



W-C-Sat

Sistema de Rastreo Satelital

WCSat is a **GSM/GPS/GPRS** system that, joined with the provided software, allow the user to track the unit position (location) in real time and show this in a street worldwide map.

Besides this, it also provide a wide range of information about the unit, current speed, alarms, panic button and the ability to talk with the unit's driver.

The software provide the user with all necessary tools to manage each unit and track them without any technical knowledge, it also provide tools to download unit information (internal memory with 2gb capacity) or configure the unit remotely.



WCSat is a tracking system to be used in any vehicle (cars, trucks, etc.), it have a wide variety of utilities to track small, medium or big units quantities.

His design is done to be installed in any part of the vehicle with an **easy-to-follow** connection, without need any technical personnel.

It have two antennas (**GPS** and **GSM**) which could be hided in any part of the main front. WCSat uses a power supply of **12V** to **18V CC**, with a max current consupcion of **3A**.

The data transmission between the unit and the control base is done via **SMS** (encoded with a **256 bits** security algorithm), these information is stored into an internal memory (**2gb**), from where the user can download it later via a **RS232** connection with any pc and the provided software.

WCSat also have **GPRS** connection to send data, this is very useful when the user need to download a big amount of data or when the **SMS** service isn't working properly.

All the information transmitted between each unit and the control base is encoded (encrypted) using a **256 bits** security algorithm making any information unlegible to any person that intercept the message. Each unit is configured with an unique **32 bytes key** to decode (decrypt) the received information.

With the software, or from any cellphone, is possible to request information from each unit or change the unit settings. In the case of using a cellphone (not using the software), it need to be configured as a "**valid**" cellphone in each unit, by

this way we prevent that any other person can communicate with any unit without authorization.

Any signal or alarm that was activated in any unit will be reported to the control base and to any or all of the three (**3**) programmables telephones. This option provides a full track over each unit and make possible any type of solution, from anywhere.

The unit comes with a small **LCD** display to be installed in from of the driver with three (**3**) buttons that allow the driver to manage it, those buttons are "**UP**", "**OK**" and "**DOWN**". Using the buttons, the driver can see some current information about the unit (RPM, Temp, Speed, Lat/Long, etc.) and, most important, allow the driver to make a call to any of three (**3**) configured telephones. Pressing only 1 button, the driver will be talking with the selected telephone, of course programmable via the software (locally or remotely).

From the control base is possible to call to any unit and have **2 modes: Speak and Hear or only Hear**. With this option, is possible to call to any unit and only hear what's happening on the unit, without advice the driver or just make a common call.

The speaker module is a small box that is installed near to the driver.

The provided software is easy to use and let the user configure, track or download information from any of the units, and making a continuous log of the track and information of each unit. It also provides others applications that allow the user to see past information and have a complete log of each unit and driver.

GPS Technical Specs

- Chipset SiRF Star III High Performance
- Sensitivity: -159dBm
- Quick Position Reception
- Integrated SuperCap
- Compact Design
- 20 channels

GSM Technical Specs

- Tri-Band: EGSM 900, DCS 1800, PCS 1900.
- GPRS Download Speed. 85.6 kbps
- GPRS Upload Speed: max. 42.8 kbps
- Short Message System SMS (PDU)
- Integrated TCP/IP Protocol
- 1.8V and 3V SIM Support
- Real time Clock

WCSat Specs

- Fixed current position show in a worldwide street map with an error margin of 10 meters.
- Current unit speed.
- Max Speed Alarm (Programmable).
- Total distance.
- Air Condition On/Off.
- Unit Turn On/Off.
- Lock/Unlock Doors.
- Open/Close windows.
- Panic Button.
- Connected/Disconnected Sensor (useful for trucks/trailers).
- RPM Sensor.
- Temp Sensor.
- Additional Input (On/Off).
- Additional Output (On/Off).
- WCSat Intrusion Alarm.
- No GPS Connection Alarm.
- Minute-to-minute storing of current unit status.
- Auto-Reporting option (Send a report every X minutes programmables by user).
- Talk from/to Unit – Control Base.
- Optional Modes: Speak'n Hear / Only Hear.
- LCD Display (3 telephones numbers to call, current unit status information).

WCSat Technical Details

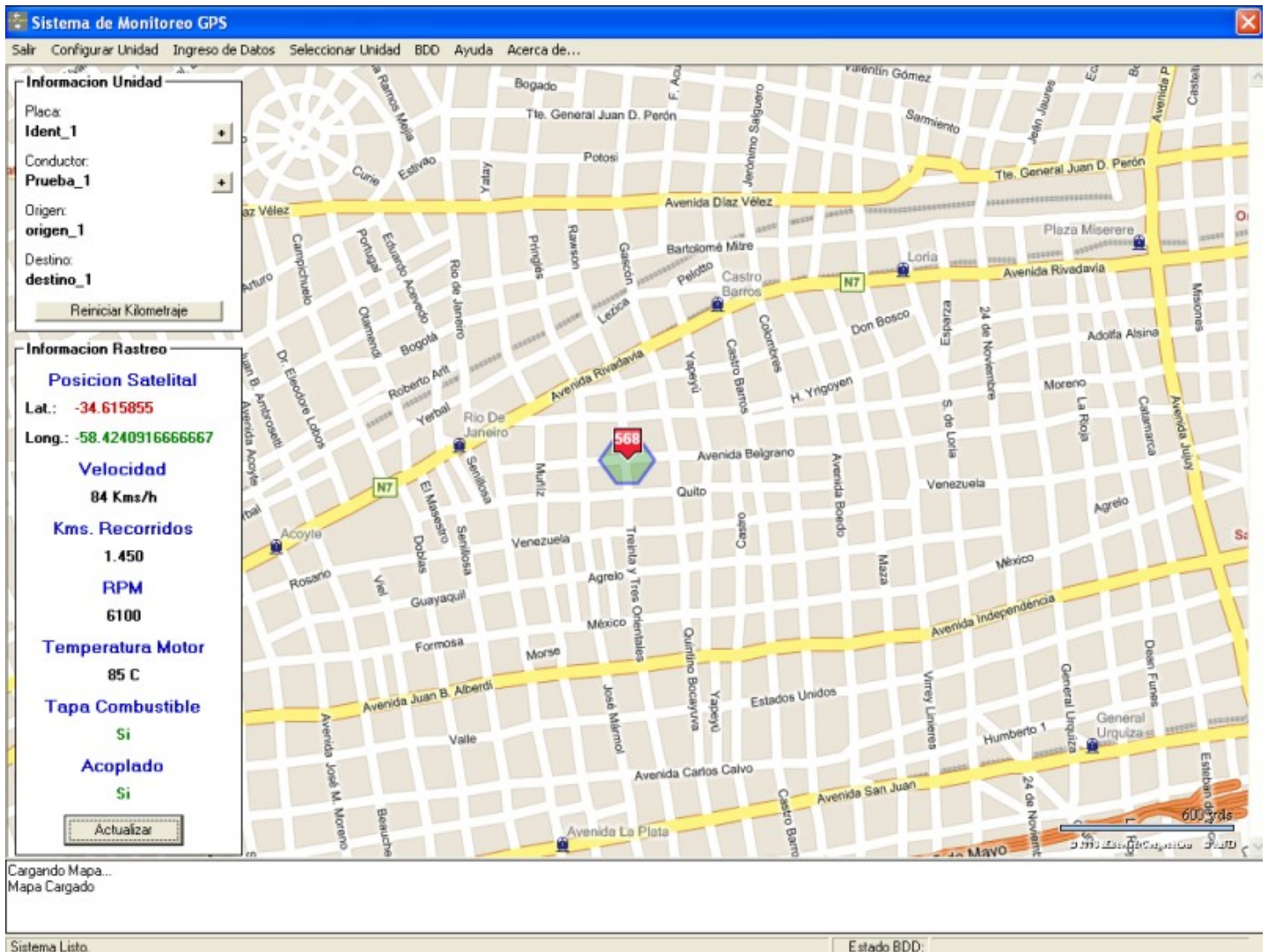
Power Supply	12v/18v-CC
Max Current	3 amperes
Inputs	Temp Sensor RPM Sensor Connected/Disconnected (Trailer) Alarm (On/Off) Additional
Outputs	Relay Output (On/Off) Relay Output (On/Off) Relay Output (On/Off) Panic Button Additional
Power Cable (+)	1 Red (12v)
Power Cable (-)	1 Black (Ground)
External Cables	10 (plus 2 power supply cables, total 12)
Status Led	Yes
Fuse Protection	Yes
Antennas	2 (GPS / GSM)
Antenna Cable Length	2 meters
Control Module Dimension	180x90x50mm
Audio Module Dimension	90x90x70mm
Audio Cable Length	2 meters
LCD Module Dimension	70x20x20mm
LCD Cable Length	2 meters
RS232 Connection	1
Internal Memory	2 GB

WCSat Software

The provided software have “mini” applications that help you to organize, configure and track each unit with easy and powerful tools

After configure each unit (connecting them to the RS232 serial port and using the same software), the system will be ready to be used.

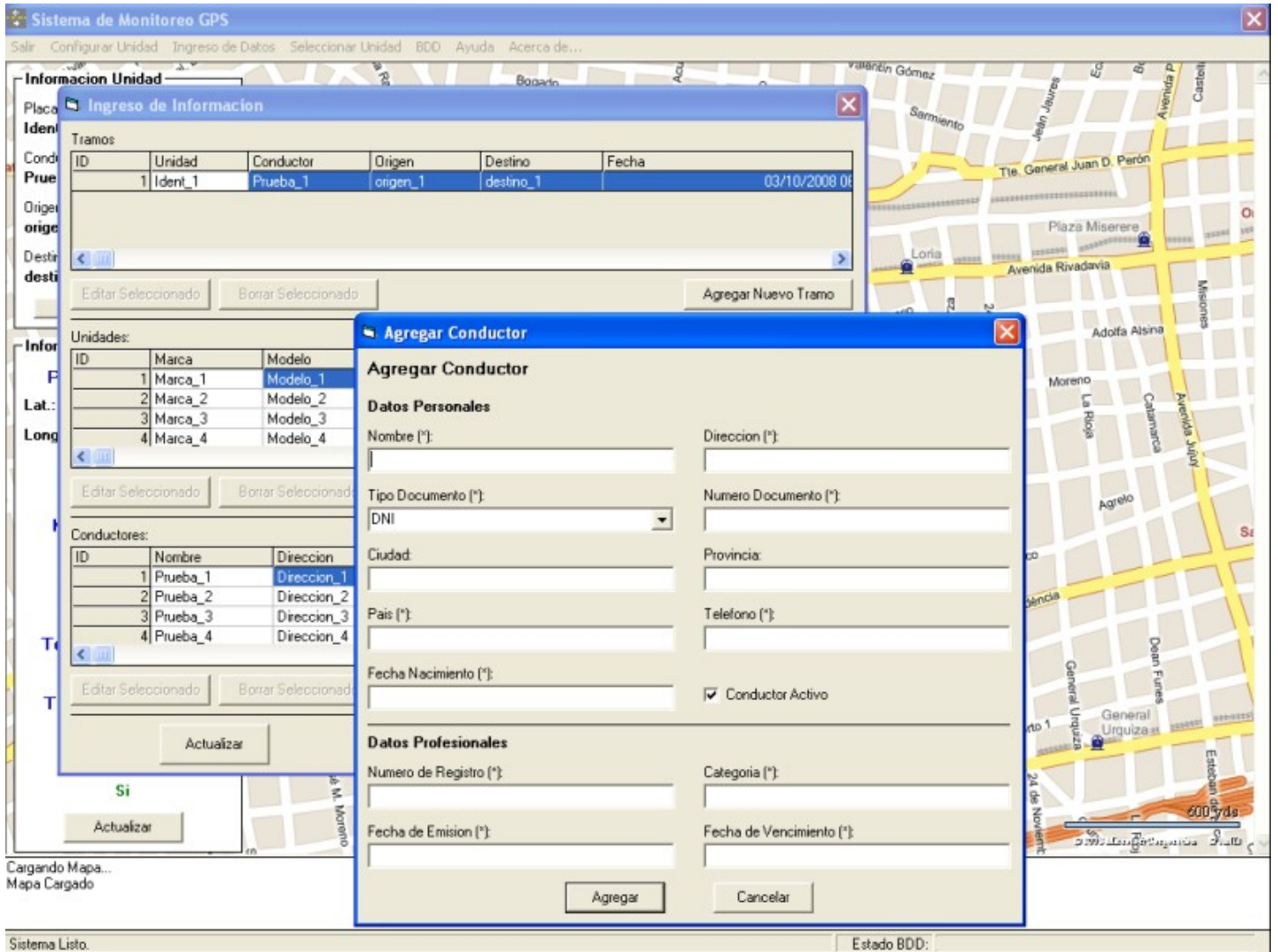
On the “Help” menu you will found guides about how to realize each action that the software provides, here we will show you only some of the most important.



Main Window

On this image we can see the most important unit information (left down) and the driver information, unit source and destination (left up). This last is a basic information show, you can see a more detailed information by clicking on the “+” button.

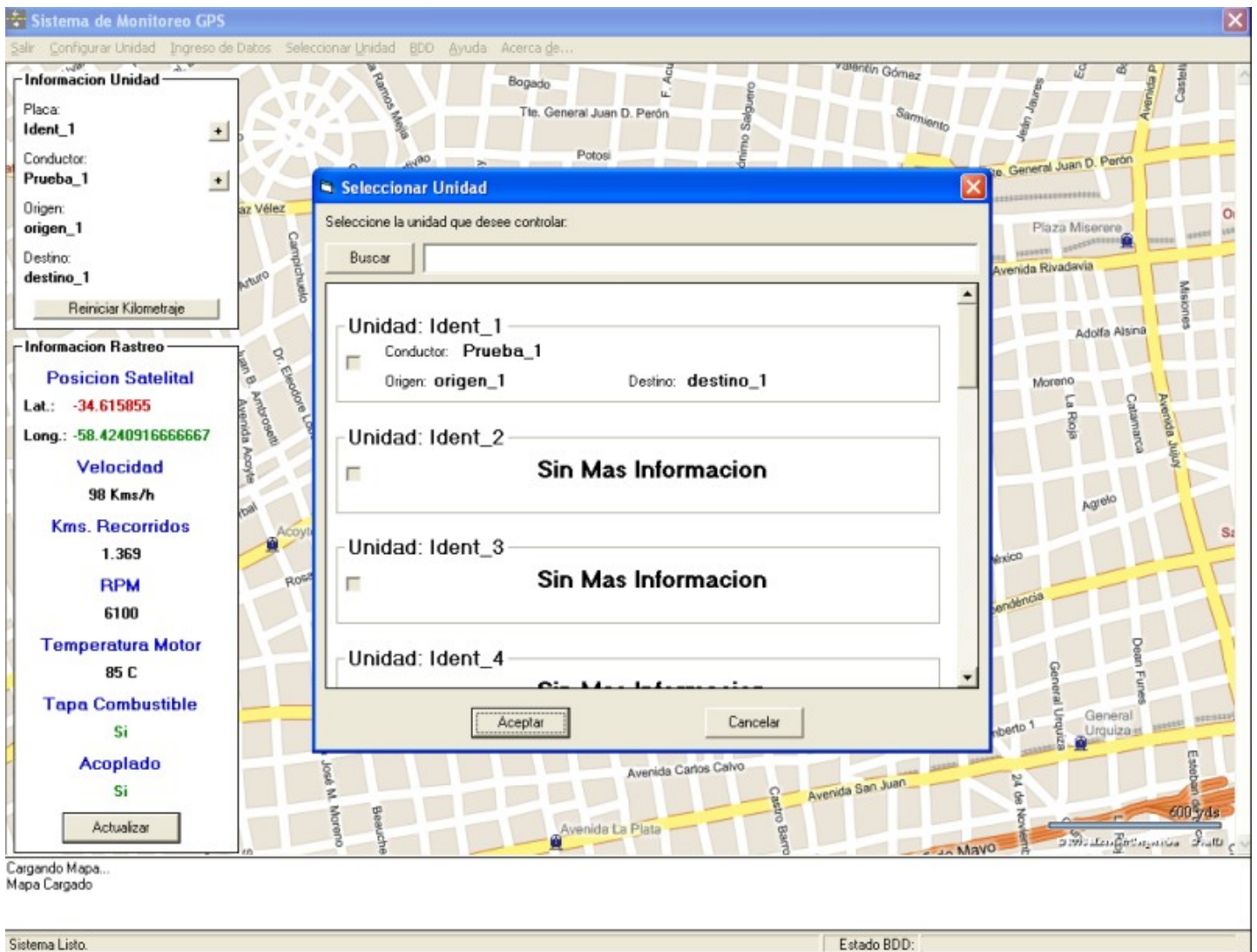
On the center of the screen you can see the current position of the unit in the street map.



Data Input Window

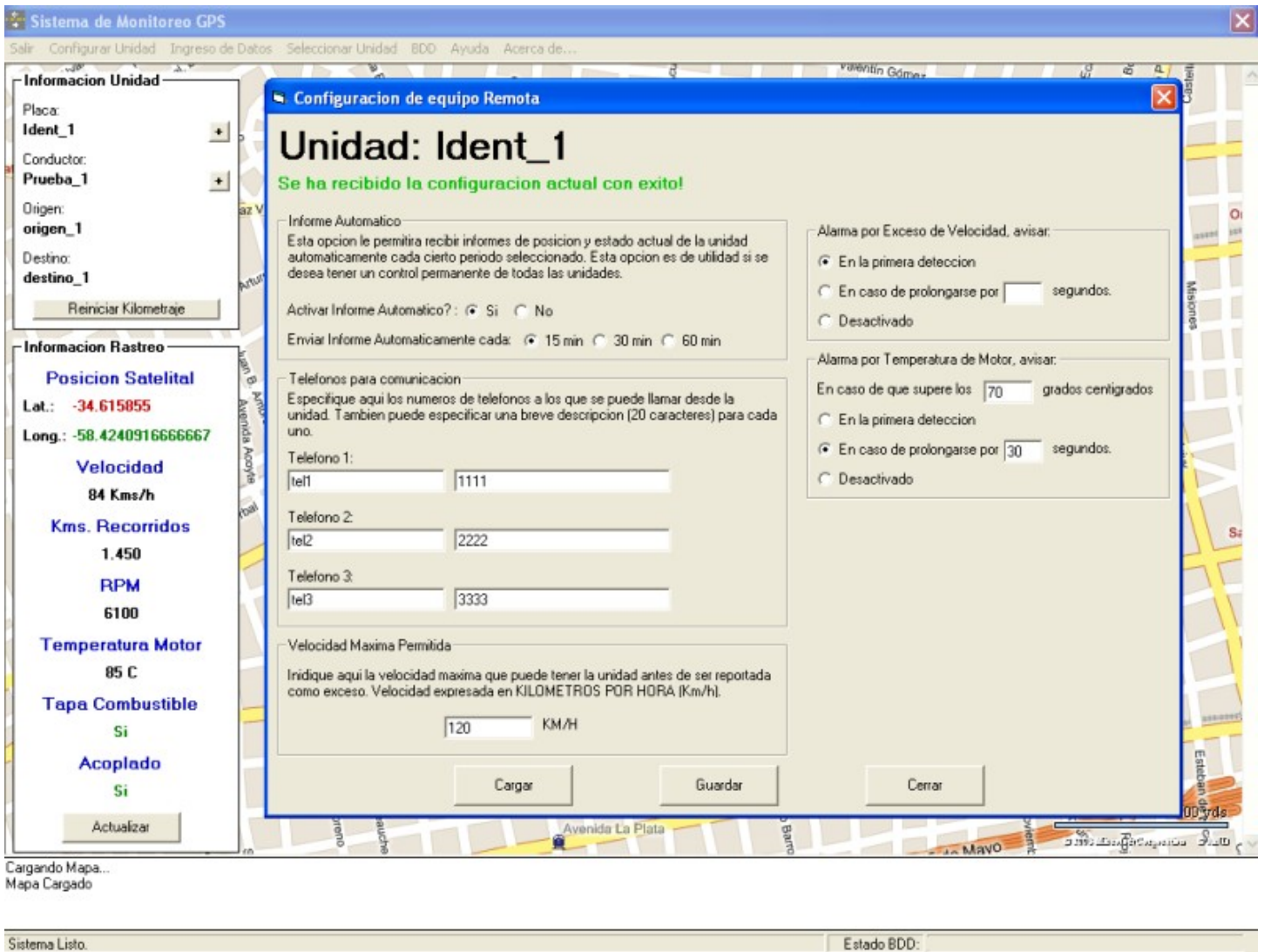
On this screen is shown the Driver Signup Form. The system provides a form to signup drivers, units and trames. "Trames" are done by selecting a driver, an unit, a source and a destination, by this way you can control the current unit position with the destination of the unit.

All fields are not required, the user can choose to complete all of them or not.



Unit Selection

From this screen you select what unit you want to track, doing this the app will follow and show you the unit information.

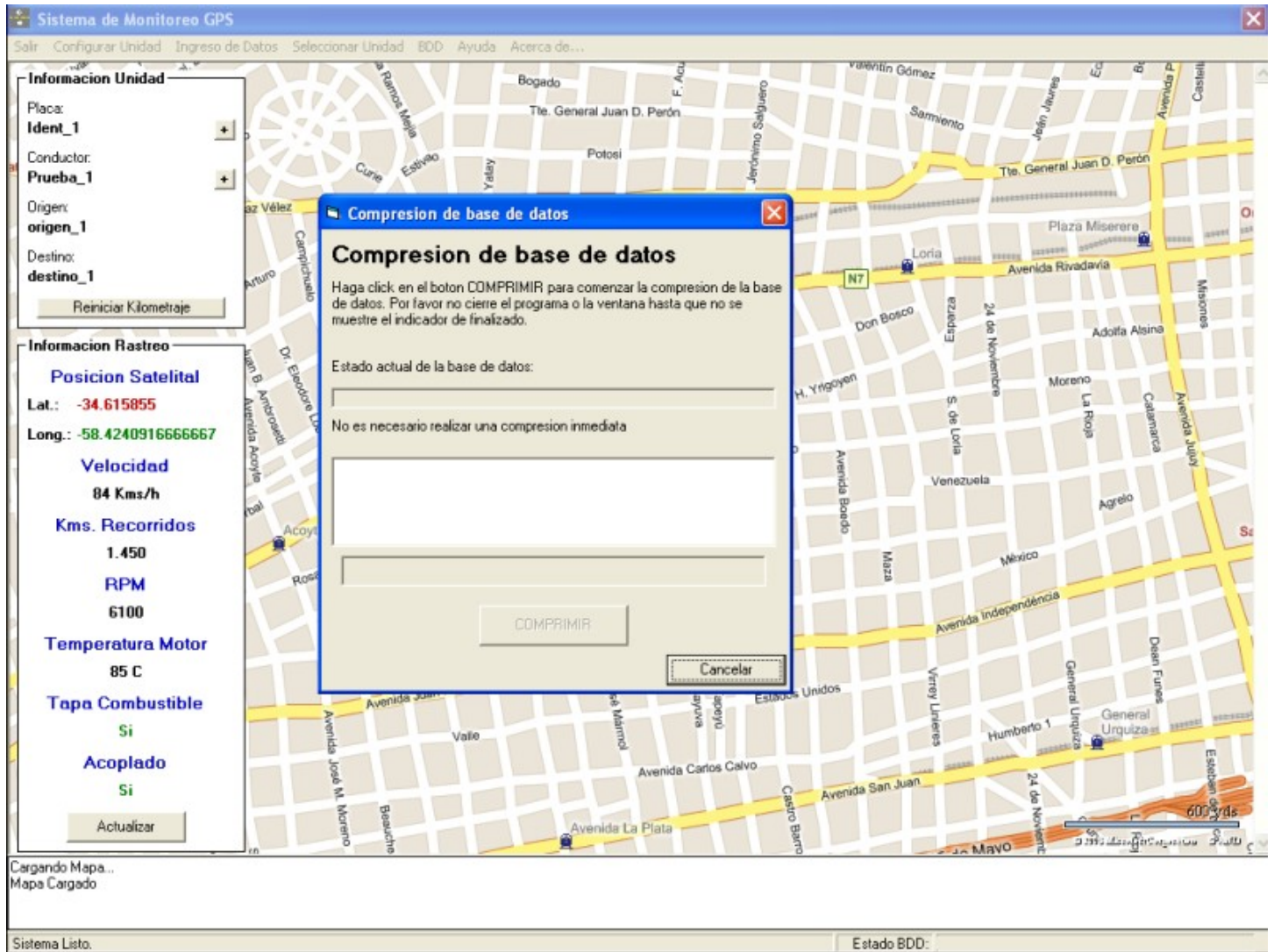


Unit Configuration (Remote)

From this screen you can configure the selected unit.

The system will retrieve the current unit configuration automatically and will show it on the screen, after this you can change the configuration and save it, it will be updated in real time and the unit will start using the new values.

The local configuration of the unit is the same procedure.



The system provides the user with a DB Compress System. This is necessary every certain time (depends on the units quantities) to prevent software performance decrease. The user will receive an advice that a DB Compress is necessary, when the user accepts the warning, the system will start the compressing and freeing the current DB used, by this way the system will always work better and keep a high performance. This tool allows the user to browse the compressed DB's and use them as a permanent log or backup.