

Graphical Battery Monitor

My first application for the ebm, written as an exercise to learn C++ and the ebm API. Idea based on the original Battery Monitor app (www.geocities.com/ebmstuff/). I tried writing to the author of that app to suggest the graphical display idea, but was unsuccessful, so I set about writing it myself from scratch.



[Download BatGraph 1.7](#)

[Version Française!](#)
(F. Veysseyre)

- monitors the state of the eBookMan battery
- plots battery voltage (in black) and percentage remaining (in grey)
- data is immediately stored in a separate file so that they remain available even after power downs, sync sessions, battery replacements, OS crashes
- uses no processing power
- set an alarm if the battery voltage falls to a specified level
- is automatically launched after sync operations and system reboots to continue collecting data
- data collection is suspended when on USB power - only true battery time is recorded and plotted, so stopping the program while connected to USB power is unnecessary
- ebm will automatically stay awake when connected to external power, saving batteries. The BatGraph app is ideal for including this function, because it is already running in the background and monitoring the power source. **See note** on Awake and BatGraph later.
- remaining time is estimated and displayed

Note: If you run the monitor without pressing the New Battery button for many battery sets, the data array may fill up. The time will automatically revert back to zero after 33h and 58 minutes. A popup message will warn you about this.

Battery voltage tends to fall quickly from its freshly charged value to a plateau where it remains for the life of the charge, slowly falling. Near the end, it will drop away from the plateau quickly again. For both NiMH and Alk. battery types, 2.0V corresponds to 0%.

BatGraph vs Awake: [Whitware](#) first published the idea of keeping the ebm awake at all times with the app called Awake (Yahoo msg #4043). Robert Sawyer queried if this would save battery power when connected to USB power, because the ebm still draws from the battery when off even though it is still connected to the USB (Yahoo msg #4044). A new version of Awake was then published that would not keep the ebm awake when running on batteries. Since I have been using this exact same idea just for testing BatGraph for many months prior to this, but never included that feature in release versions, and after the positive response of users to Awake (e.g. Yahoo msg #4047), I decided to also make that feature available in BatGraph 1.6.

To sum up, Awake and Batgraph do exactly the same for keeping the ebm awake when connected to the USB, while BatGraph gives the additional info about battery usage. If you don't like to use BatGraph, use Awake. If you want the battery data, use BatGraph. There is no point in using both simultaneously - that is redundant.

If you have **more questions**, check these messages at the [Yahoo ebm Group](#): 4502, 4507, 4517, 4529, 4777, 4820, 4823, 4825, 4827. There are also many earlier message on this topic, starting at msg #4043.

Release history:

V1.7: 10 Feb '03 - Fixed zero minutes bug in low battery warning popup window. Increased total time to 33h58m. Included automatic back to zero if data array fills up.

V1.6: 20 Nov '02 - Implemented awake function. Estimated remaining time displayed.

V1.5: 7 Sep '02 - Implemented date display with Franklin's international language package.

V1.4a: 1 Sep '02 - Fixed small bug with date display and screen refresh on choosing new battery

V1.4: 30 Aug '02 - Changed plotted traces to battery voltage and real percentage (using NiMH calibration). Traces are smoothed using moving average filter. Simplified starting date display.

V1.3: 16 May '02 - Implemented user definable battery level alarm. Battery type stored. Alarm level stored. Minor cosmetic changes.

V1.2: 27 Mar '02 - Fixed a bug that would overwrite ebm data file on sync (reported by Jim "jhw549"). Added battery choice feature - suggested by Mark Buffy (does not save setting at this stage - data not affected). Added 30% battery alarm - suggested by Jeff Sharpe.

V1.1: 5 Mar '02 - Added the auto-launch feature - suggested by Jeffrey G. Sharpe of Franklin. Fixed a bug that caused new battery data not to be displayed immediately on starting a new battery.

V1.0: 24 Feb '02 - First release.