

User guide

GPS Training SO2

Evolutions of the document

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1. GENERAL PRINCIPLE

The GPS Training SO2 software is a simplified version of the ERTF Rally Raid software which was used during several years in competition.

The software was simplified to allow a very easy use. It is made for someone who wants to make training for Rally Raid competition with a strong GPS easy to use.

Other versions exist: GPS Raid ORG for the organizer and GPS Raid SO1 for the raid without competition training.

The software GPS Training SO2 allows:

- The import of a race
- The download of a race prepared on PC
- The unloading of tracks and the timing log
- The management of timing
- The trip functions (odometer) with possibility of automatic adjustment at each Waypoint
- The management of speed control
- The use of masked waypoints
- The management of visibility radius
- The management of validation radius

2. INSTALLATION

2.1 Prerequisites

The PC tool works on Windows XP, Vista, 7, in 32 or 64 bits.

2.2 ERTF software installation

From the CD delivered, copy the directory GPS_Raid on the computer.

No particular installation is required.

The GPS_Raid directory can be renamed and placed anywhere in the computer.

2.3 Installation of the adapter USB/RS232

Once the software is installed, you have to install the drivers Windows for the connection USB/series.

It is standard equipment from market, install the CD-ROM delivered with the adapter. Update the drivers if necessary (via internet).

2.4 First start

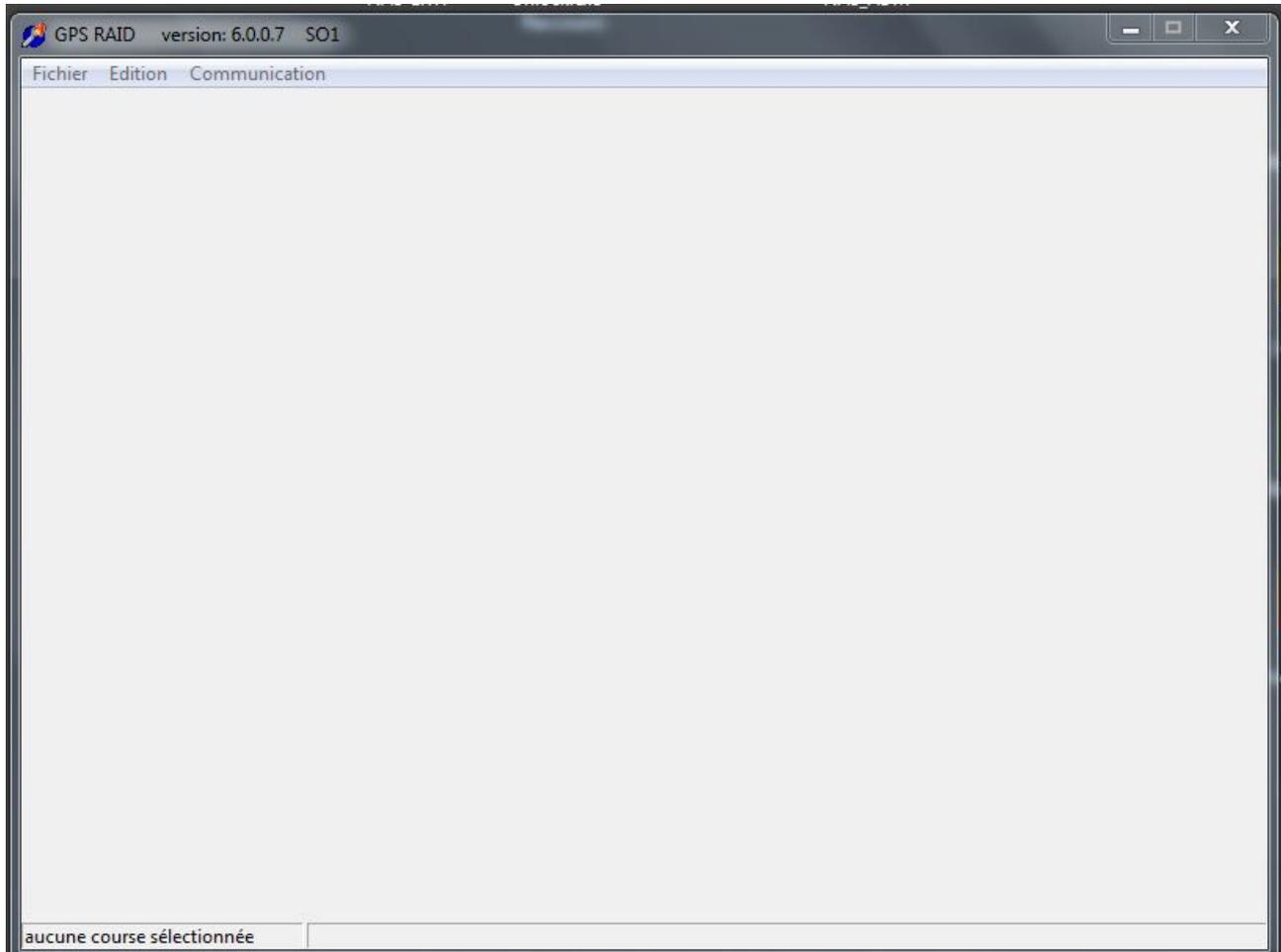
Once the software is installed, during the first start, it will ask a name which will be written in the log title, this name is used only for that.

If the software indicates that there is no connection on the port COM1, it is normal; you do not have yet assigned the port COM to be used to connect the GPS to the PC.

3. USE

3.1 Software star

Start the file GPS_Raid.exe (or the shortcut created especially).



The tab File allows reaching the under-menus:

- New race
- Select a race
- Import a CSV file
- Save as
- Serial port
- Quit

The tab Edition allows modifying a race, it is ineffective while any race has been selected.

The tab Communication allows entering in communication by radio or by cable with the GPS Unik 1.

4. RACE CREATION

4.1 Race creation out of nothing

From the tab file, click on new race. A window opens, race name is asked, example TEST01, validate. The race is created and you can access to the editing menu.

An under-directory has been created: c:\ERTF\GPS_Raid\TEST01. It is the directory which is suggested for the track and GPS logs unloading.

A file TEST01.mdb is created in this directory. It is the data base where the race is stocked (to delete a race, just delete this file). You can rename the file.

4.2 Csv file import

You can complete a race directly in the editing menu but it is also possible to import a csv file resulting from the reconnaissance for example.

An imported file comes in form:

```
WPT1;Latitude;N/S;Longitude;E/W;odometer  
WPT2;Latitude;N/S;Longitude;E/W;odometer  
WPT3;Latitude;N/S;Longitude;E/W;odometer  
WPT4;Latitude;N/S;Longitude;E/W;odometer  
...
```

```
E1K0;47x44,427;N;3x24,363;W;1  
DZ0;47x44,347;N;3x24,514;W;1  
FZ1;47x44,319;N;3x25,140;W;100  
K2;47x44,145;N;3x25,127;W;200  
DZ2;47x43,967;N;3x25,272;W;250  
DZ2a;47x43,948;N;3x25,668;W;3000  
FZ3;47x43,944;N;3x25,856;W;3200  
K3;47x44,186;N;3x25,939;W;4500  
DSS1;47x44,384;N;3x25,634;W;1  
K1;47x45,446;N;3x25,267;W;1125  
K3;47x46,512;N;3x25,022;W;3476  
K5;47x46,148;N;3x24,370;W;5674  
K21;47x45,718;N;3x23,773;W;21290
```

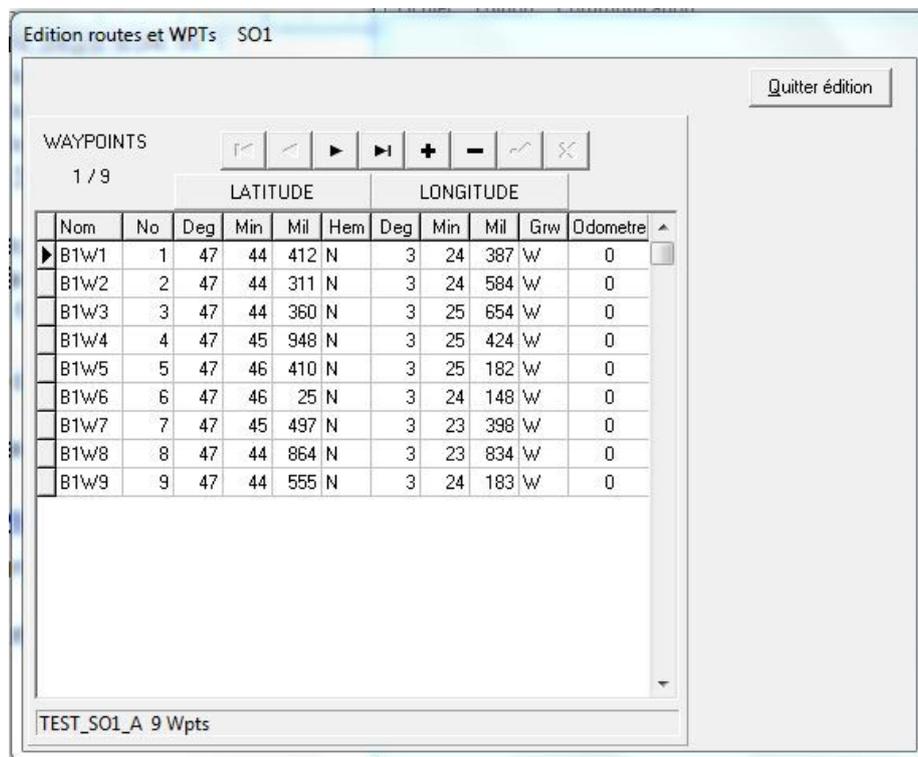
- Keep the syntax correctly
- NAME by 5 prints maximum;
- Longitude in the form of degrees x minutes x thousandths (without space)
- Odometer is stated in meters

Once race creates, from the tab file, do import, select the csv file to import and click on OK. A warning message notices that base will be erased, which is normal. Answer yes.

ADVERTISING: the old data has been changed by the new ones; if you want to keep the old data, do not forget to save them.

4.3 Edit a race

Now you can reach to the Edition menu to add/modify some Waypoints.



4.3.1 Description of the screen

The Waypoint block describes the Waypoints of the way selected.

If you have not import a way, it would have been necessary to fill them one by one.

Columns description:

- Waypoint name by 5 prints maximum
- Waypoint number
- Latitude and longitude
- Waypoint radius, it is the validation radius (200m by default)
- Visibility radius (3000m by default)
- Speed limit between 2 waypoints (0 : no restriction)
- Odometer in meters. **Value 0 indicates there is no adjustment on this Waypoint, value 1 makes an adjustment to 1 meter, means 0 on the GPS, the minimal distance on the screen is 10m.**

+, - keys and arrows can create, delete and navigate in the Waypoints.

Careful to validate properly after a modification is done or you will close without saving it. The validation can be done by the descent or the ascent of the cursor with arrows high and low, or the checkmark of the V key.

To quit this menu click on « Quitter édition ».

5. OTHER OPTIONS FROM THE FILE MENU

5.1 Select a race

You need to select a race before starting the editing menu (when you create a race, this operation is done by default).

5.2 Save as ...

To copy an existing race in another race. This is useful for starting a new race from an existing race.

5.3 Serial port

To associate the serial port where the download cable is installed.

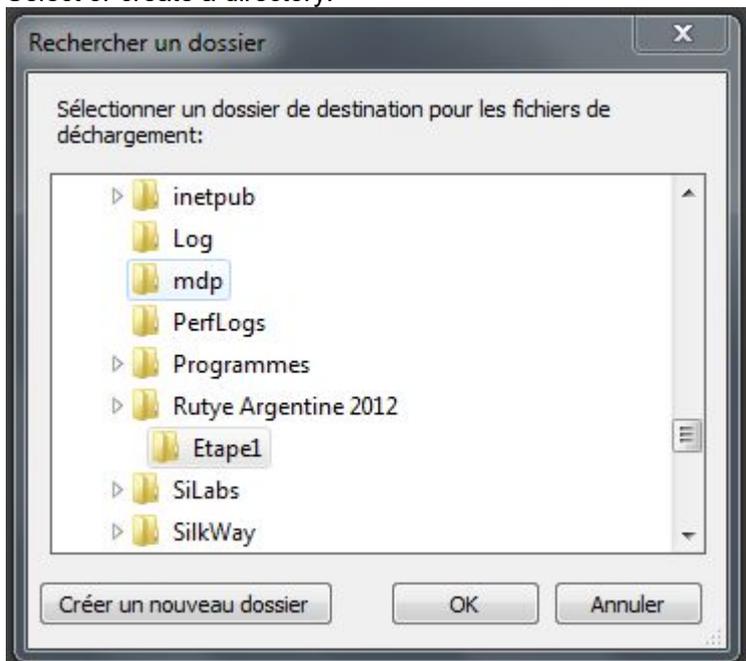
If you don't know the port number, verify in Gestionnaire de périphériques ; Ports (COM and LPT).

6. COMMUNICATION MENU

Once there is at least one race created and selected, it is possible to go in the communication menu.

Select « Communication »

Select or create a directory.



It is important to carefully choose the directory because it is in this directory that unload will be done.

6.1 Principle

In this screen you can communicate with a GPS Unik 1 via a cable connection. You can access to the GPS by double click on the competitor number « ???? ».

As soon as a GPS is connected, its log is unloaded. If there has already been an unloading of the same GPS, the old log is archived in the sub directory « \archive».

6.2 Screen description

The screen is divided in 3 areas:

- Window in the top on the left « GPS en attente ».
- Right window, it is the principal window which displays the present GPS « GPS finis ».
- « Informations » window below on the left, it is the « log ».

Adds 3 functions keys:

- Dcl Start and Dcl Stop, to start and stop the communication with the GPS.
- Quitter

And a box « Forcer deload »

The box « Forcer deload » allows reinterrogating the GPS.

6.2.1 Windows

The window of awaiting GPS has to be empty.

The Information window (Log) allows seeing the information of the connected GPS.

The finished GPS window is the most important.

You find there the connected GPS (if several GPS are connected you will have a line by GPS).

For each GPS you can read:

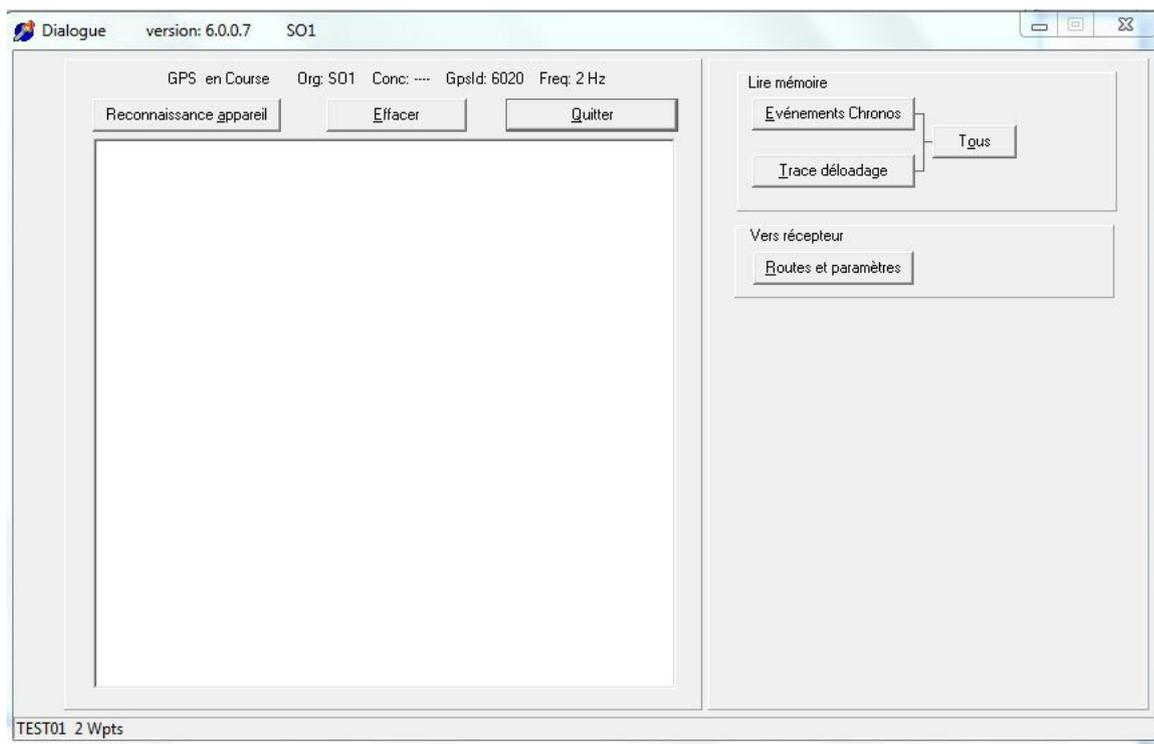
- The competitor code is equal to ???? because it is not used in this version.
- The GPS number (in green if present, in blue if in the directory but not connected from the communication window opening).
- Chk indicator usually in red (from the start), comes green (at the arrival) only for the GPS which have validated all the waypoints.
- The race version equal to 1
- The vehicle type equal to SO2
- The updating state when you are downloading
- The order number if several GPS has been connected one after the other

6.3 Dialog page

The dialog page allows all possible actions on the GPS.

You access to it from the communication menu by a double click on the competitor number.

GPS must be connected.



The dialog page is essentially formed by an information window and the function keys.

After each actions, to quit the dialog page, do not forget to click on Quitter to free the GPS.

6.4 Functions

6.4.1 Unit reconnaissance

Allows interrogating the GPS to have its GPS number and its competitor number.

6.4.2 Erase

Erase the information screen (no action on the GPS).

6.4.3 Read memory

- « Tous » allows reading in one time the timing log and the tracking.
- « Evènements chrono » allows reading only the timing log.
- « Trace Déchargement » allows downloading only the tracking.

6.4.4 Ways and parameters

Way and parameter allows the GPS downloading. Name of the selected race appears below on the left.

7. FILES STRUCTURE

7.1 Timing file

7.1.1 Description

The timing file contains the information concerning the competitor course.

It contains a section check Info

- Competitor number
- GPS number
- Race name
- Entered codes
- CHK indicator if everything is OK CHK=OK
- CP number not validated (OK=0)
- ASC number not validated (OK=0)
- Discontinuities number (GPS switched off...)
- Village overspeed number
- Global overspeed number
- Unmasked Waypoints number

CP not passed list and overspeeds.

Then a section timing info.

File name structure

JRNX followed by the date and the hour of the code SO2 of the competitor number "----" and GPS number.

Example

JRNX_2012-03-13_09-38-34_SO2_----_6055

7.1.2 Example CHK OK

*** Récepteur: 1.16, Outil: 6.0.0.7, Mode: SO1, Freq: 2 Hz, GPS: Raid, Véhicule: 101, Course: 1, CHK: OK

InfosControle
Concurrent; ----
No série; 10281
Course; E2K0
Code1 entrés; 0
Code2 entrés;
CHK; OK
CP non passés; 0
Asc non passés; 0
Discontinuités; 0
Excès vit.village; 0
Excès vit.globale; 0
Nb Wpts démasqués; 0
Cps non passés;0
Dépassements vitesse; 0

InfosChronos

DateHeure: 18/10/11;11:57:54;TPC;NumWpt: 13;TempsPassage: 555;;
DateHeure: 18/10/11;14:17:16;TPC;NumWpt: 25;TempsPassage: 725;;

<FIN>

7.1.3 Example CHK NOK

*** Récepteur: 1.16, Outil: 6.0.0.7, Mode: SO1, Freq: 2 Hz, GPS: Raid, Véhicule: 101, Course: 1, CHK: NOK

InfosControle
Concurrent; 110Y
No série; 10006
Course; E1K0
Code1 entrés; 9999
Code2 entrés;
CHK; NOK
CP non passés; 2
Asc non passés; 0
Discontinuités; 1
Excès vit.village; 0
Excès vit.globale; 0
Nb Wpts démasqués; 0
Cps non passés; 4; 17
Dépassements vitesse; 0

InfosChronos

DateHeure: 28/11/11;10:49:05;TPC;NumWpt: 8;TempsPassage: 0;;
DateHeure: 28/11/11;10:50:39;TPC;NumWpt: 9;TempsPassage: 810;;
DateHeure: 28/11/11;10:58:06;TPC;NumWpt: 16;TempsPassage: 750;;

<FIN>

7.1.4 Details

DateHeure: 28/11/11;10:58:06;TPC;NumWpt: 16;TempsPassage: 750;;
TPC indicates the timing passage in the centre, in this case Waypoint number=16 and passage hour: 10h58mn06,750 seconds.
The time is given in UTC and the timing precision is from +/-0,3 seconds.
In the second example, 3 Waypoints are defined for the timing passage.

7.2 Tracking file

7.2.1 Description

The tracking file contains a title followed by a recording point.
Each record contains:

- Speed
- 'NumTrace' (section between 2 waypoints)
- Date
- Hour
- Half second (because there are 2 points by second)
- Latitude and Longitude

7.2.2 File name structure

TRA followed by the date and the hour of the competitor number and GPS number ORD cod.
Example

TRA_2012-03-13_09-38-36_SO1_----_6055

7.2.3 Example

*** Récepteur: 1.16, Outil: 6.0.0.7, Mode: SO2, Freq: 2 Hz, GPS: Raid, Véhicule: 101, Course: 1, CHK: NOK

Vitesse,NumTrace,Date,Heure,Mil,Latitude,Longitude
2,0,13/3/12,09:09:08,5,47x44.425N,3x24.378W
20,0,13/3/12,09:08:59,0,47x44.433N,3x24.355W
47,0,13/3/12,09:08:32,5,47x44.503N,3x24.294W
48,0,13/3/12,09:08:20,5,47x44.550N,3x24.189W
53,0,13/3/12,09:07:41,5,47x44.594N,3x24.086W
56,0,13/3/12,09:07:31,0,47x44.550N,3x24.189W
51,0,13/3/12,09:07:21,0,47x44.503N,3x24.292W
10,0,13/3/12,09:06:36,0,47x44.433N,3x24.354W
0,0,13/3/12,09:06:33,5,47x44.433N,3x24.357W
1,0,13/3/12,09:06:45,0,47x44.517N,3x24.102W
...