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Helpfile

Ulysse
Speedometer

Overview

The main dashboard of Ulysse has:

- the Speedometer itself
- two multifunctional tools (MFTs)
- trip computer displays
- GPS status monitor
- battery status indicator
- current address/coordinates line (free version shows Ad block)

High Precision GPS Speedometer

The Speedometer shows not only the current speed, but additionally packs in loads of unique functionality – impossible to find with any other 'normal' speedometer installed in vehicles, such as in automobiles, motorcycles, boats, planes to name just a few examples.

Different Speed Units

Different Speed Units: you can set up the following speed units for the Ulysse: km/h, mph, knots. To do this, open the Preferences menu and choose the corresponding unit in the category "Speed Units".

Adaptive Scale

Depending in/on which vehicle you are using Ulysse, you can set the maximum value of the speedometer scale. If the speed reaches the maximum value – or exceeds it – Ulysse will automatically increase the scale with a shift of around 20 measurement units. The application will expand the measurement limit while the speed increases – or the speed limit for civil GPS device (1000 knots) is reached. Likewise, during decreasing speed, Ulysse will auto-correct the scale until it reaches the value set by the user.

Maximal Speed

Ulysse constantly monitors its moving speed and shows the maximum speed of the current trip so far achieved via the display of a small red arrow on the scale, plus its digital value situated under the main digital speed indicator.

Different Indication Styles

Digital: where speed indication is numeric in the center, with highlighted ticks on the dial.
Analog: for the more traditional way – with a needle on the dial, and numerical in the center.

Multifunctional Tools

Ulysse features two MFTs in both lower corners:

1. Left: a combined compass / average speed display
2. Right: a combined GPS altimeter; an average speed speedometer; a racing measurements display

GPS Compass

With the strong distortions of magnetic fields due to the amount of the metal from which an automobile is made, Ulysse does not use a traditional magnetic compass, but instead uses GPS to define the direction of the movement from signals of satellites.

The use of a magnetic compass in a car without special equipment, enabling installation in a specific place of a specific car model, is practically impossible. A GPS compass is not subjected to any external influences; however, its drawback is giving false values when the car is stopping.
This happens due to the following reason – in a static state, a GPS receiver can give small changes of location to within several meters/yards, which it then treats as movement and thus sensing perceived changes of direction. On the move however, the GPS compass works with a more-than-sufficient precision for practical use.

Average Speed Display

Ulysse shows two values. The upper value is the average speed calculation *while moving* - only the time when the vehicle is in motion is taken into account and not while stationary at red traffic lights for example.

The lower value is an average speed, constantly calculated, whether stopped at lights or on the move. Both speeds are calculated for the whole trip and they are reset together with the counter of the current trip.

Controllable Speedometer of the Average Speed: On modern highways, road surveillance from CCTV monitoring, etc., of the traffic is on the increase. A check of an automobile's average speed is very often made on these parts of the road: the moments when the car enters the area and then leaves are recorded, and then an average speed is calculated. The aim of our *Controllable Speedometer of the Average Speed* (CSAS) is to help you successfully drive these stretches of road without unnecessary penalties.

Using this function is extremely easy; when entering the controlled area, make a long press on the indicator to switch to CSAS. From that moment on, CSAS will display your average speed – measured from the start of this time marker.

GPS Altimeter

Ulysse's GPS Altimeter displays the altitude above the sea level for the *geoid WGS84*. This geoid represents an averaged model of the Earth, which in most cases coincides quite near to the real geometry of the planet.

However, this averaged model could give results differing from the actual. So, for example, while driving along a sea coast (close to zero feet above mean sea level), an altitude of -50 feet could be displayed. Alternatively, a measurement from high altitude could be +20 or 30 feet *higher* than the actual altitude shown on a map. This is why GPS altimetry is more suited for the measurement of altitude *difference* between the points of your route rather than for indicating *absolute* altitude. The altimeter can be measured in meters or feet depending on the setting choice.

Dynamic Changes (Racing Measurements Display)

This indicator has three main racing timers:

1. acceleration time from 0-60 mph
2. acceleration time from 0-100 km/h
3. time for a quarter-mile

Reset and restart are fully-automated. The timers are always reset when the car stops completely for more than three seconds, and are restarted once again the moment car movement is detected. You can also reset the current calculation and put the timers in a stand-by mode by long pressing on the indicator – it then becomes lit green.

After the reaching the required condition: a speed more than 60 mph, 100 km/h, or the reaching the quarter-mile, the corresponding timer stops and the given time value is recalculated to find the actual start / finish time, and display.

This is done because GPS can give a speed calculation with a time interval, mainly once per second. The car starts moving regardless of this - that is why an application based on the given GPS locations calculates the exact moment when the car started moving and until when it reached the necessary

speed. For secure activation of the timers, you have to continue accelerating (even after having already exceeded the necessary speed).

The given values remain on the indicator until the next reset. To avoid an infinite time calculation, all timers stop one minute after starting.

GPS Status Monitor

This indicator shows the current condition of GPS chip. It is an important tool as it shows how reliable the current values on Ulysse are.

When green – all is in order, the GPS is giving precise information. The Monitor also displays the precision of location ID (in feet or meters).
When it is red – the GPS has skipped the regular data update interval and the value on Ulysse could differ from actual.
When gray – the GPS is giving no info about speed or location – so it's not possible to rely on the displayed information whatsoever.
When the GPS chip cannot identify its location, the Monitor displays the number of satellites from which signal are received; availability of a signal does not guarantee that it will be used for the calculations – the signal could be maybe weak or intermittent.

If Ulysse was started with GPS not activated on the device, the display of the monitor will be totally black with the word 'off', along with a proposal to click it in order to move to the system control panel of the GPS. From this panel, you'll be able to activate the GPS and return back to Ulysse.

If you often run one or two apps from Ulysse – like Maps or Music – you can use the *GPS Fast Menu* for this and call the most used apps in just two taps! To access the menu, tap on the GPS Monitor and add an app in free slot. This menu has three slots in the Pro version, but just one in the Free version. For removing an app from the menu, press and hold then select 'Remove' from the dialog.

Date & Time Indication

Most other speedometer apps have small, insignificant time displays in the status line – they're quite difficult to read when driving. With Ulysse we added a large time and date display to its dashboard.

Trip Computer

Trip Computer contains several trip meters, each of them records total time in motion, the stop-times, trip distance, average, and maximum motion speed. Additionally, in Ulysse Pro, coordinates and addresses of the start and finish points of the movement are displayed. Currently, Ulysse records data for:

- the current trip
- all trips for today
- all trips for yesterday
- all trips for the week
- all trips for the month
- all trips since the installation of the application

The current-trip meter can be reset to zero at any time. After clicking it, press the key 'Reset' in the menu that appears. To review the meters' list, the menu command 'Trip Meters' is required to be pressed.

On the right-hand side of the list, there is the key to call the menu allowing:

- saving of data on the memory card
- resetting of the meter (if this operation is provided)
- opening of detailed information (Ulysse Pro only)
- sending of the meter via email (Ulysse Pro only)
- setting of the initial value for the meter (currently available only for the meter of all trips)

Additionally, Ulysse Pro has three extra meters, the names for which can be set and reset at any time.

Battery Monitor

When the battery heats up, an overheating indication appears. The threshold parameters can be changed in the settings. The value of parameter 'Low' is the lowest temperature of the range considered to be normal for the battery. The value of parameter 'Warm' is the highest temperature of the battery's normal operating range – but is not in dangerously hot.

The final parameter 'High' specifies the temperature considered dangerous for the battery; potentially decreasing its capacity or lifespan. As default, all the above parameters are given standard values that are the safe working averages for a generic battery. Of course, these settings can adjusted to any

particular device. The temperature is shown in Celsius or Fahrenheit; as defined globally for the whole application in the general settings of the units.

After many requests from our cyclist-users, we've now made it possible to use this same battery widget as a bell on the handlebars; just go to the Battery Monitor settings to assign a bell (or maybe something stronger?). This can then be activated in the usual way – a thumb tap.

Speed Limits

To drive the most efficiently without breaking any traffic rules, a special *Speed Limits i*mplemention was developed for Ulysse. Via this technology, the application signals possible overspeed, allowing zero distraction to one's attention within dense city traffic.

When the car gets to the *lower edge limit* ('Min'), the speedometer scale turns. The scale remains green until reaching the *Speed Limit* ('Edge'). By exceeding this speed limit, the scale turns red and will remain red until the speed exceeds the *upper edge limit* ('Max'). In addition to this, you can set the individual sound signals for speed limits, as well as the ranges from *Min* to *Edge,* and from *Edge* to *Max*. Furthermore, you can set the sound signal for indicating the return of the speed to the 'concrete' limit (*Back*). Having set the various sound signals, you can drive your car without distracting your attention, thus avoiding speeding tickets.

Initially, the speed limits – which are valid in most countries of Europe and the US – are preset into Ulysse. Two independent sets of limits for km/h and mph are supported.
Each set can include up to ten limits, each of them containing values for *Min*, *Max*, *Edge* and *Back* speeds. The limits cannot overlap themselves (i.e., the max. value of the lower limit cannot be more than

the min. value of the next limit). In most cases it is enough to change only the main value of the limit: *Edge;* the rest of the values will be set by the application automatically. Of course if you need to, you can change them individually.

HUD Mode: A Pilot's-Eye View

This mode shows summarized information of movement in mirrored or normal reflection. Two display submodes are supported: *Normal* and *Only Speed*.

In the *Normal* submode, the speed, direction of the movement, current time, and covered distance are shown.
In the submode *Only Speed,* only the speed value is shown.
This direct reflection is convenient for use while riding a motorbike or bike thanks to the large, clear digits being easily seen – even in daylight.

The mirrored reflection is designed for projection up to a windshield, therefore best suited for use in darkness. To enable this mode, set Ulysse to HUD mode, and place your device on the dash under the windshield – an undistorted reflection of your device's screen, with all the current information about your movements, will be displayed on it.
Of course, you have full control on the displayed HUD color – red, green, and blue values can be individual selected giving the huge amount of color possibilities.

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Overlays

Ulysse has special ability for displaying important travel parameters such as speed, direction, time, over other applications like *Maps* or *Navigation*. With this feature activated, a small Overlay indicator appears over the main application window. Currently, Ulysse has four Overlays:

1. *Speedometer* – displays current speed and speed limit warnings
2. *Compass* – displays direction to geographical north
3. *Elevation* – indicates current altitude
4. *Trip Info* -displays main trip parameters: like travel time and distance

Individual Overlay parameters can be specified like: screen location for different screen orientations, size, and transparency for each application with which you would like to use Ulysse.

Changing Screen Location, Size and Transparency

To set the individual parameters of overlays, go to;

<Menu><Settings><Overlays><Individual app settings>

If the required application is not shown in the current listing, tap on <Add> at the bottom of the screen and choose the desired application from the <Select applications> listing showing installations on your device.

When the newly-added app is now selected from the list, it launches with Overlays placed on top - Overlays is in now in 'Setup' mode. In order to drag the Overlays to another location, follow the commands shown in each circle; for some devices, it may be required to tap on the overlay before dragging is possible.

For changing the overlay's size, tap on 'SIZE' at the bottom and adjust using the slider. This same procedure for changing transparency is also used by tapping on 'TRANSP'.

Repeat the same procedure for the other screen orientation - Ulysse handles separate overlay locations for portrait/landscape orientations – but size and transparency remain the same for a particular app.

When you finish with settings, return to Ulysse with the 'BACK' key.

Individual Overlay Control

Using individual overlay settings you can switch ON/OFF any overlay on the screen and assign the action to be done on tapping an overlay.
To do this, go to;

<Menu><Settings><Overlays><Overlayed Tools>

and select the desired tool: Speedometer, Compass, Elevation, or Current Trip. Now you can switch the Overlay tool ON or OFF and assign one of the actions; 'Return to Speedometer' or 'Show/Hide Media Control'.
Note that an Overlay with an assigned action has double-circled outline around it.

Address/Coordinates (Pro version only)

The address line at the bottom can function in three modes:

1. automatic detection of address (A)
2. detection on request - manual (M)
3. reflection of coordinates (C)

In *Automatic Detection of address*, the update occurs every 50 meters at any speed up to 20 km/h; every 200 meters with a speed between 20 km/h and 60 km/h, and every 2 kms with a speed over 60 km/h.

In the reflection mode for coordinates, updates occur approximately once per second. The format for reflection of coordinates can be set in the application settings.

Music Control (Pro version only)

To access Music Control, slide the address bar to the left. The Music Control in Ulysse is *not* a fully-functional player; it is set of buttons that sends commands to the currently selected music player application. Music Control attempts to use the default Google Music app. If your device has a custom player as default – as is often the case – you need to set this up in Ulysse.

To enable, slide and open Music Control and tap on the three-dots button (Settings), select an empty cell (where three cells are available currently) and tap on it. From the list of applications installed on your device, select your desired player app, this player will be added to the Control and selected as the

current player. From now on, Music Control in Ulysse will play/stop and change tracks in album/playlist for that chosen player.

You can change the selection at any time – just open Music Control, tap on Settings button, tap on the desired player.

If a player app was selected, Music Control will start it; this is a convenient and fast way to choose another album or playlist in player. Remember that Music Control is *only set of buttons*, so don't forget to choose the album or playlist in the player!

When pressing the <play> button, the Music Control sends a command to the currently selected player and the button blinks until it starts to play music. It may take some time before the player reacts on the Control action.

Tracks Recording

Ulysse allows you to record your movements when the application is running. For enabling track recording, tap on the *Trip* meter in main dashboard and then select the 'Record ON' command. From now on, the app will record your movements automatically. You can stop recording at any time with another tap on the *Trip* meter and selecting command 'Record OFF'.

By doing nothing more, Ulysse will continue to record tracks automatically – from app-start and movement beginning, up until quitting – this means, you don't need to start track recording every time. Each track will have a unique name, based on its start time.

For reviewing all of the recorded tracks, open the tracks list: <Menu><Tracks>. When you select track, it will show you a button panel – where you can mark it for export/delete, or change the track name.

For deleting one or more tracks at once, mark them with DEL button and press 'Delete' button at the bottom-right on the screen.

For exporting, mark the tracks that you would like to export and press 'Export' button.

In the export window select the required format: GPX or KML (Pro version only). Additional data values, such as speed, altitude, and bearing are not supported by the standard format and are available as an extension. Press 'Export to SD card' – the files will now be stored in *binarytoys/tracks/gpx* or the *binarytoys/tracks/kml* folder on your SD card.

If you press 'Export with e-mail' (Pro version only), you will need to enter a target e-mail address – then all exported files will be attached to the e-mail and sent. You can reset the selection list at any time with the 'Clear' button or unselect individual tracks with the 'Undo' button in the track row.