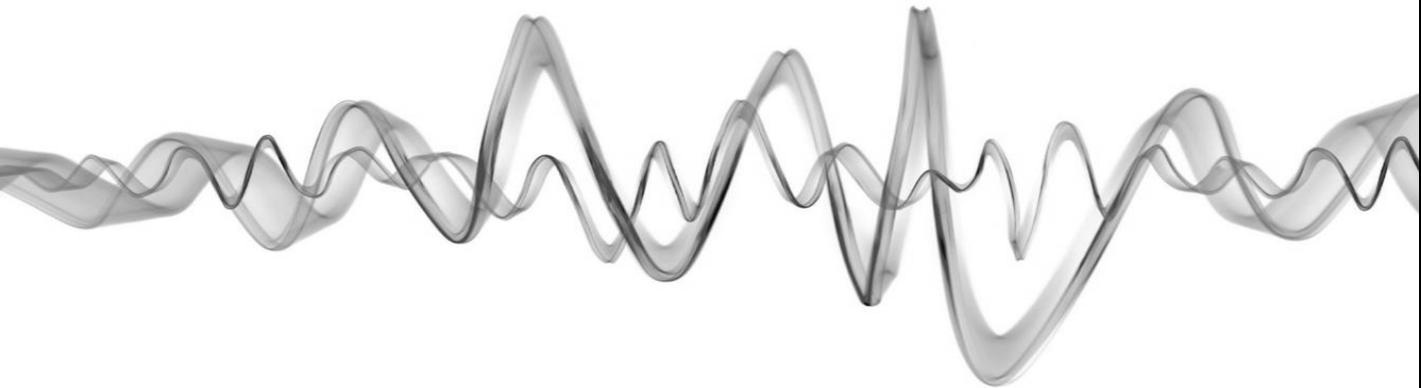




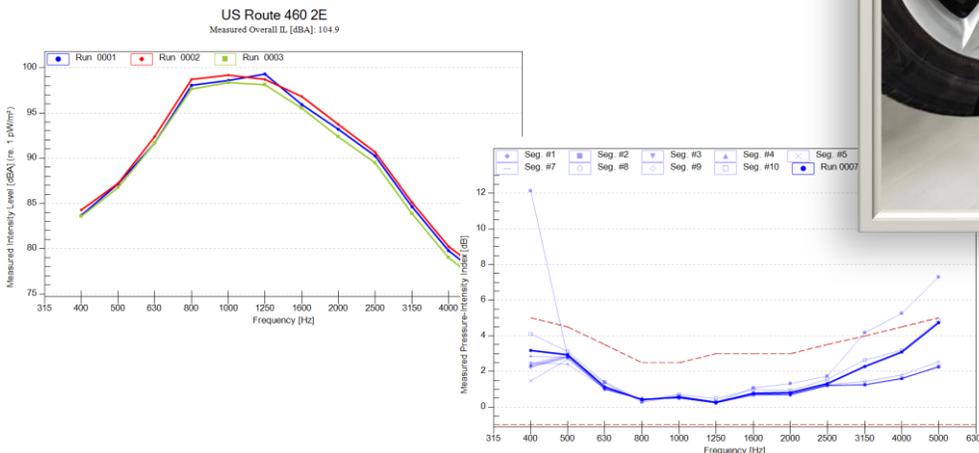
CONTINUOUS MODE OBSI SOFTWARE MODULE



AVEC has developed a new module for its OBSI software that allows using the OBSI system to survey long road sections. The **Continuous mode OBSI** software module is offered as an upgrade to existing customers or as an optional item to new customers. The upgrade allows using the OBSI system in two different modes:

- Standard OBSI Mode
- Continuous OBSI Mode

Further details and typical uses of each software mode are described in the following pages.



AVEC, INC. OBSI SOFTWARE

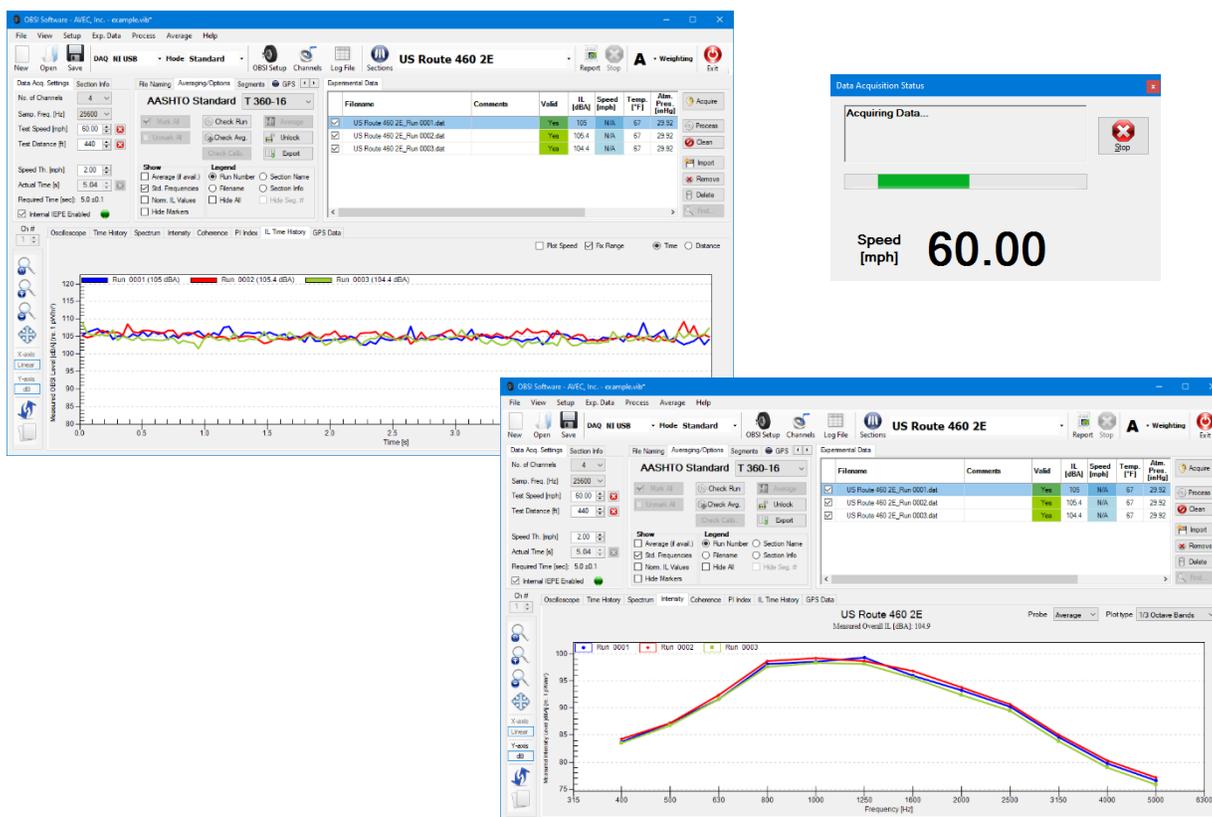
Standard OBSI Software Mode

The **Standard** software mode was the only available option in previous releases of our OBSI software. It allows using the OBSI system following all the guidelines and test procedures specified in the AASHTO standard.

The main goal of a test following the standard is to characterize the noise of a particular road section (representative of the surface type) using a Standard Reference Test Tire (SRTT) in a typical passenger vehicle. These results can then be directly compared to results from a different surface type, even if they were obtained using a different vehicle or OBSI system.

Alternatively, although not specified in the AASHTO standard, using the same OBSI system to test different tires (size, compound, etc.) and/or different vehicles on the same road section/surface can be used to directly compare their results and determine their impact on noise levels. This is a common approach used by tire manufacturers in a test track.

A typical test in **Standard** mode requires multiple valid measurements of the exact same section to obtain averaged intensity levels for it. The test is conducted at a constant vehicle speed over relatively short distances (440 ft or 134 m), resulting in a few seconds of data for each measurement.

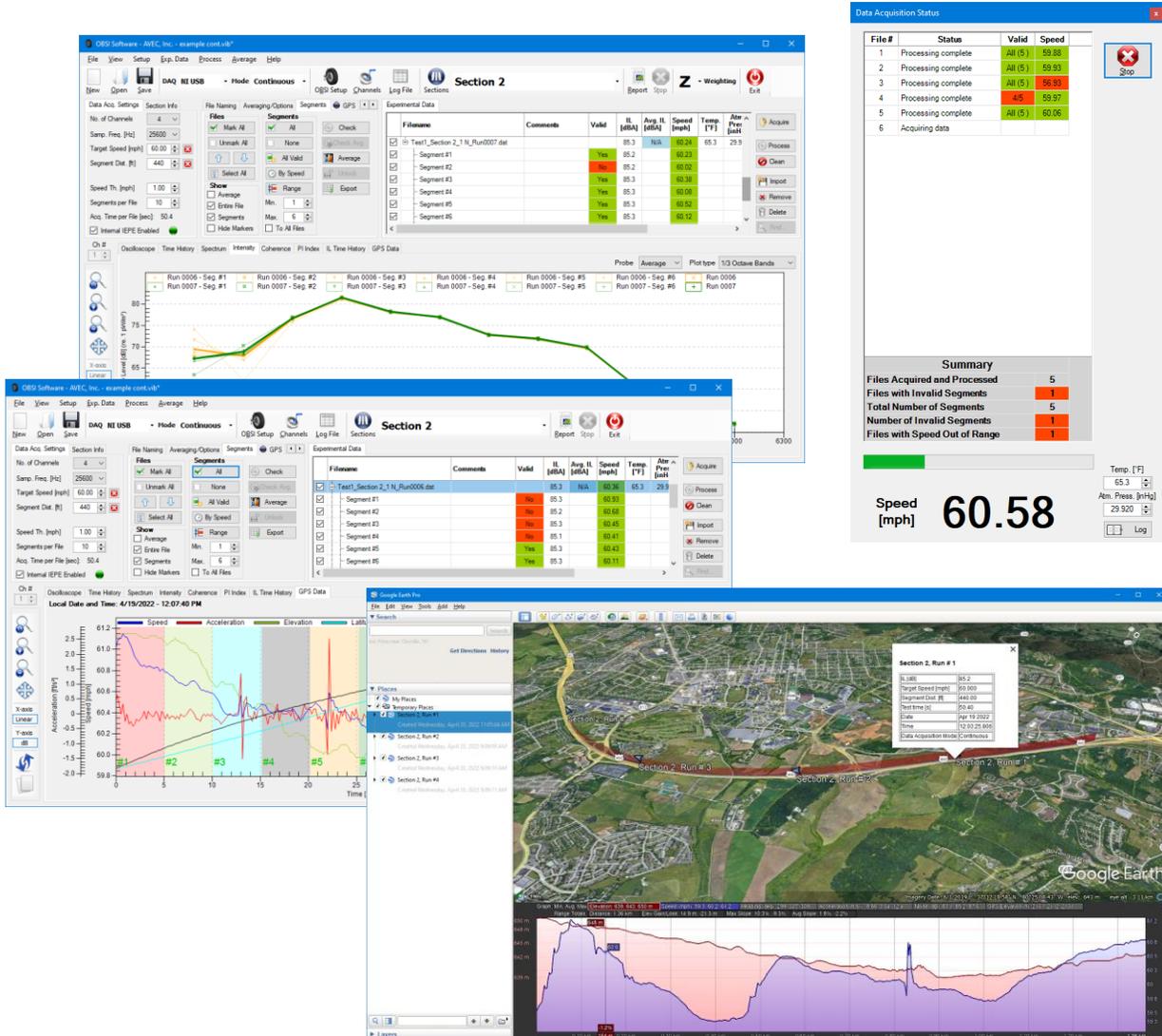


Continuous OBSI Software Mode

This new software mode allows using the OBSI system to survey long road sections and to compare their relative noise levels. This mode significantly reduces test time because there is no need for multiple measurements of the exact same road section (see notes and comments in the next page).

In **Continuous** mode, data is acquired for several road “segments” in a single data file and the resulting intensity levels are obtained by averaging all the segments (user selectable) within a file, based on an approach similar to the processing in *Standard* mode. Then, multiple files are automatically acquired (until the user stops the process) to cover the total length of the road being surveyed.

Since data is acquired almost continuously, instantaneous intensity levels and GPS information can be used to visualize/study noise for long road sections. This new mode also includes several tools to facilitate the data analysis and to export the results.



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Continuous OBSI Software Mode

Note that the procedures implemented in **Continuous** mode are NOT specified in the AASHTO standard and therefore they are not considered a substitute for them. However, assuming that the same surface type was measured for an entire file and that the variability in terms of noise is small between its different segments, results obtained in this mode (following all standard guidelines in terms of vehicle, tire, speed, etc.) are expected to resemble those obtained in Standard mode.

If the Standard Reference Test Tire (SRTT) was not used and/or a larger vehicle was used (e.g., a van with other road-testing equipment), absolute levels are unlikely to match those obtained following all AASHTO guidelines. Nevertheless, this test approach is still expected to be accurate/relevant to obtain relative levels between roads tested with the same vehicle, tire and test conditions. To obtain relevant results over time, it is recommended replicate the test conditions as closely as possible (including vehicle type, tire size/type/running condition, weather, etc.).

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