

DriveRecorder GPS data acquisition

Using ES820 with the integrated GPS feature

Do you know this challenge?

You are a calibration engineer and you are interested in receiving some information regarding your trip as the altitude, longitude, latitude etc. You would also like to have them synchronized with ECU and environmental data, and recorded in the same file.

Our Solution – GPS signals acquisition via USB GPS device

Within INCA you are able to connect a GPS device: like the other devices it can be found in the Hardware Configuration and its signals (e.g. Longitude, Latitude, Date, Time, Altitude...) can be added in the INCA Experiment Environment. Then, the whole can be exported and loaded onto the ES820.

Regarding the post-processing, the data may be used in MDA in "Map View", so that also the map of the trip is shown and synchronized with all other information.

How does it work?

Example: how to use the GPS device with the ES820

First of all, the GPS drivers must be installed onto the DriveRecorder. Please note that the drivers of some GPS devices (as e.g. NL-442U) are already included in the installation of the SP7 of ES820 and therefore there is no need to install them.

Connect the Ethernet cable CBE250 to the HOST Port of the ES820 and to your PC, and access the DriveRecorder via MS Remote Desktop Connection:

- On your PC, from the **Start** Menu launch **Remote Desktop Connection** tool (Fig.1)
- Enter the IP address, select the user, and then enter the corresponding password

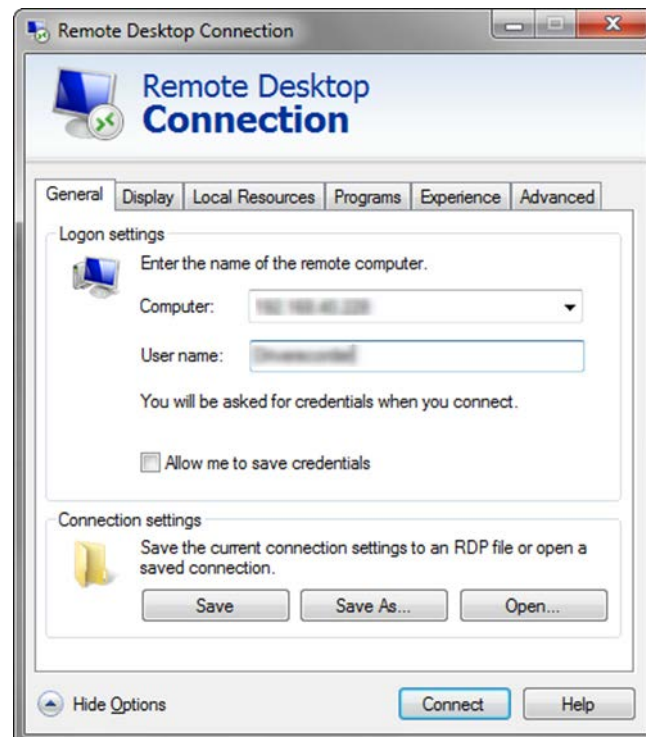


Fig. 1

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Once logged into the ES820, start the **device manager** (e.g. *Start -> Computer -> Manage*) as on a normal PC:

- Physically plug the GPS mouse in a compatible USB port (3.0 on the right or 2.0 in the left) (Fig.2)
- Check the driver status and note to which COM Port the GPS mouse has been assigned (Fig.3)

If necessary, install the driver (for many devices it is not necessary!):

- Copy the installation file to the ES820 and run it there
- From the DRConfigurator, select *Tool -> Persist Current System Configuration*
- The ES820 will perform a couple of memory cycles



Fig.2

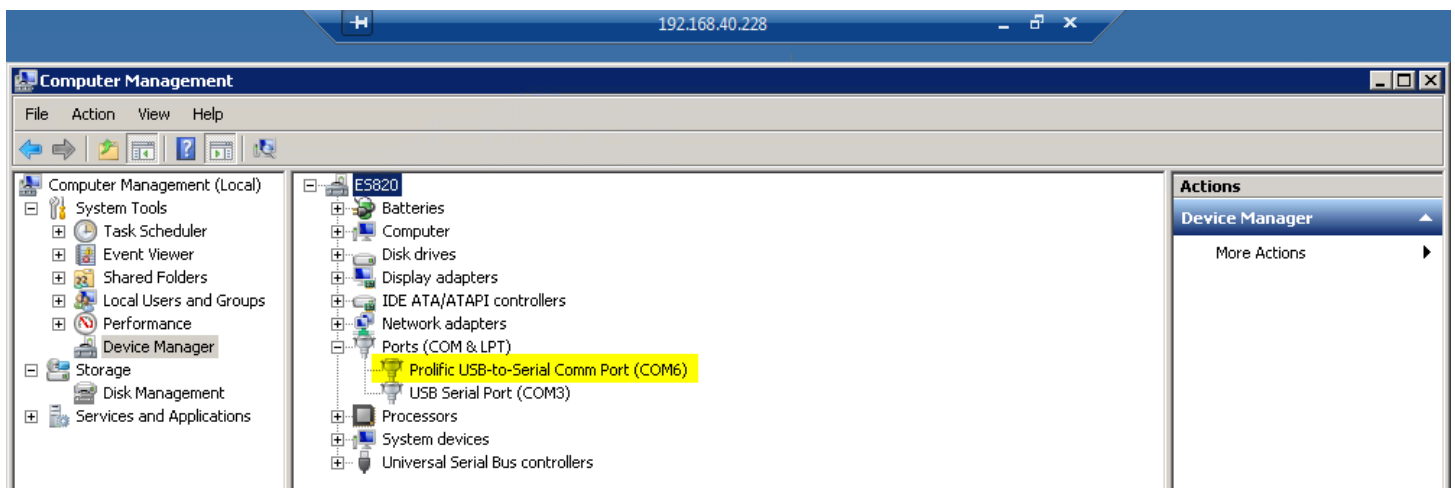


Fig. 3

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After that, you have to configure the INCA .exp file with some GPS device signals on your PC, and export it to the DriveRecorder.

Please open INCA and go to the Hardware Configuration page (Fig.4)

- Add *GPS_System* from the list of devices
- Select the right *COM Port* assigned by ES820 in the tab *GPS_Device Parameters* and press *Apply*

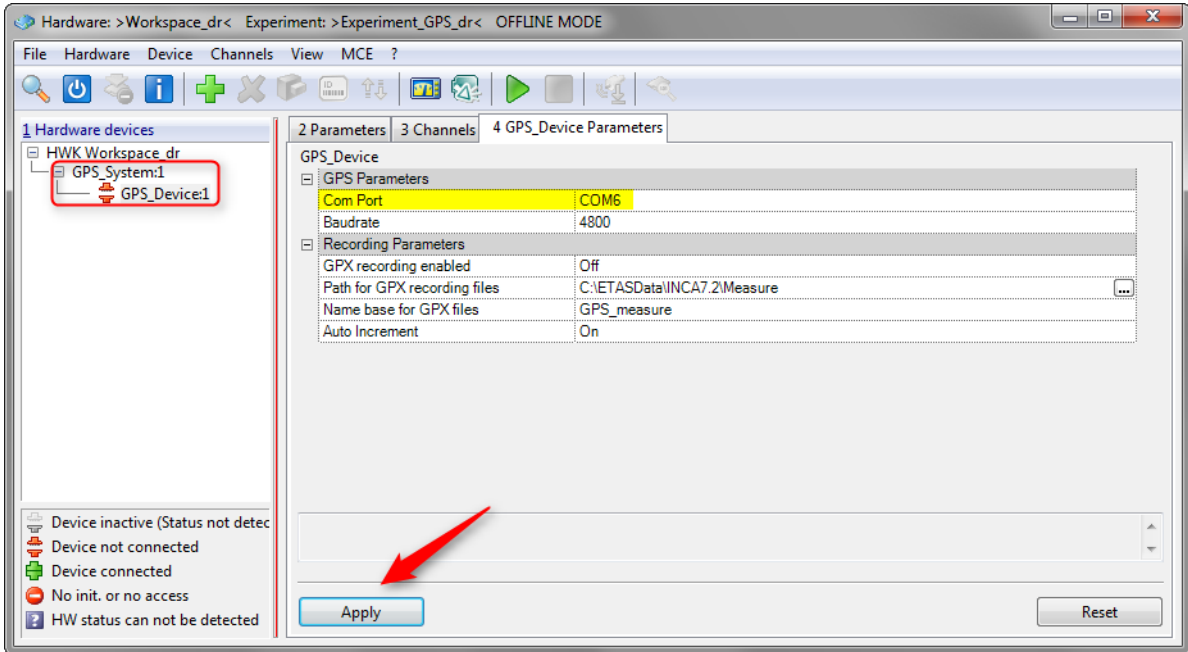


Fig.4

In the Experiment Environment, do not forget to add the relevant signals from GPS!

Then export the DriveRecorder .exp file by *Hardware -> Drive Recorder -> Export...* (Fig.5).

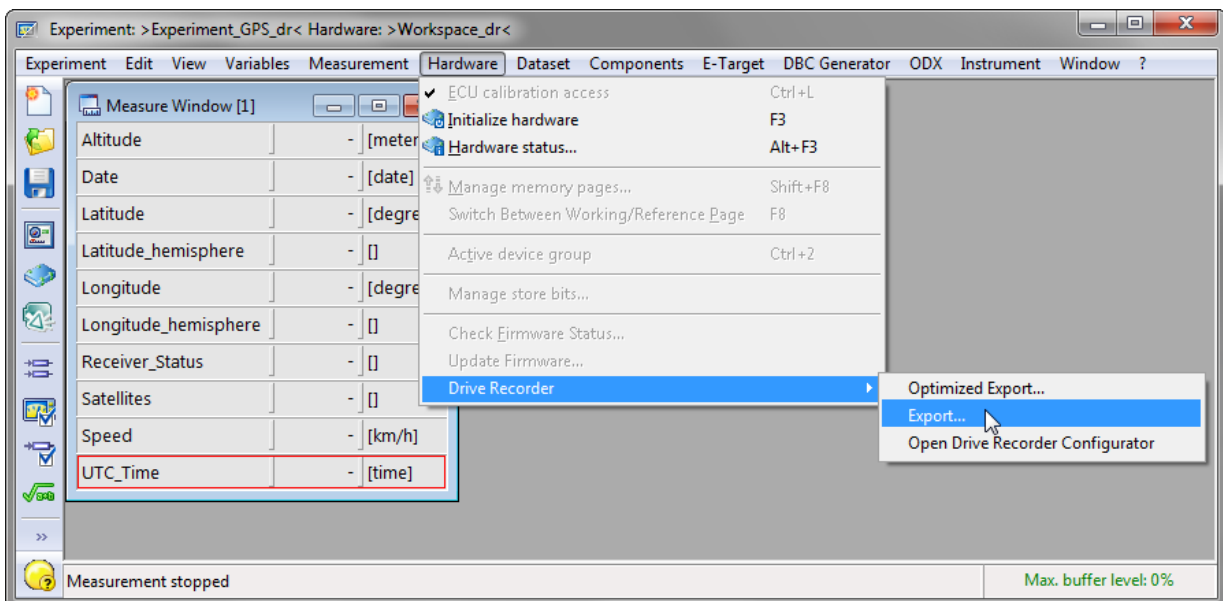


Fig.5

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In the DRConfigurator Tool:

- create a new Recording Job
- double-click or drag&drop the INCA export file to the right side of the page
- set the *Start condition* as *Automeasure* (Fig.6)
- *File -> Apply the recording job to the DriveRecorder*

Your ES820 is ready and at the next start will be able to record GPS data automatically as the satellite is reached.

The recorded GPS data can be read within MDA in a "Map View" window.

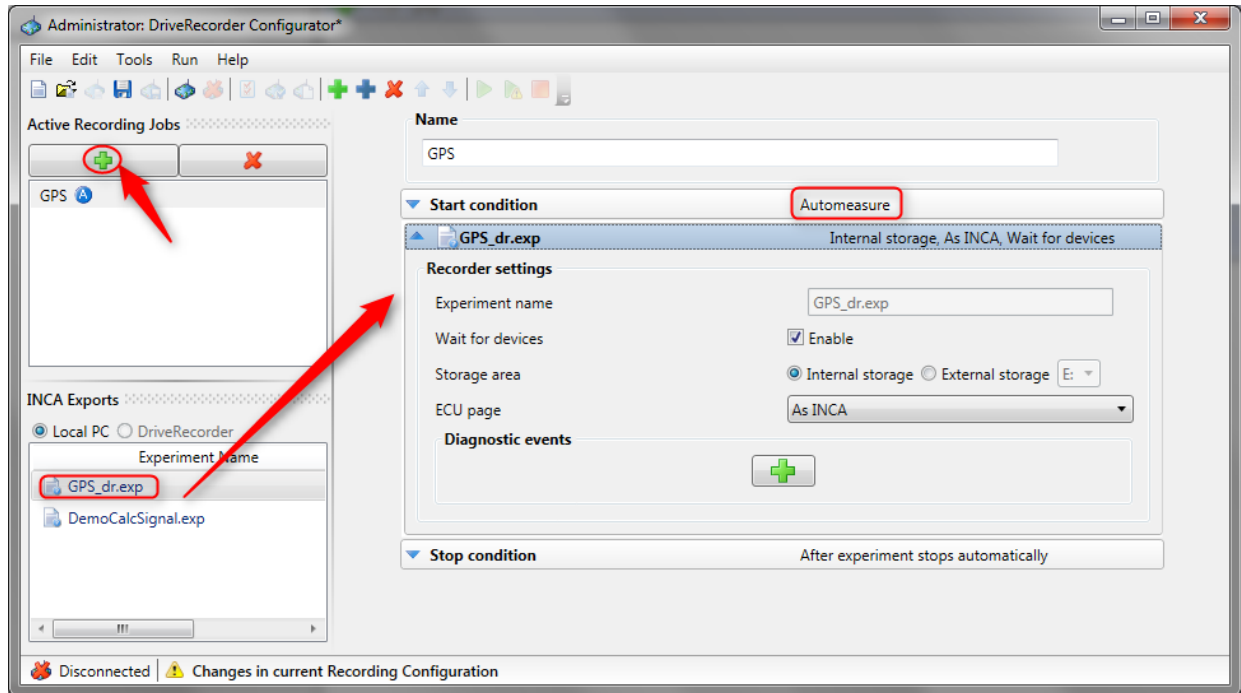


Fig.6

Tools used

- DriveRecorder ConfiguratorTool 7.2.7.125
- ES820 SP7 (7.2.7.128)
- INCA 7.2.7
- MDA 7.2.7



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