Endurance Race Software

USER DOCUMENTATION

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PROCEDURE

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New

INSTALLATION

On the Notebook which will be used for the race

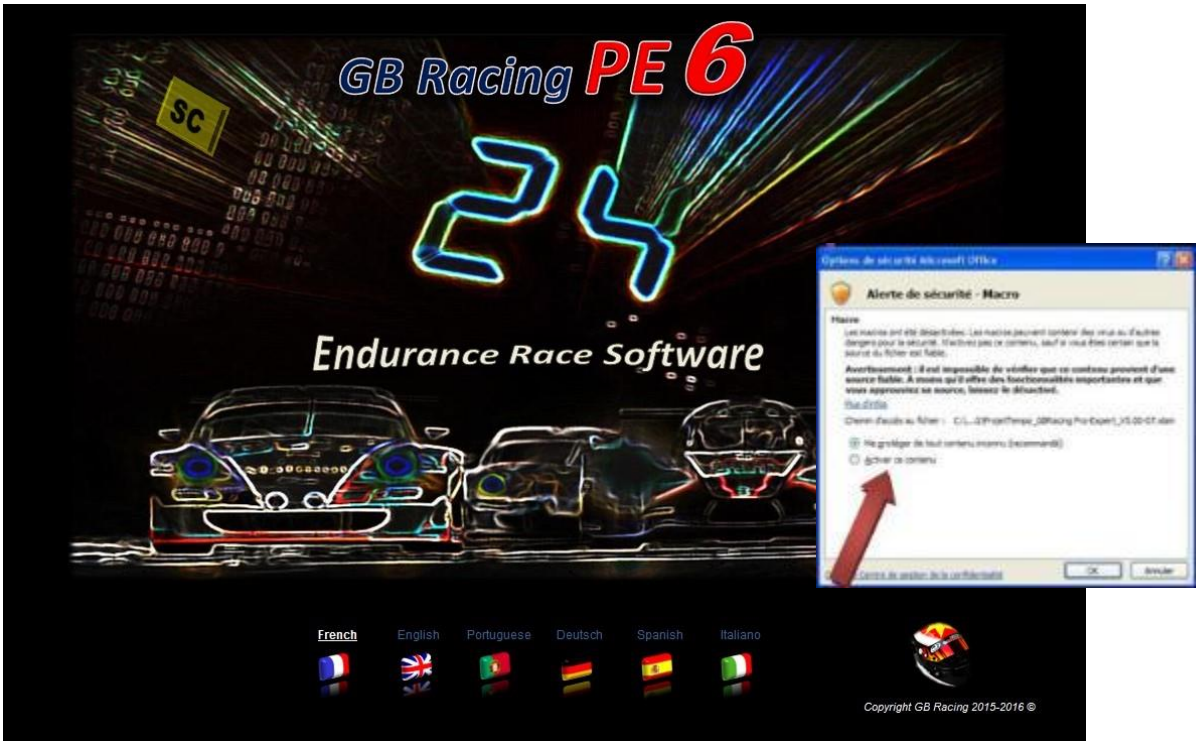
1. To create a repertoire “GB Racing PE5” on C:\ - (Not on “Program files”)
2. To unzip all the files and to extract them or Copy all the files in the same repertoire
3. To create a short cut of file “GB Racing PE5”on the desk and to affect the icon « Casque ».

IMPORTANT: SUSPEND A "HIBERNATE" OF YOUR PC

SAFETY MACROS

You can change the security office on "MINIMUM" to remove this message. NOT RECOMMENDED

Click on "Options ..." from the safety bar.



In the window, check on "Enable this content" and then "**OK**".
A scan of the sheets of the application is made for full functionality. **This is NORMAL**.

CHOICE OF THE LANGUAGE

On HOME page, choose your language. (*French, English, Spanish, Portuguese, Deutsch, Italian*)

PROGRAMMING 1

1. New Race

This button allows you to reset all the validations and variable data entered during your last race.
NOTE: You will unlock access to certain data "programming1"

2. Type of race

From the dropdown menu, select: **Karting, Auto, Moto, Fun Cup, Truck, 4x4 or Boat.**

3. Name of Team

Enter the name of team, as you want it to appear.

4. Running time

Free programming of 1h with 36h.

5. Departure time

- **For the race simulation** :

  - Enter the day and the hour to the format « **dd/mm/yyyy _hh:mm:ss ».**
  - Click the Simulation button, to start the simulation
    The indication "Simulation" button will be replaced by "Pilot in race" from the start of the simulation.

- **For the race** :

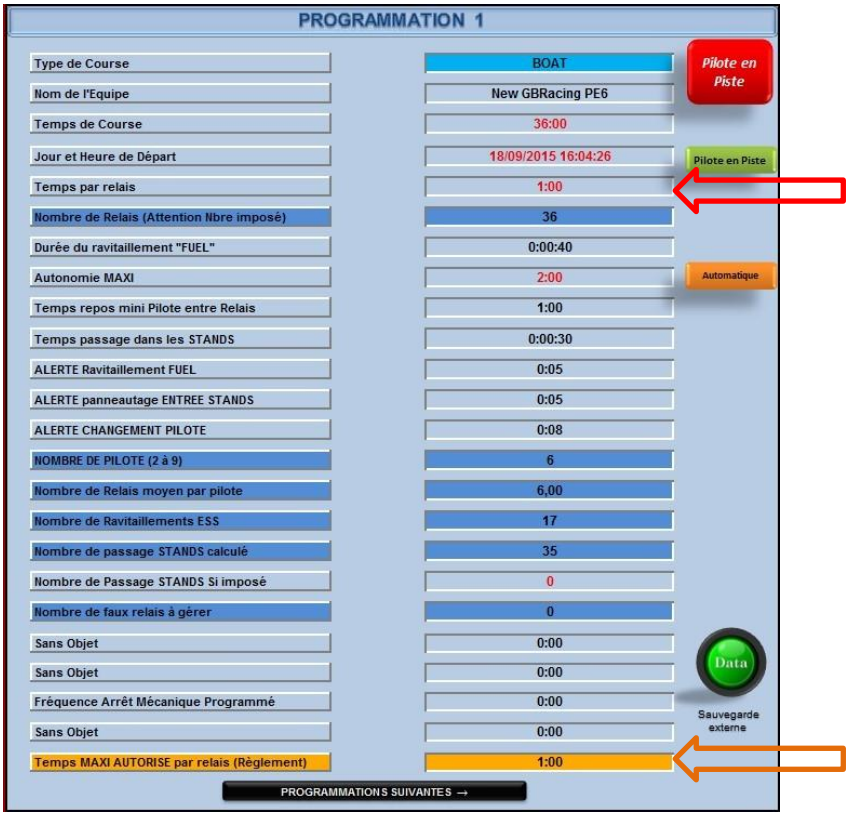
On "SYNTHESIS", **at the moment of departure**, click on red button **"START"** to update the starting hour exact in "PROGRAMMING 1" and to launch the race. The **START** button **NEW RACE** and **SIMULATION** will be inactive from the departure of the race.

The data in red on Programmations1 will be inaccessible during the race.

6. Time Relay & MAXI Time Relay

Enter the time you want, depending of the regulation, and the number of driver and time of the race.

Enter the MAXI time you want, depending of the regulation of the race.



7. Duration of refueling

Information here, as long as you feel **for refueling only**. (Excluding transit time in the pits, which will be filled in later)

8. Autonomy MAXI

According to the type of race and material, inform here, the maximum time of autonomy which you estimate, for programed each refueling.

Automatic calculation, offers optimized time, consistent with the autonomy and the time relay selected for refueling in the pit lane.

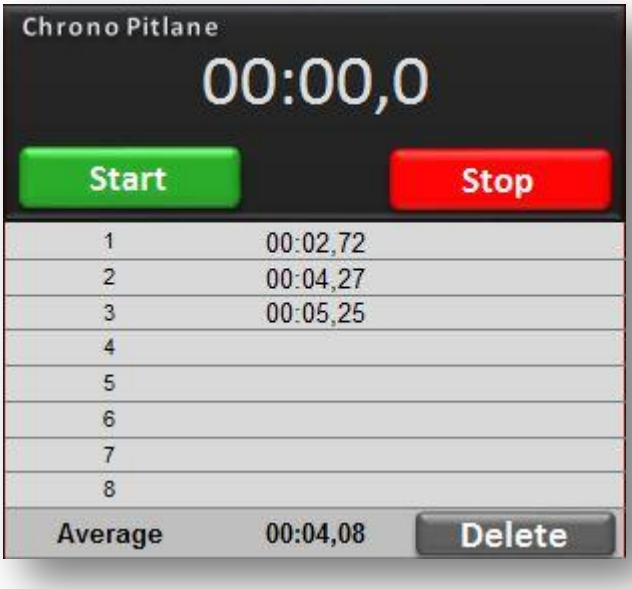
9. Minimum rest period of each driver

Depending on the rules, check here, the minimum rest time for pilots, between each relay.

10. Time of Passage in the Pit lane

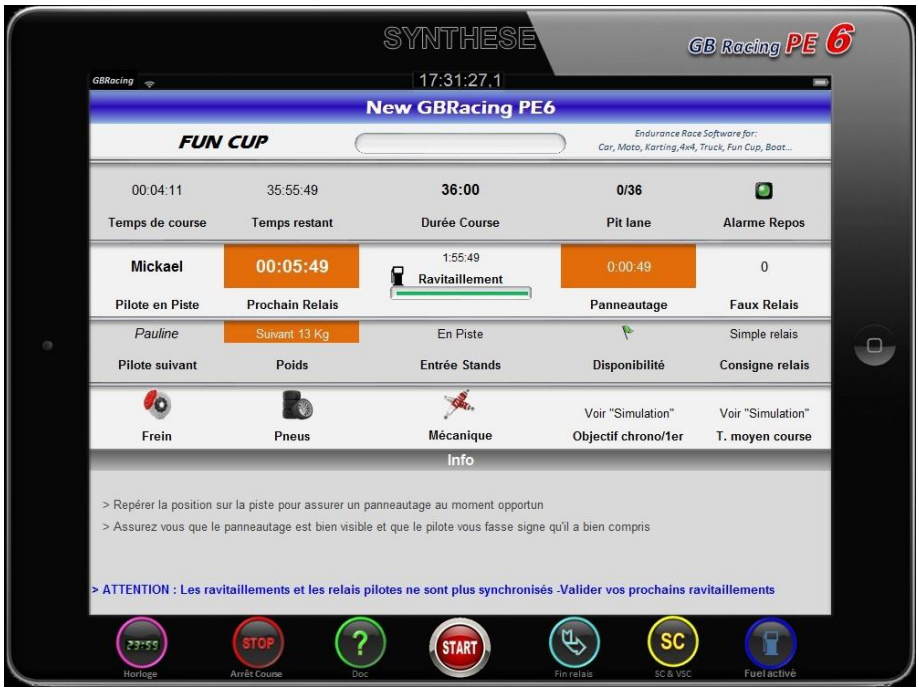
Inform here, the average Time of passage in the Pit lane. (A stopwatch is available on the Simulation sheet, to record times of passage during the tests and automatically to provide you the average of the recorded passages)

This time will determine the hour of entry and exit of the Pit lane.



ATTENTION: The speed limit in the pits. See the regulations.

11. The ALERTS



a. Refueling

Inform here, the Advance of the posting of alarm for the REFUELING, (2 with 4mn recommended)
This dynamic Alarm, will be posted on the SYNTHESIS Sheet

b. Pit board

Inform here, the Advance of the posting of alarm for Pits board. (2 with 4mn recommended), according to time with the turn of circuit and the number of turns which you wish to leave to the pilot for entry.

This dynamic Alarm, will be posted on the SYNTHESIS Sheet

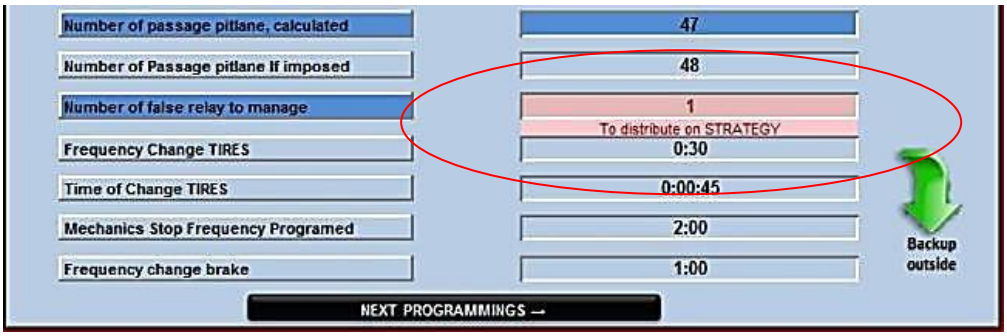
c. Driver change

Inform here, the Advance of the posting of alarm to awake the PILOT who will take the next relay (5 with 15mn recommended)

This dynamic Alarm, will be posted on the SYNTHESIS Sheet

12. Number of passes in the Pit lane, if they are imposed

In some racing rules, the passages were in the pits that are imposed without stopping or driver change mandatory.
We call "False relay."



In this case, you can learn here, this information and the software will provide, below, the number of "false relay" to handle during the race.
To you to spread manually, on STRATEGY, these "false relay" in the relay already planned.

See detail of this operation on "STRATEGY"

13.Frequency change of tires

For some types of racing, you can program the frequency change of the tires. If this is not the case, put the information to zero.

14.Time to change tires

You can program the time change of the tires in the pits. If this is not the case, put the information to zero.

15.Frequency of Mechanical Stops Scheduled

For some types of racing, you can schedule the frequency of mechanical stops provided

(*Mechanical stops unscheduled will be treated later - See Mechanical stops 1 & 2*).

An Alarm on Synthesis will remind you the intervention in the relay concerned.

If this is not the case, put the information to zero.

16.backup

By clicking on the Backup icon, **you save your information out software** to be able to study or future use.

CAUTION:

This external backup do not you free to save your data in the application as soon as you make changes before and during the race, to avoid loss of data if the PC stopping.

NOTE: the launch of the **START button**, the application automatically saves your data.

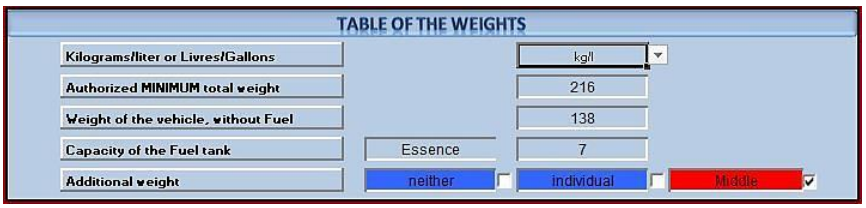
Type of Race	KARTING
Name of Team	GB RACING PE3
Time of Race	24:00:00
Day and Time of start	19:18:53
Time relay	0:30:00
Number of Relay (Warning Nber imposed)	48
Duration of refueling	0:00:15
Autonomy MAXI	2:30:00
Time Pilot rest between Relay	1:00:00
Passage time, in the PILANE	0:00:45
ALERT refueling	0:05:00
ALERT Pit board ENTRY PITLANE	0:02:00
ALERT CHANGE pilot	0:07:00
NUMBER OF PILOT (2 to 9)	7
Number of average Relays by pilot	6,86
Number of refueling	9
Number of passage pitlane, calculated	47
Number of Passage pitlane if imposed	48
Number of false relay to manage	1
Frequency Change TIRES	0:30:00
Time of Change TIRES	0:00:45
Mechanics Stop Frequency Programed	2:00:00
Frequency change brake	1:00:00

PROGRAMMING 2

This sheet gives you the opportunity to refine, at most, the various parameters of your races.

1. Table of Weights

The information you enter in this table will be used to calculate the optimum data for each driver in their relay. Be as specific as possible.
If you do not have weight constraints, put the information to zero (0)



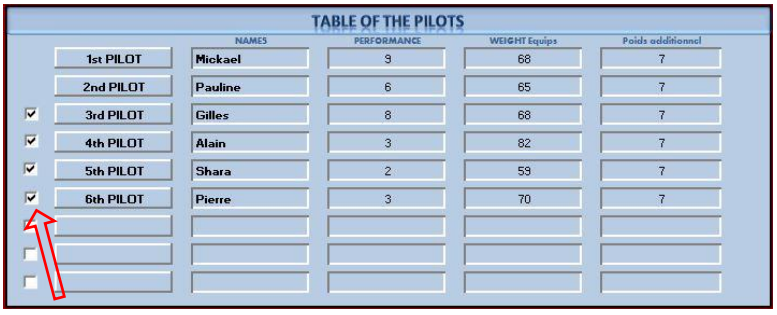
- select the metric system you want to use: kilogram / liter or pounds / gallon.
- If the regulation imposes a minimum weight, enter it here.
- Enter the weight of your vehicle, empty weight excluding fuel.
- Enter the maximum capacity of your tank or the amount you plan to add at each refueling.
- Enter the type of fuel you will use: petrol or diesel

- Select how will be applied to the additional weight (Gueusage)

  ➢ No - Individual for each driver - Average weight of the team

2. Table of Pilots

The information you enter in this table will be used to calculate the optimum data for each driver in their relay. Be as specific as possible.



If you do not have weight constraints, put the information to zero (0)

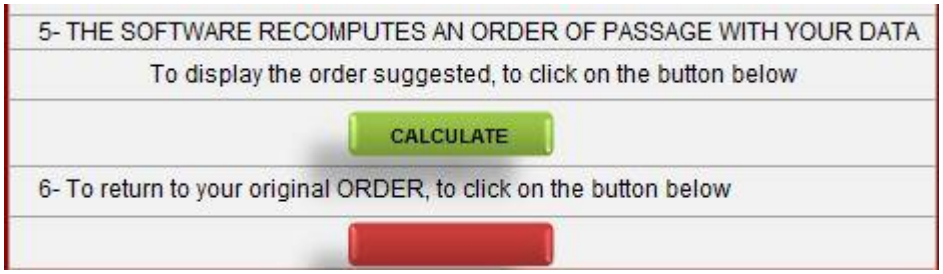
CAUTION

If you activate the drivers without putting a name, the software does not consider them in planning and calculations will be distorted.

 Enable or disable to manage the overall presence of your drivers

- Indicate the number of pilot that you wish (two first are obligatory)
- Seize the NAMES of each pilot, such as you wish that they appear.
- Opposite each NAME, seize an index of PERFORMANCE (0 to 10) and the WEIGHT of the pilot equipped.
- In the last column are shown the total additional weight required for each driver to reach the minimum weight based on the sequence of, and the fuel consumption.

- The index of performance can be the general quality of the pilot, his speed, his regularity, the cleanliness of its piloting, the absence of error or shock, the respect of the material…
- the weight equipped is the total weight, including helmet
- The software will compute an order of passage optimized according to the seized data and the fuel weight during the relay



1. Diagram of the positions of pointing

The additional information which you will seize in this diagram will use recomputed the exact hours of ENTRY and EXIT of the Pit lane.

Select the button corresponding to the position of pointing envisaged.

If there is no pointing, to select the button EXIT

A DIFFERENTIAL button enables you to activate a double pointing ENTRY and EXIT the Pit lane (24H of Mans Open)

2. Diagram of the positions of refueling

The additional information which you will seize in this diagram will use recomputed the exact hours of refueling

Select the button corresponding to the position of refueling envisaged.

If there is no pointing, to select the button ENTRY

A button **OUT of PIT LANE** enables you to disconnect the refueling of the pilot relay, to carry refueling out of pit lane (*Example: 24h 4x4 of Paris…)*

If this button is activated, it will automatically generate a new sheet **"FUEL"** enabling you **to follow and validate** the refueling **OUT OF PITLANE**, at the moment that you chose

NOTE: The validation of a refueling involves automatically recomputed it following refueling according to the initial autonomy, which you entered.

2 cells "Launchers Offset" automatically allow you to enter the time of Safety Car, VSC & Code 60.

A column enables you to seize, opposite the hours of refueling envisaged, the durations of **MECHANICAL STOP NOT PROGRAMED**, to prolong of as much initial autonomy.

This function is accessible only for the refueling OUT OF PIT and is independent of the lengthening of the time of pilot relay.

automation

Refueling button on SYNTHESIS is active and allows you to directly validate the Refueling made STANDS OUT or OFFSET

SC button on "Synthesis", you can **record directly** offsets refueling time due to SC

Back to previous text

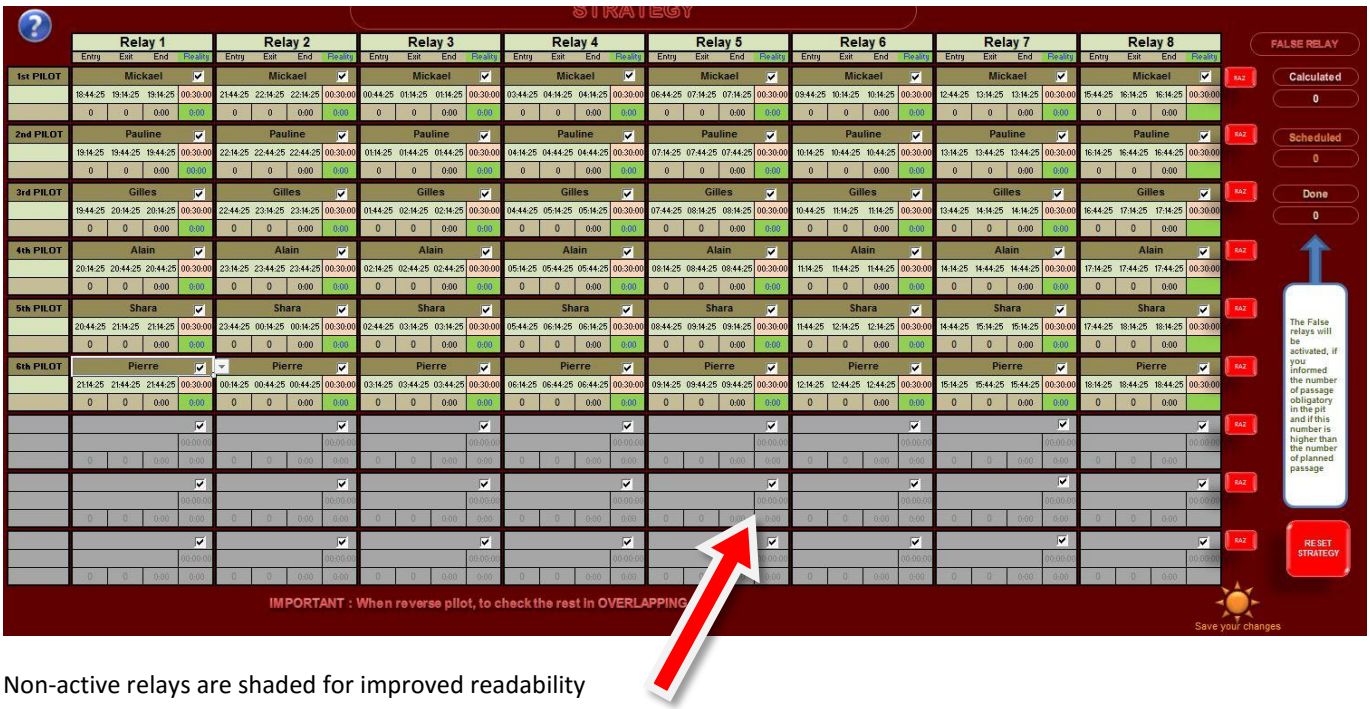
RACE STRATEGY

Modification duration, Inversion, deletion, double or triple relay in the same group:

Now everything is possible, from the first pilot!

This tool of racing strategy it is enriched by an additional **8th column and a new engine of calculation**, for have a broader range of programming and strategy.

For the least broad screens, move the columns to reach into the table.



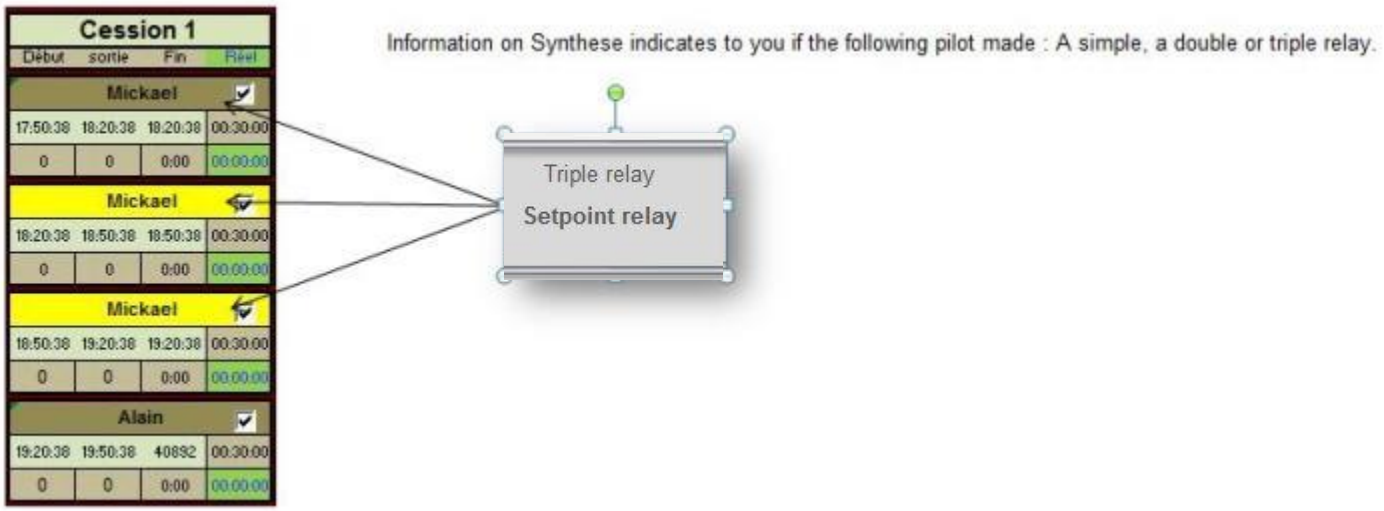
Non-active relays are shaded for improved readability

This Button at the bottom, right, to reset all the "real" time entered during programming or during the race, and all false Relay.

ATTENTION: No turning back on error. (**Close the program without saving and open it again**)

1. double or triple relay in the same group

Select the name of the pilot, as for an inversion.



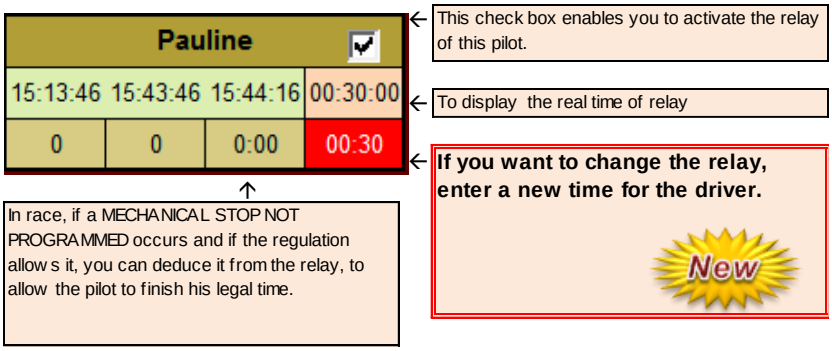
2. Pilot Inversion

EXAMPLE: In the first relay, the order is fulfilled. In the second relay, PAUL and MICKAEL are reversed. In the third relay, GILLES and MICKAEL reversed

This button allows you to reset on each line, the pilot name from the first relay, after a reverse pilot.

3. Programming your own time of relay

manually:



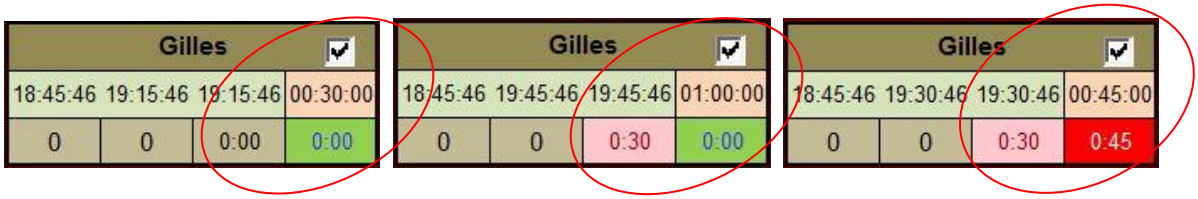
Before or during the race, you can change the programming time of each relay, by entering the **new time relay**, under "**real**" green box (hh: mm) Once entered, the cell turns red.
The box just above, will tell you the exact time of this new programming.

Automatically:

During the race, with the button END Relay located on Synthesis, you automatically save the new relay end time, under "**Real**" in the current relay.
WARNING: Your changes may an impact on **the obligations of the Rules of the race and the FUEL relay,** reducing the backup time of the relays involved.

NOTE: you can change as long as programmed relays are not made

4. Mechanical stop not programmed

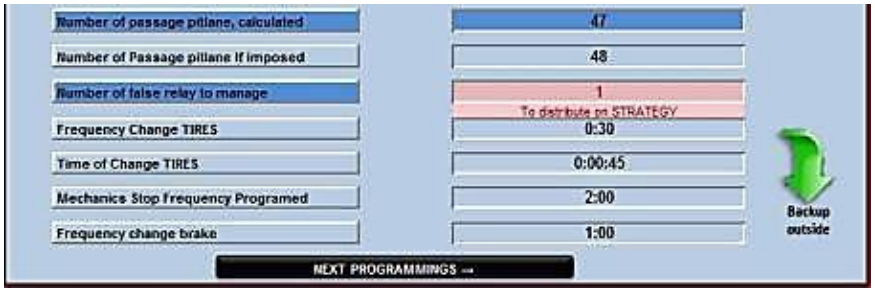


IF the REGULATION ALLOWS IT, in each relay, you can seize the duration of a **stop NOT programmed**, to prolong of as much the duration of the relay and to allow the pilot to carry out his time initially envisaged. (This duration of stop will be deduced from the total time of race while reducing automatically, the last programmed relay)
NOTE:

- If your supplies are carried out in the Pit lane, the software will recomputed, at best, your new autonomy.
- If your supplies are carried out "Out of Pit", you must, to inform this stop about the FUEL sheet.

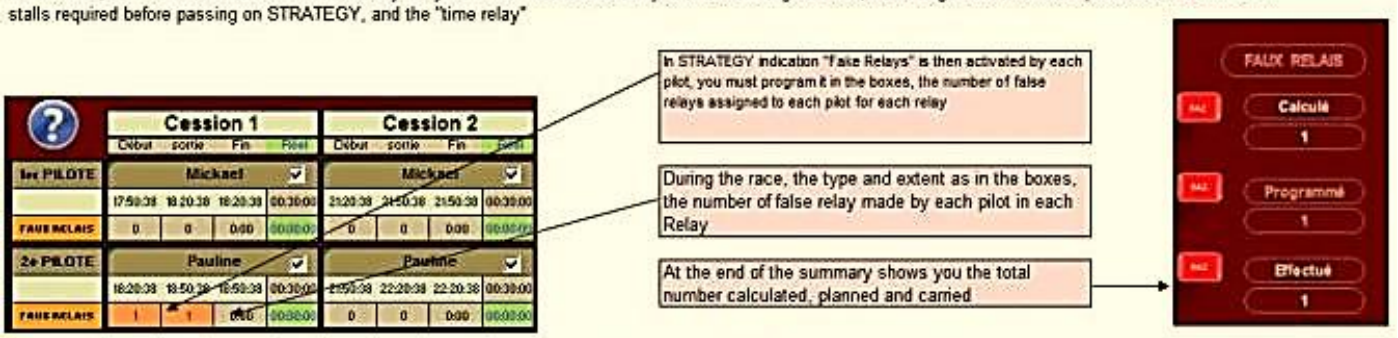
CAUTION: If you already modified the relay by seizing a new hour of END in the column "real", your mechanical stop will not be taken into account for recomputed hour of END, since you impose it. (*As represented in the last image above on the right)*

5. Management "False Relay"

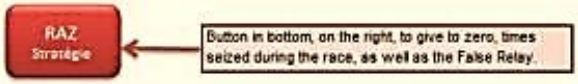


Data from "False Relay" seized on PROGRAMMING 1 must be managed on STRATEGY

► In the number of passes required through the pit, a number can be managed by "false relay, if the pilot change is mandatory. (With or without leaving the pilot of the vehicle, according to regulation)
In this case, the PROGRAMMING 1 automatically tell you the number of false relay to handle during the race, according to the number of pilots and the number of stalls required before passing on STRATEGY, and the "time relay"



IMPORTANT: At any time of the race on the STRATEGY, you can modify or move the False Relay not yet made



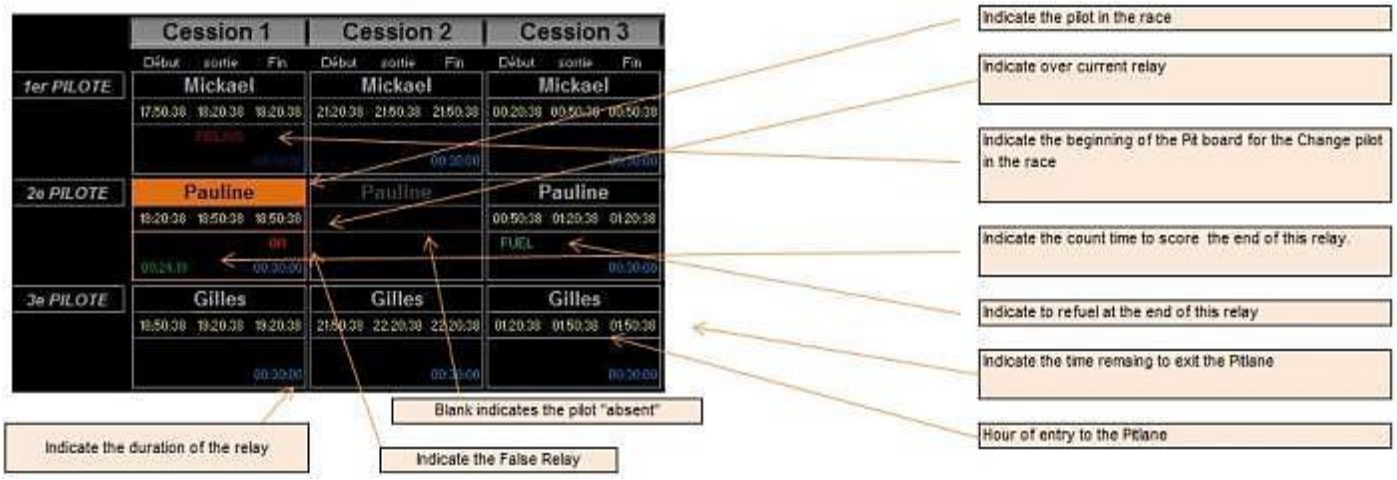
IMPORTANT: At any time during the race, on STRATEGY, you can modify the number or manually move the False Relays which are not carried out yet. To put at zero and to defer on the relay of your choice

A recall, for the relay in progress, is present on **PLANNING** and **SYNTHESIS**

NOTE: False relays used properly will give you a strategic advantage over your competitors.

RACE PLANNING

It dynamically displays all the information of the race in real time.



NOTE: Any additional information of the race will be erased or color darkened at the end of each relay pilot

SAFETY CAR

On the appearance of a Safety Car Panel, Virtual Safety Car or Code 60

Click on the yellow button, you will be directed to the SC page (Below) and the timer will operate automatically

One of the current relay time control will be automatically performed to avoid exceeding (Time MAXIMUM PERMITTED on Programmation1)

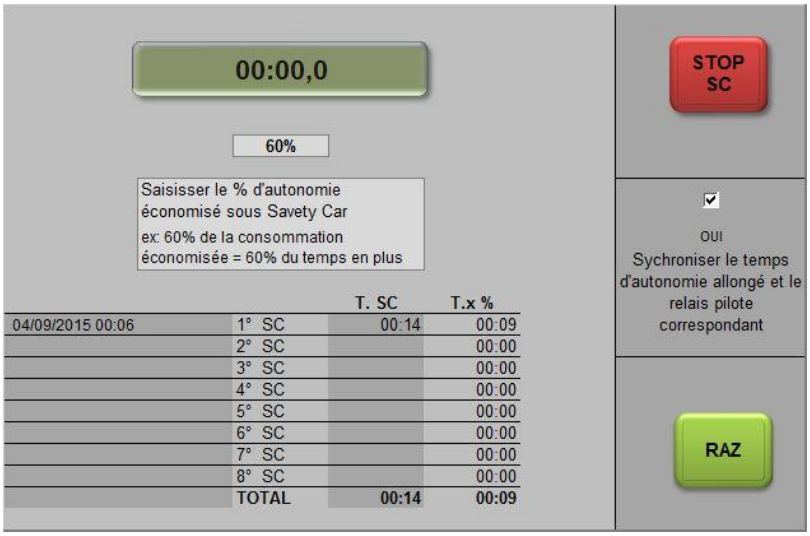
decision:

If you continue, you will have all the time in the SC to decide whether to save the additional time

If you continue, you will have all the time in the SC to decide whether to save the additional time

cancellation:

Click the reset button, all data will be deleted



		T. SC	T.x %
04/09/2015 00:06	1° SC	00:14	00:09
	2° SC		00:00
	3° SC		00:00
	4° SC		00:00
	5° SC		00:00
	6° SC		00:00
	7° SC		00:00
	8° SC		00:00
	TOTAL	00:14	00:09

During the time of SC:

Select the% of time you want to add to autonomy in progress. (Example: 60% above)

Select the timing of the pilot relay with the recalculated autonomy. (Time MAXIMUM PERMITTED on Programmation1)

At the resumption of the race, click "STOP SC"

1- Stop recording time and the SC time of day, time and calculation of injury time

2- Adding additional time in the autonomy Fuel underway

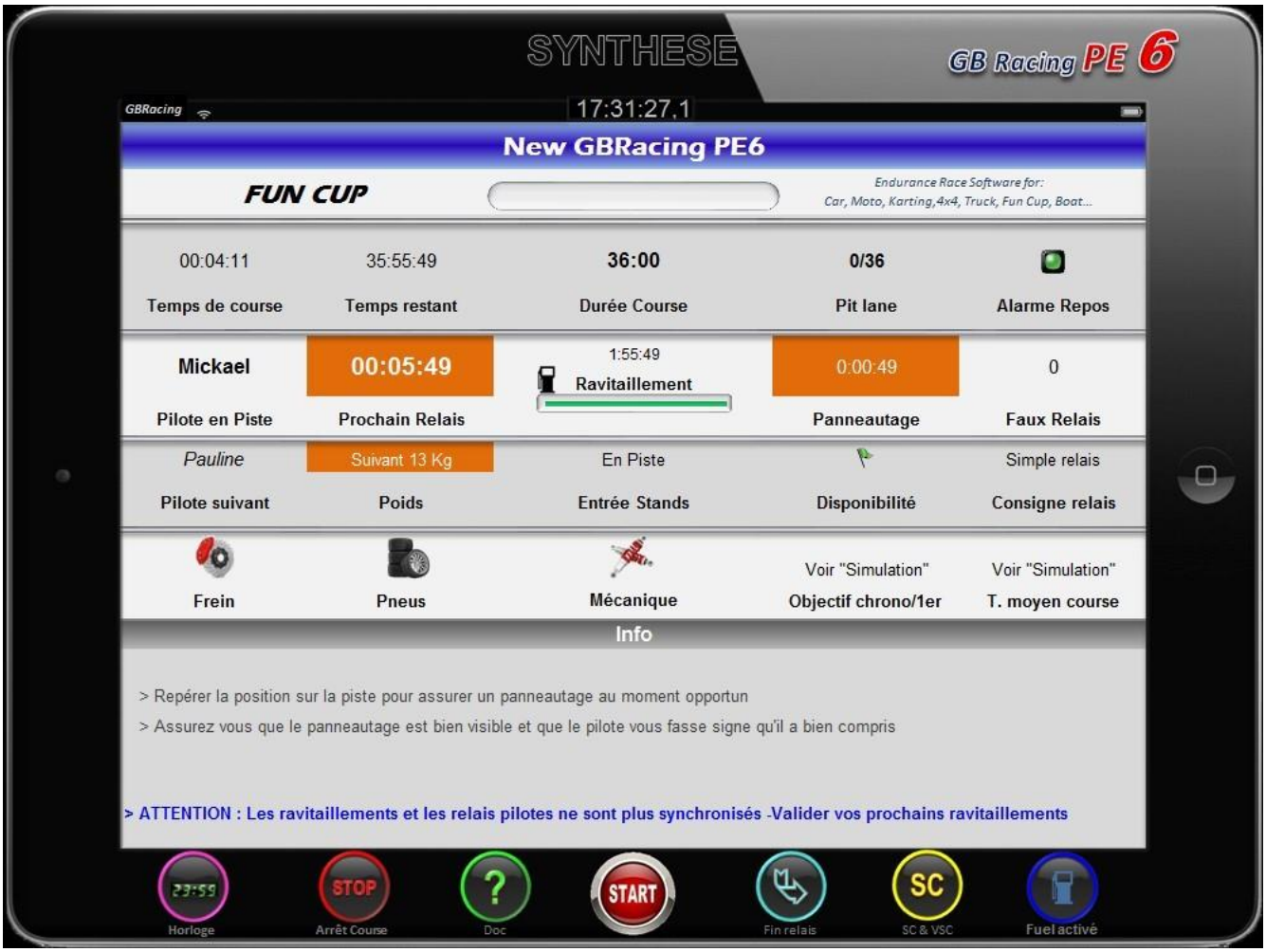
3- Adding additional time to time current relay, if selected synchronization

4 Back on the SYNTHESIS page for the resumption of the race

SYNTHESIS

This new screen interactive virtual TouchPad, summarizes all the data from a relay to follow:

- ► Basic information about the running relay
- ► Alerts
- ► Help Messages
- ► The automation buttons



1. START

► For the race Click on the red button START to record the exact time of START.
Your data will be automatically saved.
CAUTION: During the race, do not click again a second time on the button, you would start the race

2. END RELAY

Automatically record each "real End of Relay" in the corresponding box on STRATEGY.

This "real End of relay" will be obligatorily equal orlower than that programmed.

To increase the duration of the relay, to manually seize the hour of end in the suitable box on STRATEGY, before the end of the relay to be modified.
This action enables you to recompute all the following relays instantaneously.

This button is inactive during the first 5 minutes ofeach relay. If you do not validate one or more relay, it will inform the relay in the race of its next use.

3. STOP RACE

For safety reasons (Accident, rain, etc) the Management of race can stop the race temporarily.

1. **To immediately stop the software by CLICKING ON the BUTTON "STOP" on Synthesis**
2. **To preserve OPEN this window of information not to make set out again the race**
3. To note the number of stop or passage by the pitlane already carried out. (On Synthesis or Planning)
4. To note times remaining for:
   a. The race.
   b. The next refueling.

The Management of race will provide you the hour of the new departure and time remaining fort he second part.
You must consider this Restart as a new race and replanifier the software.

1. On Programming 1, to modify the time of racewith the time which was provided to you.
2. To remove all your modifications of strategy. Button "New Race".
3. If necessary, to modify the order of passage of the pilots according to the new departure.
4. If the Refueling is not made during the stop:
   IGNORED the new refueling planned.
   2 solutions are possible:
   a. On "Programming 2", to activate the "REFUELING OUT OF PITLANE". A new sheet "Fuel" will open.
   B. Or to remake the refueling at the end of the 1st turn of the second part, to readjust the refueling on the planned relays.
5. If the refueling is made during the stop: The race will set out again NORMALLY with its correctly refueling planned.
6. If necessary, to reposition your new Strategy now.

Press on button START.
Now, with you to manage and, if necessary, to validate the first refueling, according to your choice…

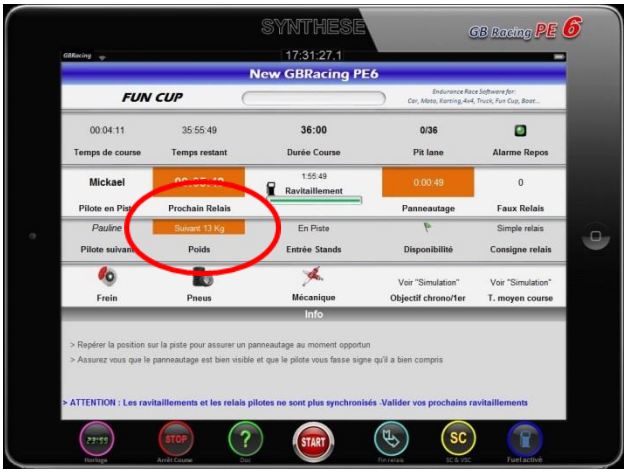
4. INTERNAL CLOCK

The software used 2 clocks synchronized to allow a management of the races up to 36 hours *(Clock of PC and internal clock of software)*

If the clock it is stopped, start again it.
No data will be lost and the race will take again its normal unfolding.

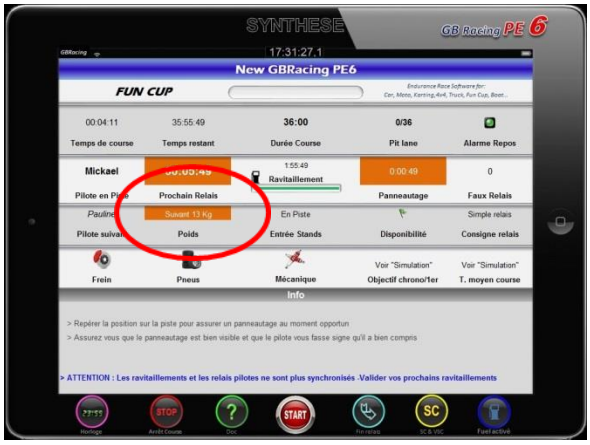
5. WEIGHT

a. Individual



Indicates **the weight to be added or removed** based on the weight already shipped by the previous driver.
It is not here, the total weight for each driver, but the weight differential calculated based on data entered onSchedule 2 and the sequence of choice.

b. Average



Shows **the average weight** shipped by team

6. AVAILABILITY

Indicates the period in which **it is recommended** that the following driver is ready.

Driver must be prepared

Driver in preparation

Driver to rest

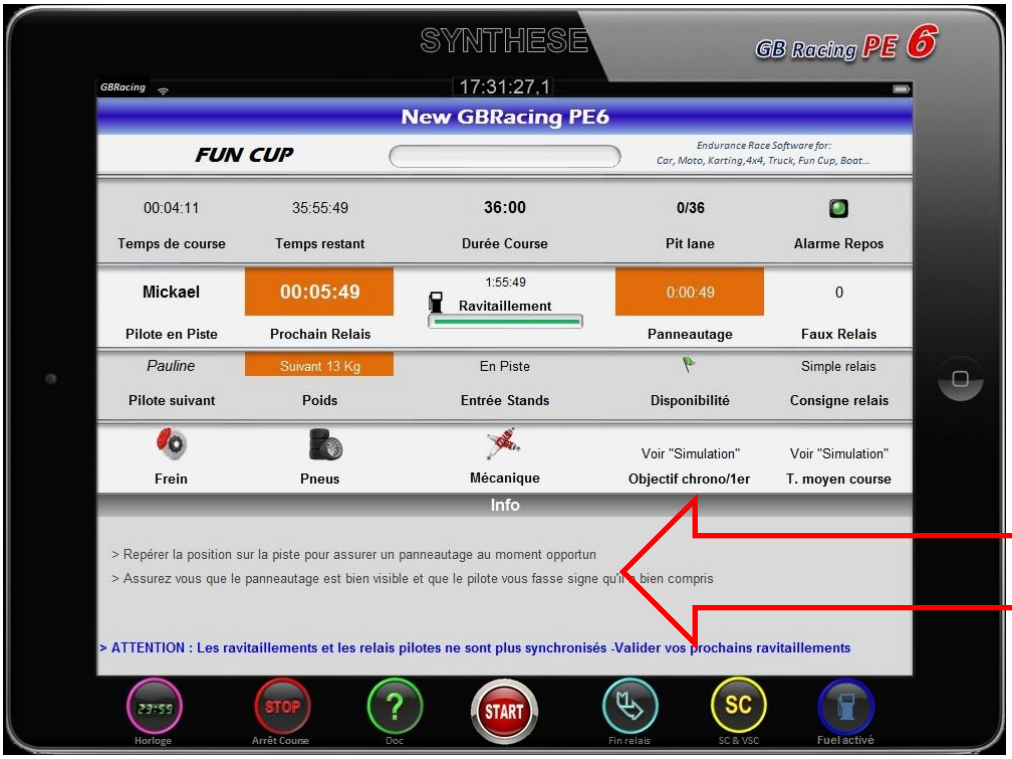
7. Personalized and Conditional Message

HERE you can add a personal message that is displayed on the page "SYNTHESIS"

Time of Race		Personalized MESSAGE
start	End	
00:01:00	00:10:00	Your Message is displayed here, to seize on the Documentation page

HERE you can add a conditional message that is displayed on the page "SYNTHESIS"

MECHANICS PROGRAMMED	On "Documentation", to add your message for the Programmed stops Mechanics and to validate	☑
TIRES	On "Documentation", to add your message for the change TIRES and to validate	☑
BRAKE	On "Documentation", to add your message for the changes of BRAKE and to validate	☑



SIMULATION/CHRONO

1. SIMULATION

For each TEAM, to inform the number of turn and the number of relays carried out.
Easy way:
To control the input time of the data to add 1 turn for each TEAM and to validate at the time ofthe next passage of 1st on the line of timing!

Choose your position in race: Real, if you in the 6 first or Are shifted, if your position is less favorable.
For this last case, Team1 remains the head ofthe race, (the reference).
You position in the 5 teams available according to what you want to simulate:
Correction of the preceding teams or the management of the following teams. You will make evolve this position according to attack of your objectives.
With each modification, not to forget to click onthe button "To validate" to activate your new data on SYNTHESIS.

In the table, this arrow (↑) indicates to you that you turn more quickly than the competitor which precedes you.

A recall of the objectives is posted on SYNTHESIS. Its update is carried out by the button "VALIDATE"

2. CHRONO PITLANE

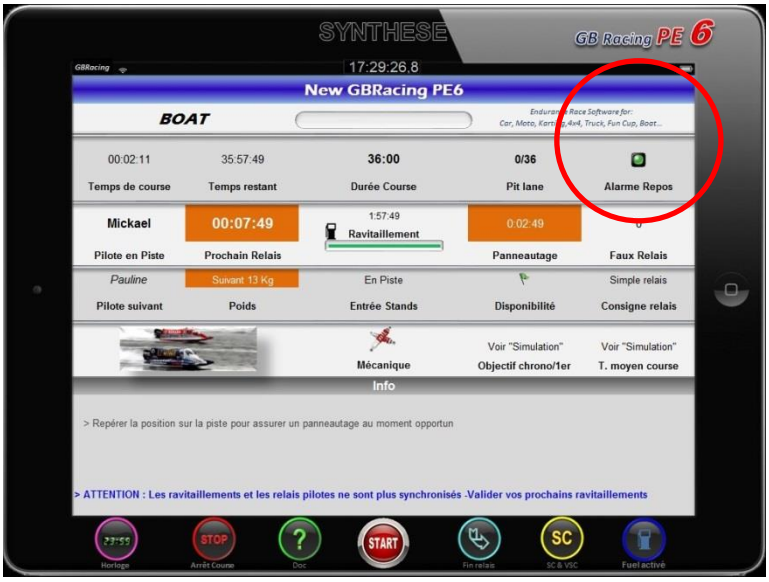
During the tests, allows you to calculate the time of average passage in the Pit lane.

CUMUL PILOTS

Joined together all times and the number of relays of each Pilot, as well as the office pluralities on the race.
Also indicate the rest period between each relay of the same Pilot, to control with the minimum timepossibly imposed by the regulation.

ALARMS, for each pilot, inform you if the rest period, seized on PROGRAMMING 1, is exceeded.

A **GENERAL ALARM**, centralized on SYNTHESIS, informs you if one of the rest periods is exceeded.



His information is essential, in the case of inversion of pilot and of seize by times of END of Relay.