,4A Autopilot 1,7A Chart plotter 0,8A Stereo 0,8A Lights (night) 0,8A Navigation lights (night) 0,3A VHF Radio 0,2A AIS 0,2A Navtex 0,1A Sounder/Log 0,1A Sum 6,6A ! Ever since I've ordered the batteries I've been thinking. Something doesn't feel right. Adding more batteries is one way to deal with the power consumption. But is it the right way? I don't think so. I should reduce my power consumption, and not buy bigger batteries. Actually, all I really need during a crossing is the Sounder/Log, the AIS, Navigation lights and a little light inside. That adds up to a current draw of 0,5A during the day (6W) and 1A during the night (12W). However, in addition to what I have I would need a little device to show my GPS position and sound an AIS warning, because I would keep the power-hungry chart plotter turned off. Hmm. Actually ... I have a Lego Mindstorms NXT "intelligent brick" with me. With a interface converter from RS-232 to RS-485 and "a little programming" to parse the NMEA data from the AIS engine that should be able to do the job just fine. And it only draws 0,1A. Come to think about it, I also have a compass sensor for it, hehe. Hey, this is cool! So here's the plan: I'll cancel one of the batteries, 3x168Ah is enough. And turn my LEGO NXT into an AIS display. Should it turn out that I "can't live" without the stereo, chart-plotter (not much to plot on an ocean) and radar, I'll get an Ampair towed water generator.

Posted by Axel Busch in Gudrun V at 03:17

big lol, somehow these topics sound soo familiar...
Can't you sent some of the things to sleep and only wake them up in intervals?

And now a little question:
what's A/h? as A is C/s this would be $C/(s^2 \cdot 3600)$
And under headline power consumption you list current, tststs,

Do I need to fret about Gudrun's further electrical future?

...interesting that sailing comes so much down to electrical engineering, love it
Anonymous on Jul 28 2010, 23:46

Ah, yes. I can see how A/h is very confusing. It's better known as a "boaty". A brand new SI unit that was introduced to specifically measure the power consumption on sailing boats.

It saves the electrically ignorant (and 14 to 16 year old girls) the hassle of having to divide the actual power consumption (in Watts) by 12 (Volts) to calculate the expected current draw on their batteries. And it frees you from the responsibility to actually match the unit and verb to the number correctly, because the result is always measured in "hours until next engine run" (also known as motor-sailing). Very convenient. Things are so much more relaxed on a boat .

As normal people (and highly trained engineers like you) can not be expected to know these things, I rewrote my entry. I hope both "worlds" understand now :-p.
Anonymous on Jul 29 2010, 02:26