Errata

Known Problems and Conflicts

Magic Menus (part of StuffIt Deluxe)

There is a conflict with this control panel, that causes MyBattery to unexpectedly quit if the "Cancel" button is pressed in the Preferences dialog.   Other problems may also exist.   I am currently trying to work with Aladdin to resolve this bug.   Until then, the only recourse is to turn off Magic Menus through its control panel.

Registration and disk compactors

Several users have reported that disk compression utilities can prevent proper registration.   If you are using an automatic disk compression utility, you should exclude MyBattery from compression until after you have registered it.   For example, if you are using AutoDoubler to compress your hard drive, you should expand MyBattery before attempting to register your copy. This problem does not appear with "drive-level" compression utilities, such as TimesTwo and Stacker.

CursorBeacon CDEV

Bill Monk's CursorBeacon is a freeware control panel that lets you find your cursor on PowerBook or large displays.   Several users have reported that if you activate the CursorBeacon with MyBattery in the foreground, MyBattery will unexpectedly quit.

Apparently, CursorBeacon "steals" free memory from the current application.   MyBattery has just enough memory allocated for its own use; this conflict can be easily fixed by allocating more memory to MyBattery.

1)   Quit MyBattery, if it is currently running.
2)   Locate your copy of MyBattery.
3)   Click on the application icon once to select it.
4)   From the File menu, choose "Get Info".
5)   Move the cursor to the "Suggested Size" text field, and increase the current number by 10k.
6)   Close the window.

The next time you run MyBattery, it will consume a little more memory, but the conflict with CursorBeacon will be fixed.

Menu bar conflicts

The menu bar is the one constant among all Macintosh applications.   Many software programs use it to display additional information.   These applications sometimes try to use the same space as MyBattery, which can cause menu bar display conflicts.   For example, Apple's AppleShare

uses the left side of the menu bar to indicate if information is being transmitted or received by your PowerBook over the AppleTalk network, which can interfere with MyBattery's left menu display.

There is no simple solution, other than turning off menu bar displays, which isn't much of a solution at all...

HP PaintWriter Drivers

One MyBattery user has reported a conflict with the Hewlett Packard PaintWriter driver software.   He noticed an unusual problem with the MyBattery Preferences dialog.   When he upgraded the drivers to a new version, the problem went away.   Therefore, if you are noticing a black box being drawn in the lower right corner of the "Preferences" dialog, covering the "OK" and "Cancel" buttons, you should upgrade your PaintWriter drivers to 3.0.7b.   Thank you, Mike!

Troubleshooting

While I have attempted to test MyBattery as thoroughly as possible, there is no way of testing all the possible configurations.   If MyBattery is operating erratically, it is always possible that some piece of software is interfering with it.

Occasionally, it is possible that the "MyBattery Data" and "MyBattery Preferences" files can become corrupted, if your Macintosh crashes while these files are open (MyBattery periodically updates these files).   If you are getting internal MyBattery errors, try deleting these files from your "System" folder (or "Preferences" folder under System 7).   The errors should disappear.

Application interference

If MyBattery is operating erratically with other applications running, note the other applications that are running.   Next, restart your computer and try running MyBattery by itself.   If the problem does not appear, try running the same applications, one by one.   When you isolate the problem application, drop me a note and let me know what it is!

INIT/CDEV/Extension interference

If MyBattery continues to operate erratically, an INIT, CDEV or system Extension (collectively known as extensions) may be interfering.   First, restart your machine while holding down the SHIFT key.   A message will come up stating "Extensions off".   Try MyBattery; if the problem doesn't appear, it is most likely an extension causing the problem.

Isolating the offending extension can be tedious, especially if you have lots of extensions loaded. Start out by removing half of your extensions.   Restart and try MyBattery.   If the problem occurs, remove half of the extensions that were loaded, and try again.   If the problem did not occur, swap the extensions you loaded with the ones you didn't, and try again.

Continue this process until you isolate the offending extension.   Drop me a line and let me know what extension was causing the problem.

Upgrading System 6 to System 7

When MyBattery is running under System 6.0.x, it creates a "MyBattery preferences" file and a "MyBattery data" file in your "System" folder.   If you upgrade to System 7 and want to preserve your preferences and estimation data, copy these files to the "Preferences" folder in your "System" folder.   Otherwise, MyBattery will create new files in your "Preferences" folder using default values.

Acknowledgments

Not being wealthy, every time Apple introduces new PowerBooks, I must rely on the kindness of others to provide me with the information I need to support the new machines.   To all of you who have helped, thanks!

Thanks also to those who have enthusiastically responded with criticisms and suggestions for new features.   MyBattery continues to mature, with your guidance.

I'd particularly like to thank Rich Wolfson for providing me with the low voltage tables and other information, Marcus Wallgren of Apple for contributing much knowledge on the Duo power manager, and Joe Vantaggi for providing me with cool telephone icons instead of the icky "typewriter" icons I created.   Thanks to John Fernandez for his cool folder icons!

Compatibility

MyBattery requires System 6.0.8 or later.   It is fully compatible with System 7.0.x and System 7.1.

MyBattery has been tested on all current flavors of PowerBooks.   It should work on any portable Macintosh that supports the Power Manager (part of Apple's Macintosh system software).

MyBattery was designed as a stand-alone application for two reasons - to minimize the possibility of conflicts with other programs (with CDEV's or INIT's, there's always a risk), and to allow you maximum flexibility with free RAM.   If you need more memory, simply quit MyBattery (with a CDEV or INIT, you'll have to reboot, wasting time and battery power).

Technical information and references

References

The information used to write MyBattery and this manual has been culled from various sources,

including:

• Inside Macintosh, Volume VI (Apple, published by Addison Wesley).   This volume contains a discussion of the Power Manager software.
• Macintosh PowerBook Family Developer Notes (Apple).   Discusses technical side of PowerBook hardware and firmware.
• The PowerBook Companion (Richard Wolfson, Addison Wesley).   A great book with loads of tips for PowerBook users (did you know that when Apple prepares your PowerBook hard drive, megabytes of hard drive space are unused?   Buy the book and find out how to get it back!).

Development environment

MyBattery has been developed using:

• Apple PowerBook 100 8/40, PowerBook 165c 8/80, Duo 210 12/80,   and Centris 610 (for original color prototyping).
• Apple's ResEdit, version 2.1.
• Symantec THINK C 6.0.0.   This is one of the best C development environments I've seen - it only lacks a configuration management system of similar quality.
• Symantec THINK C Reference.   I use this so much my printed copies of "Inside Macintosh" are getting dusty.   A truly useful tool if you're doing any sort of Macintosh programming - the code examples alone are worth the price!
• Apple's "Inside Macintosh", volumes I-VI.

Low Battery Warnings

Some of the following values have been compiled from user's measurements and other sources; your voltages may differ.

Model	Typical "fresh" battery	First warning threshold	Second warning threshold	Final warning threshold	Forced shutdown threshold
Macintosh Portable	≈6.20v	5.90v			
5.81v					
5.78v					
5.74v					
PowerBook 100	≈6.20v	5.90v			
5.81v					
5.78v					
5.74v					
PowerBook 140	≈6.70v	5.90v			
5.75v					
5.65v					
5.55v					
PowerBook 145	≈6.70v	5.90v			
5.75v					
5.65v					
5.55v					
PowerBook 145B	≈6.70v	5.90v			

```
5.75v
5.65v
5.55v
PowerBook 160          ≈6.70v    5.90v
5.75v
5.65v
5.55v
PowerBook 165c         ≈6.70v    5.90v
5.75v
5.65v
5.55v
PowerBook 170          ≈6.70v    5.90v
5.75v
5.65v
5.55v
PowerBook 180          ≈6.70v    5.90v
5.75v
5.65v
5.55v
PowerBook 180c         ≈6.70v    5.90v
5.75v
5.65v
5.55v
```

```
                    Typical  First      Second     Final      Forced
                    "fresh"  warning    warning    warning    shutdown
Model               battery  threshold  threshold  threshold  threshold
------------------- -------  ---------  ---------  ---------  ---------
Duo 210             ≈13.80v  11.80v     11.40v     11.00v     10.60v
Duo 230             ≈13.80v  11.80v     11.40v     11.00v     10.60v
Duo 250             ≈13.80v  11.80v     11.40v     11.00v     10.60v
Duo 270c            ≈13.80v  11.80v     11.40v     11.00v     10.60v
```

Apple NiCad battery capacities

As Apple has introduced new PowerBooks, they have also been increasing the charge capacity of their accompanying NiCad batteries.   The list below illustrates the current models of the NiCad batteries Apple has provided.   Apple has made no upgrades to the lead-acid battery used in the PowerBook 100.

```
Model                     Rating          Apple part #
----------------------    -------------   ------------
PowerBook 140, 145, 170   2.5 amp-hours     M5417
PowerBook 160, 180        2.8 amp-hours     M5653
PowerBook 165c, 180c      2.9 amp-hours     M5654
```

Apple Battery Chargers

Apple has also been busy upgrading the battery chargers.   Note that while all chargers work with all PowerBooks, charging a newer PowerBook on an older charger may take longer.

```
Model                         Rating        Apple part #
```

```
-----------------------    --------------    ------------
PowerBook 100-170          15 watts output
     M5140
PowerBook 160, 180         17 watts output
     M5651
PowerBook 165c, 180c
24 watts output
     M5652
```

Version History

2.2.4 - 6 May 1994
- Updated menu bar display more frequently.
- Fixed "the bug that would not die" - identification of 250 and 270c.
- Fix for Duo modem status.
- Added additional code to prevent problems with corrupted "MyBattery Link" file.

2.2.3 - 20 March 1994
- Added elapsed time to menu bar display options.
- Added command key 'E' to toggle external battery possible.
- Properly finds Preferences folder under foreign language versions of System 7.
- Adjusted Duo voltage range.

2.2.2 - 21 January 1994
- Fixed Identification of Duo 250 and Duo 270c.
- Replaced icky "typewriter" modem icon with more tasteful rendering.
- Fixed optimistic default estimates for Duo's.
- Fixed calculated estimates for Duo's.
- Fixed battery icon display for Duo's.
- Fixed mask for small preferences file icon.
- Updated line plot display to display Duo battery voltage range.
- Added option for launching MyBattery in background.
- Fixed spurious resetting of line plot with older history files.

2.2.1 - 30 December 1993
- Fixed CPU speed recognition for Duo 250.
- Fixed faulty voltage calculation on Duos.
- Fixed overlap of modem label on line plot display.

2.2.0 - 28 December 1993
- Automatic switching to external battery when connected.
- Support for data link with Threshold.
- Clear larger area around text boxes to prevent artifacts.
- re-initialize elapsed time when switching batteries.
- Corrected calculation of Duo voltages.
- Window redrawn when the color palette is changed.
- Sleep can now override AppleTalk.

- Added modem status to displays.
- Fixed bug that prevented window from being moved under certain conditions.
- Changed CPU speed test to be more tolerant of new models.
- Better support for external battery packs.
- Histogram display renamed as line plot, which more accurately describes its function.

2.1.1 - 25 October 1993
- Added longer period to estimation technique, for more accurate estimates with large external battery packs.
- Added support for PowerBook 165, Duo 250 and Duo 270c.

2.1.0 - 5 September 1993
- Changed to Apple version numbering scheme.
- Updates displays if color depth changes.
- Support for external batteries.
- Histogram display enlarged to show more data.
- Updated preferences dialog to support external battery selections.
- Updated default estimates for color PowerBooks (original estimates were too optimistic).
- Fixed menu bar blanking problem - only blanks when icons drawn.

2.01 - 11 July 1993
- Fixed "disappearing" zoom box problem.
- Registration password is once again case-insensitive.
- Fixed bug that would prevent historical data collection under specific circumstances.
- Fixed CPU speed display on PowerBook 160's.

2.00 - 21 June 1993
- Color and grayscale support added (MyBattery only).
- Menu bar displays added (MyBattery only).
- Support for multiple batteries (MyBattery only).
- Preferences dialog added (MyBattery only).
- Lots of tables added to manual!
- Faster startup.
- Battery status icon revamped to display charge rate.
- Histogram display options added (MyBattery only).
- Option to hide display when charging (MyBattery only).
- Sleep shortcut added.
- Optimized to minimize disk accesses, to conserve power.

1.31 - 22 April 1993
- Histogram now displays last four hours of time, and is reset manually.
- Added support for insertion of unformatted floppy while MyBattery is in foreground.
- Description of CursorBeacon conflict, with work-around.

1.30 - 10 March 1993
- Added column displays.

- Added text-only displays.
- Added text-only displays.
- Display estimated time remaining on collapsed displays (makes 'em smaller).
- Updated calculation of PowerBook Duo voltages.
- Enhancements to estimate of battery time left.
- Support for PowerBook 165c, 180c added.
- Internal changes to make adding new PowerBooks easier.
- Improved error recovery with corrupted estimation data files.
- "Time left" display averaged to give a "steadier" display.

1.22 - 12 January 1993
- Added histogram display.
- Enhancements to long-term estimate technique.

1.21 - 24 November 1992
- Added support for PowerBook 145, 160, 180, Duo 210 and 230.
- Decreased memory requirements.
- Enhanced estimate for non-registered users.
- Elapsed time now saved between sessions.
- Optimization problems with Think C fixed by Symantec, so turned optimization back on.

1.20 - 7 October 1993
- Password registration.
- Historical estimating technique.
- Auto-configure for different PowerBook types.
- Handling for system sleep.

1.10 - 23 August 1993
- Estimate limited to 4 hours.
- Display --h --m fix for bar graph display.
- Add elapsed battery time display.
- Improved estimations of remaining battery time.
- Improved error checking.
- "Full" is now 6.20 volts on gas gauge.
- Turned off compiler optimization to fix PowerBook 140/170 problems.

1.00 - 17 August 1992
- Displays two-color bar graph.
- Added separate icon for low battery condition.
- Gas gauge display.
- "condensed displays".

0.90 - 4 August 1993
- First release.

Disclaimer

While I have attempted to test MyBattery as fully as possible, I cannot guarantee proper operation on other computer systems.   I am not liable for any direct or indirect damage caused by MyBattery.   The individual using the software bears all risk as to the quality and performance of the software.

If you have registered your copy of MyBattery, and are not satisfied with its operation, your registration fee shall be returned to you.   You are then obligated, however, to delete all registered copies.