

Speedometer Help

On the main dashboard of the application there is:

- the speedometer
- two Multi-Functional Tools (MFT)
- trip computer displays
- GPS condition monitor
- battery condition indicator
- current address/coordinates line (or advertisement block in the free version)

Speedometer

The Speedometer displays not only the current speed, but additionally a load of unique functions impossible to find integrated within any other speedometer, installed in any other vehicle - including automobiles, motorcycles, boats and planes.

Speedometer Versatility

Different speed units

The following speed units for the speedometer can be set: km/h, mph, knots. To do this, open the Preferences menu and choose the corresponding unit in the category 'Speed Units'.

Adaptive scale

Depending on which vehicle is using Speedometer, the maximum value of the Speedometer scale can be set. If the speed comes up to the maximum value, or exceeds it, Speedometer will automatically increase the scale by approximately 20 measurement units. The application will increase the measurement limit during speed increases, or the civil GPS device speed limit (1000 knots) is reached. With the speed decreasing, Speedometer will also correct the scale until reaching the value set by the user.

Maximal speed

Speedometer permanently monitors the speed of movement and shows the maximum speed of the current trip with the help of a small red arrow on the scale, and the numeric value situated under the main numerical speed indicator.

Multi-Functional Tools

The application offers two MFTs - a combined compass, a controllable speedometer of the average speed, an altimeter, a speedometer of the average speed, and an indicator of the dynamic changes (racing measurements).

Compass/Speedometer of the average speed

Speedometer does not use a magnetic compass, but a GPS, which defines the direction of movement from GPS satellites' signals and not on the magnetic field of the Earth. Due to the metal from which the automobile is made, plus wiring inside the car, this creates a strong distortion of the magnetic field. Because of this, the use of a magnetic compass in any car, suitable for installation in any location of any particular car model is practically impossible without special compensators.

A GPS compass is not subjected to any external influences, however its drawback is that with the car stopping it can give false values. This happens due to the following reason: by stopping, a GPS receiver can give small changes of the location within several meters/yards, which it treats as movements, giving accordingly changes of the direction. On the move, the GPS compass works with the precision which is sufficient for the practical usage.

Controllable Speedometer of the average speed

On modern highways, the controlled parts of the road with video monitoring of the traffic occur more and more often. The control of the average speed of the automobile is very often made on these parts of the road: the moment when the car enters the area and leaves it are marked and the average speed of the movement is calculated. The mission of the Controllable Speedometer of the Average Speed (CSAS) is to help you to overcome these parts of the road without unnecessary penalties.

To work with it is extremely easy: when you enter the controlled area make a long tap on the indicator. From that moment CSAS will show your average speed counting the distance from the beginning of the area.

Altimeter/Speedometer of the average speed/Indicator of the dynamic changes (racing measurements)

Altimeter

GPS altimeter shows the altitude of the sea level for the geoid WGS84. This geoid represents an averaged model of the Earth, which in many cases coincides quite near to the real geometry of the planet. However, this averaged model can give results differing from the actual ones. **So driving on the sea coast of Florida one can receive a negative altitude about 50 feet or vice-versa from the altitude which is reported by the altimeter will be 20-30 feet higher than the altitude shown on the map. That is why GPS altimeter is more suitable for the measurement of the altitude difference between the points of your route than for the indication of the absolute altitude.** Depending on the current application settings the altimeter shows altitude in meters or feet.

Speedometer of the average speed

This device shows two values. The upper value is the average speed IN MOTION. For its calculation only that time is taken into account when the vehicle is moving. So those moments, for example when you wait at red traffic lights are not taken into account. The lower value is a GENERAL average speed which is permanently calculated, no matter if you stay on the traffic light or move. Both speeds are calculated for the whole trip and they are reset together with the counter of the current trip.

Indicator of the dynamic changes (racing measurements)

This indicator includes three main racing timers:

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

Reset and restart are made fully automatically, the timers are always reset when the car stops completely for more than 3 seconds and are immediately restarted the moment car movement is detected. You can also reset the current calculation and put the timers in a stand-by mode using a long press on the indicator, which will become lit green.

After the reaching the necessary condition: the 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 real moment of start and finish and to show the correct time on the display.

This is made because GPS gives speed calculations with some time interval, mostly once per second. The car starts moving regardless of this, that is why the application based on the given GPS locations calculates the exact moment when the car started moving and when it reached the necessary speed. For the safe activation of the timers you have to continue accelerating even if you have already exceeded the necessary speed.

The given values stay on the indicator until the next reset. To avoid endless time calculation, all timers stop a minute after their start.

GPS condition monitor

This Monitor shows the current condition of GPS chip.

It is quite an important tool as it shows how reliable the current numbers on the speedometer are. If it is green, then everything is in order, GPS gives the precise information. The Monitor also shows the precision of location identification in feet or meters.

If it becomes red, it means that GPS skipped the regular interval of a data update and the number on the speedometer can be differ from the reality.

If the indicator becomes grey, it means that GPS does not give any information about speed and location - so at the moment you cannot rely on speedometer information at all.

When GPS chip cannot identify the location, the Monitor displays information about the number of satellites from which the signal is received. The availability of the signal does not guarantee

that it will be used for the calculations - the signal can be, for example, weak or intermittent. If you started Speedometer and GPS chip is not activated in the device, the display of the monitor will be totally black with the word "OFF" and it will be proposed to click it to move to the system control panel of GPS chip. In this panel, you will be able to activate GPS chip and come back to Speedometer.

Trip Computer

Trip Computer contains several Trip Meters, each of them calculates the general motion time, the time of the stops, trip distance, average and maximal motion speed. Alternatively, in the Pro version the meters write down the coordinates and the address of the initial and final points of the movement. At the moment Speedometer supports the following meters:

- of the current trip;
- all trips for the day;
- all trips for the week;
- all trips for the month;
- all trips from the moment of the installation of the application.

Moreover, the Speedometer shows the data of the day meter for the previous day of the trip. The meter of the current trip can be reset to 0 at any moment. You have to click it and press the key "Reset" in the menu that appeared. To review the list of meters the menu command "Trip Meters" is used. After this command the display shows the list of meters. On the right in each line of the list there is the key to call the menu which allows:

- to save the data on the memory card;
- to reset the meter (if this operation is provided);
- to open the detailed information (only for Pro);
- to send the meter by e-mail (only for Pro);
- to set the initial value for the meter (this operation is provided so far only for the meter of all trips).

Pro version

In Pro version there are three additional meters, you can set the name for them and reset them at any moment.

Battery indicator

This indicator shows the current condition of the battery: charge level, the availability of charging at the current moment and temperature.

You can also add the sound signal of the tapping on this indicator. *This can be as convenient as using the Speedometer of a bicycle.*

When the battery warms up, the overheating indication appears. You can set the parameters of indication in the settings of the application. The parameter "Normal" sets the temperature until which the warming of the battery is considered to be normal. The parameter "Warm" sets the temperature, which is warmer than the normal one but is not in danger off overheating the

battery and decreasing of its capacity or time of service. The last parameter “Hot” specifies the temperature which you consider to be dangerous for the battery.

At first, all parameters are set in some average values which are calculated for the “generalized” battery but you can always change them for your particular device.

The temperature is shown in Celsius or Fahrenheit degrees. You can change the scale in the general settings of the units for the whole application.

Speed Limits

To drive the most efficiently without breaking the traffic rules, a special technology “Speed Edge” is implemented in the application. Due to this technology the application signals the possible overspeed and allows no distraction to one’s attention of the devices in a dense city traffic.

When the car gets to the lower edge limit (Min), the speedometer scale turns green. The scale stays green until reaching the Speed Limit (Edge). By exceeding this speed, the scale turns red and will stay red until the speed exceeds the upper edge limit (Max). Besides, you can set the individual sound signals for speed limits as well as the ranges from Min to Edge and from Edge to Max. Moreover, you can set the sound signal for indication of the “return” of the speed to the concrete limit (Back).

Having set the various sound signals, you can drive the car without distracting your attention to the speedometer and avoiding tickets for the excessive speed.

Initially, the speed limits which are valid in most countries of Europe and the USA are set in the application. Two independent sets of limits for km/h and mph are supported. Each set can include up to 10 limits, each of them contains values for Min, Max, Edge and Back speeds. The limits cannot overlap themselves, i.e. the maximal value of the lower limit cannot be more than the minimal 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. If you need, you can change them individually.

Head up display (HUD)

This mode shows the simplified information about your movement in a mirror or direct reflection. Two display submodes are supported - Normal and Only Speed. In the Normal submode, the speed, the direction of the movement, the time of the day and the covered distance are shown. In the submode Only Speed, only speed value is shown.

The direct reflection is convenient to use riding a motorcycle or bicycle because big bright digits can be easily seen even by the daylight.

The mirror reflection is made for projection to the windshield of the car and best suited to be used in darkness. To use this mode switch Speedometer to HUD mode and put the telephone on the dashboard under the windshield. The undistorted reflection of the telephone screen with all the current information about your movement will be shown on it.

Speed Overlay

Speed Overlay (SO) is used if you open other applications over Speedometer, for example, Maps or Navigation. In this case, a small speedometer appears over the main application window. It works similarly to the main one showing the warnings about the speed limits. You can set the individual position of this indicator for different programmes so that it doesn't cover the controls or some important information.

To set the individual position of Speed Overlay you have to open Preferences, choose Speed Overlay/Notifications and open Application list in it. If the necessary application is not in the list then choose the command "Add" from the menu. When the application appeared in the list of individual settings you have to tap on it, the application will run and Speed Overlay in a standby state with the inscription "Tap for setup" will appear over it. To move Speed Overlay you have to tap on it first and after the changing of the inscription to "Move to the place" move the indicator to the necessary position. After every movement the indicator turns again to standby mode. When Speed Overlay is put to the necessary position you can come out of the application with the help of the key "Back".

Address/Coordinates (only PRO version)

The address line can function in three modes: Automatic detection of address (A), detection on request (manual) (M), reflection of coordinates(C). In automatic detection of address the update occurs in every 50 m at the speed up to 20 km/h, in every 200 m at the speed from 20 km/h till 60 km/h and in every 2 km at the speed over 60 km/h. In the mode of reflection of coordinates update occurs approximately once a second. Format of the reflection of coordinates you can set in the Settings of the application.