HCP Hunter

Operating Description

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TRACKING PROCESS:

Description: Terminal is collecting all relevant tracking data. When process of data collecting is finished, terminal will forward all data to server for further processing. Data is transferred to server using GPRS connection and TCP protocol.

DATA TRIGGERS:

Triggers are used to initiate generating of new track record and in most cases after the record was made was sent to server over GPRS. HCP Hunter supports three different types of data triggers:

- Interval trigger
- Event trigger
- Distance trigger.

INTERVAL TRIGGER:

In every predefined time interval, which is different than current working mode (explained in the following section) new track record is generated and sent to server over GPRS.

Working modes:

HCP Hunter is programmed to support two working modes:

- Run mode (Vehicle is active)
- Stop mode (Vehicle is inactive)

These modes are used to track vehicle at different working modes, defining various interval timers.

HCP Hunter is switching between working modes in two ways:

- Changing state of PIN1 (contact) – available states: 0 or 1
- Vehicle Speed = 0 km/h **or** vehicle speed > 0 km/h

Example No.1:

Run mode timer = **15s**
Stop mode timer = **600s**
Switching: **PIN1**

While the PIN1 state is set to 0 (contact is switched off) the HCP Hunter will generate track record each 600s.

When the PIN1 state is set to 1 (contact switched on) the HCP Hunter will generate track record each 15s.

Example No.2:

Run mode timer = 20s
Stop mode timer = 600s
Switching: Speed

While the speed of vehicle is 0 km/h (vehicle is parked) HCP Hunter will generate track record each 600s.

When the speed of vehicle is more than 0 km/h (vehicle is in the motion) HCP Hunter will generate track record each 20s.

Note*
Changing between states is also treated as an event.

EVENT TRIGGER:

No matter what the current working mode is, when the new event is raised new track record is generated (Interval trigger timer will be reseted)

DISTANCE TRIGGER:

Is used to generate track event each time when vehicle change it's position for predefined distance.

Note*

It is possible to use both Interval and Distance triggers but for more convenience it should exclude one another)

TRACK RECORDS:

HCP Hunter track record consists of all data relevant for vehicle tracking.

- GPS Elements: (Latitude, Longitude, Altitude, Speed, Course, Time)
- States of all inputs and outputs (for example: contact, door, cargo space)
- State of pulse counter (precise mileage)

In most cases (if opposite is not predefined) as soon as record is generated it will be sent to server via GPRS connection.

If sending is not possible, what may happen if there is no network coverage in the current area, server is down, etc, record will be saved into device's internal memory and will be sent later, when it became possible.

COMMUNICATION:

HCP Hunter is communicating with server via GPRS using TCP connection.

At the beginning of every new TCP connection HCP Hunter is identifying itself to server with HCPI sentence.(for detailed instructions please check document: "HCP Hunter Protocol Description")

After the server has responded, HCP Hunter begins to send tracking data.
Track record(s) are sent in packets.

When server successfully receive record packet from device, he sends acknowledgement of receiving to HCP Hunter device. This is the end of certain communication cycle which repeats for every received packet.

COMMANDS:

When packets are successfully received server can send specific command to HCP Hunter.
That command will be parsed and executed and when finished HCP Hunter will send confirmation response to server.

For Communication and Commands protocol please consult document:"HCP Hunter Protocol Description"

CONFIGURATION:

HCP Hunter operating parameters can be set by SMS, GPRS (server) or RS232 cable using HCP Hunter configuration application.