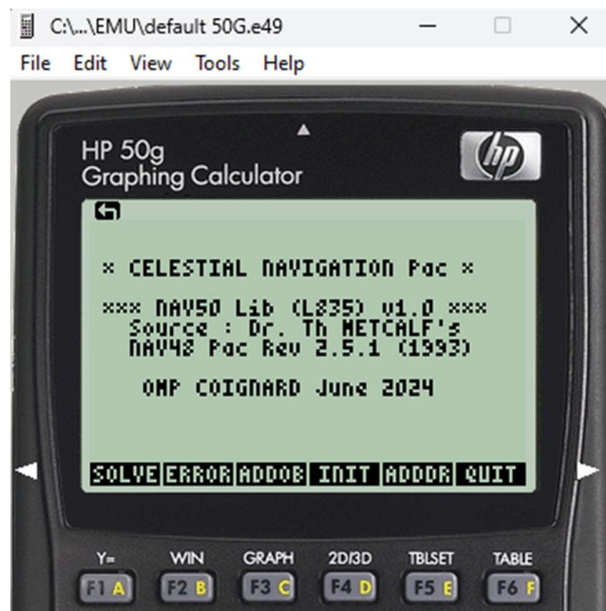


The Celestial Navigation PAC was originally created by Dr Th. Metcalf in the early 1990's and distributed by Sparcom. It was designed to run on HP 48SX machines. The nav-2.5.1.hp49.lib was a version patched for HP49/50 machines.

I tested this package on physical and virtual HP50g's and HP49g's and I found that two programs were regularly failing (ADDOB and ADV). I suspected this was due to the 48 to 49/50 migration, and after having extracted the library into its (218 !) subprograms I found that some variable or program names were in conflict with reserved HP49/50 variable names (LIMIT, LU and SOLVE).

The L835 library is then an updated version of the Celestial Navigation PAC that can run on HP49g/50g machines without any program failure.

Pict.1 – L835 master menu screen



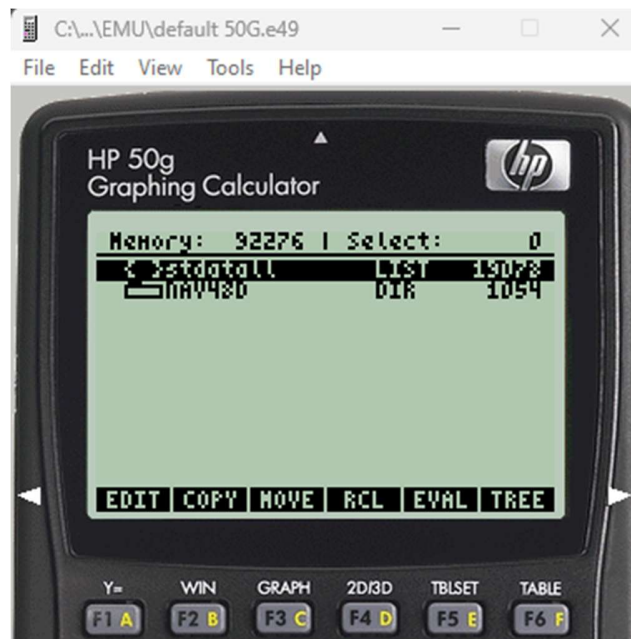
The modifications I made are as follows :

- replace the faulty variable names LU by LUZ, LIMIT by LLIMIT and SOLVE by SLVE. With this simple modification program errors were eliminated.
- rework the display format of some program results (mainly in ADDOB and ALMN).
- eliminate a risk of error in the small ARTH program (Artificial Horizon) by removing the dip correction (that is not required with an artificial horizon).
- separate the large star data list from the library in order to reduce the library size below 128 Kb, which facilitates its handling on HP49/50 machines. Once the library has been installed, the 'stdatall' list (binary file) has to be copied to the 'SPARCOM' sub-directory, at root level (see below pict.2).

The Messier file data have been updated and include one more object (M110).

NAV50 – Readme file

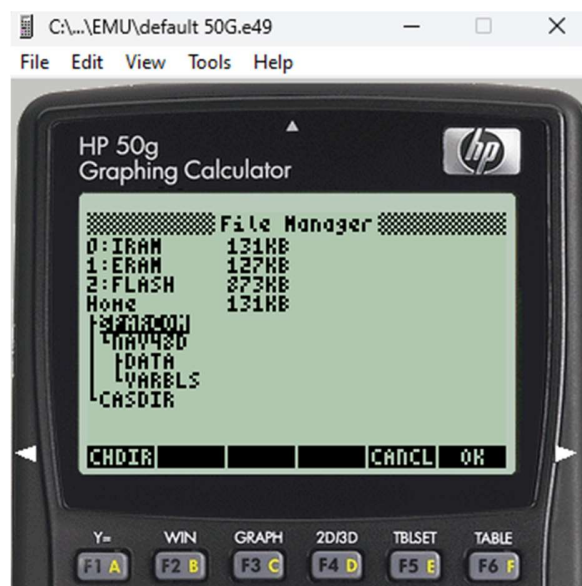
Pict.2-‘SPARCOM’ directory content



Prerequisites and installation procedure: same as with the original L833.
If needed, as the file size is now < 128 Kb, it can also be installed on port 1 or 2.

The directory structure has been kept unchanged, so that the original version of the library (L833) and the new one (L835) can run on the same machine and share the same data.

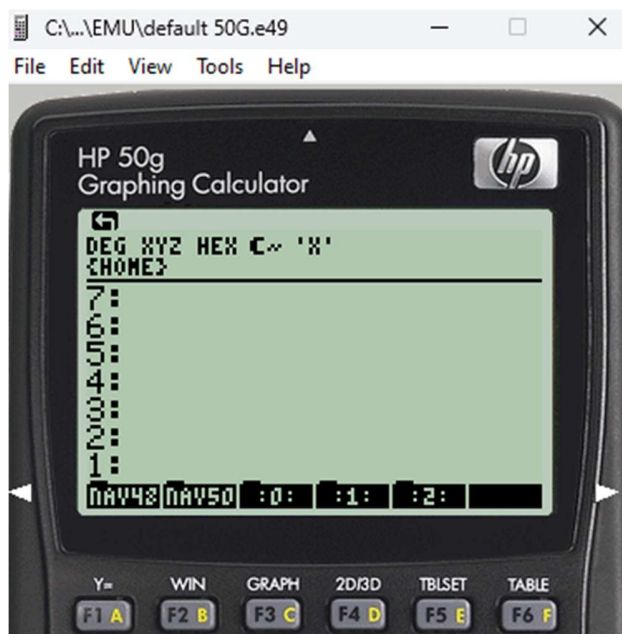
Pict.3-CN48 Dir structure kept unchanged



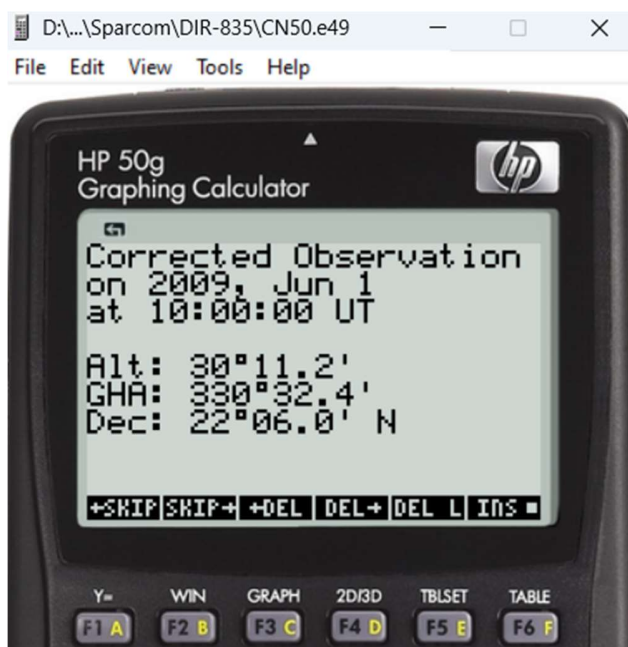
NAV50 – Readme file

The new lib appears in the menu bar as the 'NAV50' hot key (see below pict.4)

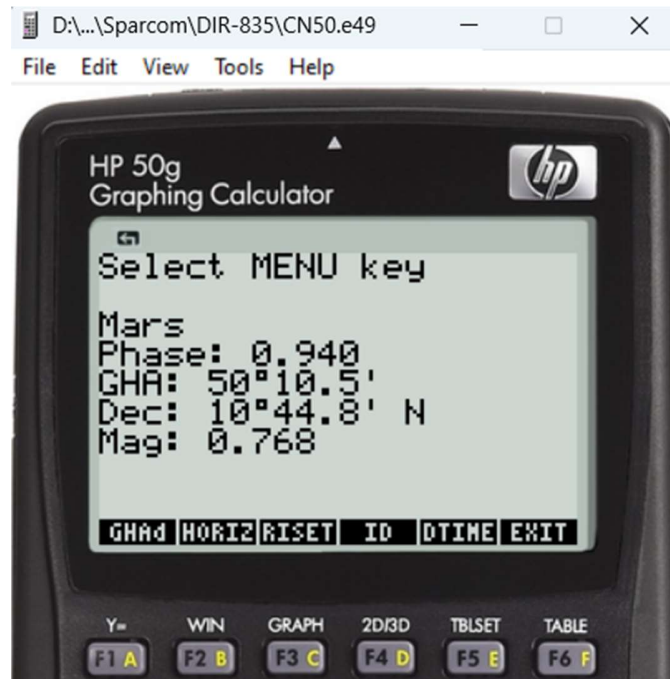
Pict.4-NAV50 lib hot key



Pict.5-ADDOB updated display format



Pict.6-ALMN updated display format



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