BoatFuel

This program is a helping vehicle to monitor in a visual way the status of diesel tank on board of a leisure boat.

Overview.
The program window is divided into three parts.
The upper for settings
The central for fuel consumption entry
The lower for data recording

On the left side there are two vertical bars, showing the fuel level and, in red color, the alarm level.
The use of the program is almost self explaining.
To start using :

First action - enter settings.

- Average boat speed when motoring
- Fuel presumed or estimated hourly consumption in L/h
- **O**verriding variation (enter an integer, will be read as %+ or % -) to be applied when evaluating the tank level after motoring.*
- Maximum tank capability.
- Estimated actual Tank (cannot be 0)
- **Engine HOURS Start data (**read below**)**

One of the most important data for the evaluation of fuel consumption, is the **Engine Hours counter**.
It's mandatory that this instrument exist and works.
Many data are based on the starting value of Engine Hours and on following readings.
First time must be entered the BASE reading of engine hours Counter.

After some motoring it's possible to update the tank status by entering the hours motored, with the same numeric format of the Base Hours .
Note: just enter the counter displayed figures, not the net hours motored.

When a refuel is done, then the additional fuel has to be loaded: using the "Add fuel" button.
The same procedure can be used to subract fuel having care to enter digits with a minus sign.

If the refueling is done with a total tank filling-up, before entering the liters of diesel, must be checked the "Tank TopUp" checkbox. So it's possible to get the average real-time consumption, calculated from the Base Engine Hours, upto the latest burned fuel.

The program will keep in memory last data entered and will calculate the nautical miles range, with the remaining diesel liters, on the basis of the average settings.
It's also possible to change the value of consumption rate, by enter an appropriate value for L/H, in the entry box located on the right of the RANGE display.

Total cumulative fuel burned will be displayed and can be reset.

* Sometime may happen a motoring leg is carried on not in a standard condition, as to require the use of a cofficient to modify the normal calculation accordingly.

There is also the possibility to have the average consumption as function of Engine RPM. This data is **valid** for the engines listed in the "Engine - Select" pop down menu.

There is a set of **RadioButtons** where it's possible to fix which type of consumption rate must be used to calculate the burned fuel. Of course the RadioButton setting must be fixed before entering the last Engine Hours data.
Summarizing: Consumption calculation may use:

1) Standard (default) liters/hours, from initial settings
2) Plus or minus rate variation (worse/better), due to special conditions
3) RPM dependent consumption (based on the specific engine data)
4) Consumption rate calculated after two Tank Up refuelling

It is possible to modify the "estimated parameters", during the use of the software, just clicking the button "Modify Estimated".
So doing you may change default speed, consumption rate, overriding percentage and the Tank Alarm setting.

A ***log*** is provided to show all the principal entries performed. It can be reset.