



**The Tracker Data Filter plugin
PRINTED MANUAL**

Tracker Data Filter plugin

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1 Introduction

With the "Tracker Data Filter" data filtration plugin you can filter data from trackers by specified criteria. That allows you to cut the number of records in the database and respectively speed up the report generation. That improves the appearance of the route on the map when the tracker has difficulties receiving the signal from the GPS.

The basic rules allow verifying date, time, and coordinates validity, removing points with unessential changes.

The module filters for each tracker individually, discerning them by device unique identifier. With certain rules enabled the module stores information about the last received route point in its memory. That information is not kept (reset) when the application restarts or its settings are modified.

2 Configuration

The configuration of the "Tracker Data Filter" module is very simple (Fig.1) and consists of just a handful of options.

Please note that the filtration is performed when any rule triggers. The module doesn't perform the remaining checks if one of the rules has triggered already.

The checks are performed as follows:

1. Date and time check.
2. Coordinates check.
3. Speed check.
4. Distance check (minimum). Distance check is not performed if the received packet has invalid coordinates or timestamp lesser than the last stored value.
5. Distance check (maximum).

Tracker data filter 4.0.31 build 415

Filter out data where SPEED = 0

Pass first stop point down

Pass last stop point down

Pass data down if one of following variables was changed

VEXT;VIN;ALTITUDE;ANGLE;FUEL;FUEL1;FUEL2;STATE_IGNITION

Filter out data with invalid coordinates

Filter out data with invalid date

Filter out data if distance between points < 50 m

Pass data down if one of following variables was changed

SPEED;ALTITUDE;FUEL;FUEL1;FUEL2;STATE_IGNITION;STATE_ALAR

Filter out data if distance between points > 3000 m

OK Cancel

Fig.1. Configuration window

Filter out data where SPEED = 0 – when enabled, the module checks and filters out data with speed value (the SPEED variable) less than or equal to 0. The rule is handy when the tracker returns "floating" coordinates when the vehicle is parked – due to poor quality of the GPS receiver or weak GPS signal.

You can also specify exceptions when the filter does not trigger.

Pass first and last stop points down – when enabled, and incoming data is chronological, the module skips the first and the last stops, which may be sufficient for determining the parking interval.

Pass data down if one of the following variables was changed – when enabling this option, list the variables, separating them with semicolons. When the value of any of the specified variables changes, the filter skips the packet. This may be necessary for obtaining information about low battery charge during parking and with active alarms.

Filter out data with invalid coordinates – when enabled, the module filters out data if:

1. Latitude (the LATITUDE variable) or longitude (LONGITUDE) are absent in the data packet.
2. If the latitude value is outside the -90 ... 90 range.
3. If the longitude value is outside the -180 ... 180 range.
4. If both the latitude and the longitude values are equal to zero.

Filter out data with invalid date – when enabled, the module filters out data if:

1. The timestamp in the data packet (TIMESTAMP.UTC) is more than 24 hours greater than the server's current time.
2. The timestamp is more than 365 days lesser than the server's current time.

Filter out data if distance between points is less than – when enabled, the module calculates the distance between the previous and the current points by a formula. This allows disregarding minor points if the tracker sends them too frequently. For this rule, you can also set up exceptions, similarly to filtering by speed.

Filter data if distance between points is greater than – when enabled, the module discards data if the distance between the current point and the previous one is greater than specified (large spread). This sometimes happens if the device (mobile phone or tablet) can obtain its coordinates from both GPS and mobile base stations (A-GPS) or if the GPS receiver is defective.