

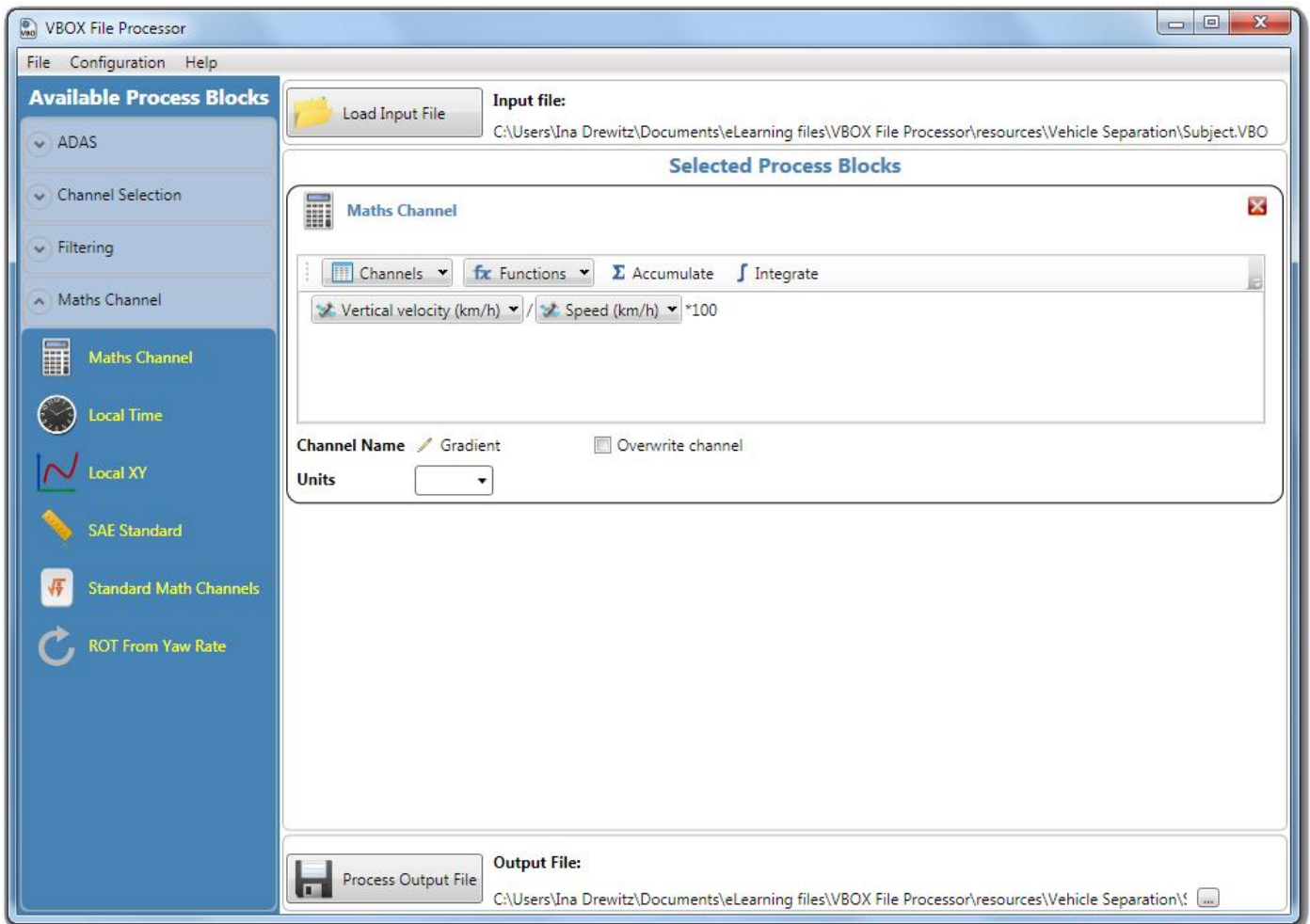
VBOX File Processor Software



VBOX File Processor is a software utility which has been designed to manipulate VBOX data files after they have been recorded. It allows the user to rename existing channels within the VBOX file, to apply filters and to generate new channels via Maths and ADAS feature plugins - all within an intuitive and easily understood framework.

The software can then output a standard VBOX Tools compatible VBO file, Excel CSV, or Google Earth format.

One of the most powerful aspects to the new programme is the ability to batch process a number of files at once - greatly reducing post-processing workloads.



Screenshot 1: Generating a 'Gradient' channel with the 'Maths Channel' function in VBOX File Processor

Features

- Batch processing of VBO files
- Export to VBO, CSV, KML
- Generate standard and custom math channels
- Filtering and smoothing
- Task specific ADAS process blocks for lane departure, vehicle separation, intersection and interruption calculations
- Data preview within the software
- Fully configurable calculation modes

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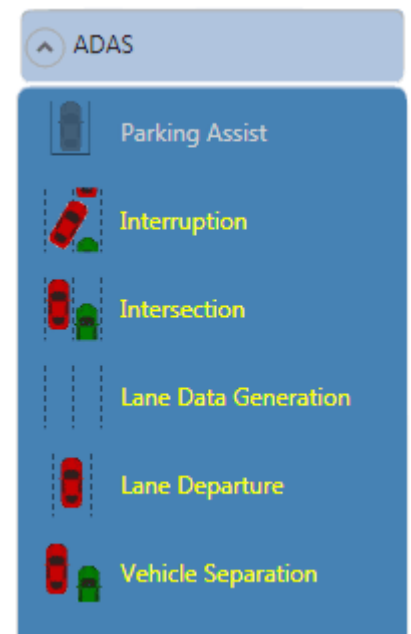


Plugin Overview

ADAS-Plugins

All ADAS process packages are free, just require registration.

- **Park Assist**
Designed to meet ISO regulation 204/WG14 ISO16787 'Assisted Parking Systems (APS) — parking with reference to other parked vehicles'.
- **Interruption**
Generates vehicle separation data between three vehicles (subject vehicle, target vehicle and interruption vehicle).
- **Intersection**
Analysis multiple lanes, target vehicles and static points with respect to the main vehicle and generates relevant lane departure and vehicle separation data.
- **Lane Data Generation**
Generates lane data for use with a VBOX 3i and lane departure software. This process block has to be used separately and can't be used with other blocks.
- **Lane Departure**
Generates lane departure data between the vehicle and the nearest lane.
- **Vehicle Separation**
Generates vehicle separation data between two vehicles.



Screenshot 2: Process blocks within the ADAS tab. All activated by registration apart from Parking Assist.

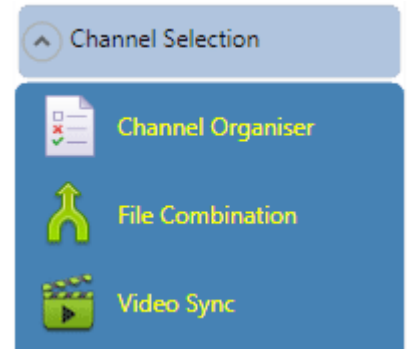
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Channel Selection

All channel process packages are free.

- **Channel Organiser**
Removes, renames and reorders the available channels.
- **File Combination**
Combines one or more channels from selected file to the output based on exact match of UTC time.
- **Video Sync**
Synchronises the video from Video VBOX file(s) to the normal VBO file(s).

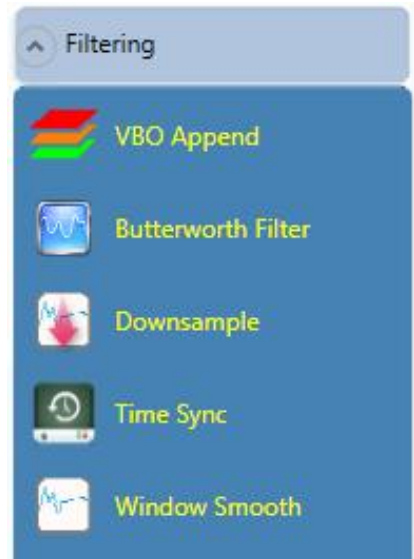


Screenshot 3: Process blocks within the Channel Selection tab.

Filtering

All filtering process packages are free.

- **VBO Append**
Appends multiple files together in chronological order irrespective of filename. Ensure appropriate files are appended for analysis (i.e. files from the same VBOX dataset).
- **Butterworth filter**
Applies a configurable Butterworth filter to the selected channel.
- **Time Sync**
Trims the output to the specified time range.
- **Downsample**
Reduces the sample rate of a .vbo file, to create a manageable file size, which is useful for large/appended files. The lowest sample rate to downsample to is 1 Hz.
- **Window Smooth**
Applies a smoothing to the channel using 'n' samples in a 'window' averaging routine.



Screenshot 4: Process blocks within the 'Filtering' tab.

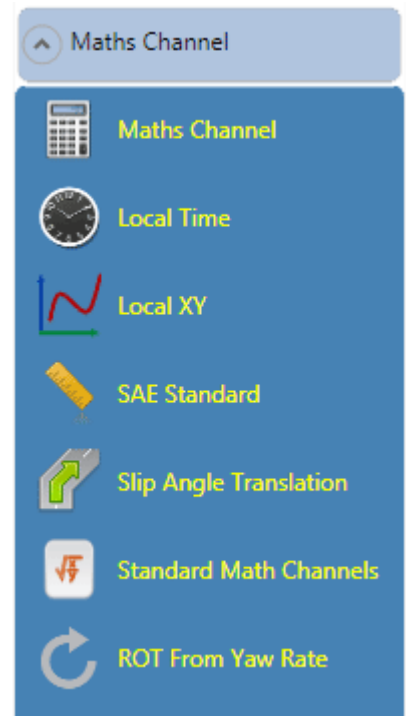
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Maths Channels

All maths process packages are free.

- **Maths Channel**
Computes user defined channel using custom math formula.
- **Local Time**
Computes local time from UTC time.
- **Local XY**
Computes X Y coordinates in meters using ECEF ENU transformation of latitude and longitude, making the first point in the file 0.0m.
- **SAE Standard**
Applies the SAE standard to applicable channels.
- **Slip Angle Translation**
Calculates the vehicle's slip angle at the centre of gravity and corners of the vehicle, using the overall slip angle
- **Standard Math Channels**
Adds one or more selected predefined maths channels calculated from standard channels.
- **RoT from Yaw Rate**
Computes the 'radius of turn' from 'yaw rate'.



Screenshot 5: Process blocks within the 'Maths Channel' tab.

Software Support

Racelogic provide lifetime support for a minimum of 5 years from the date of purchase. The support contract is limited to the original purchaser and includes technical support provided via telephone or email by the local VBOX Distributor, as well as free software upgrades.