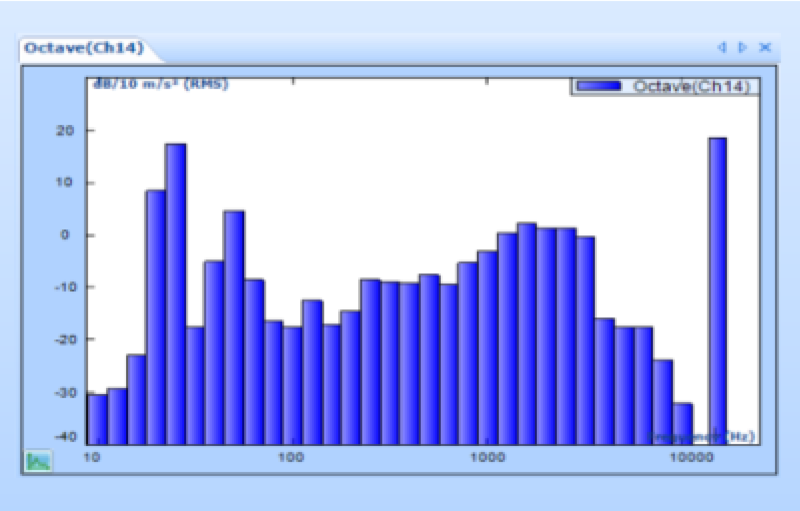
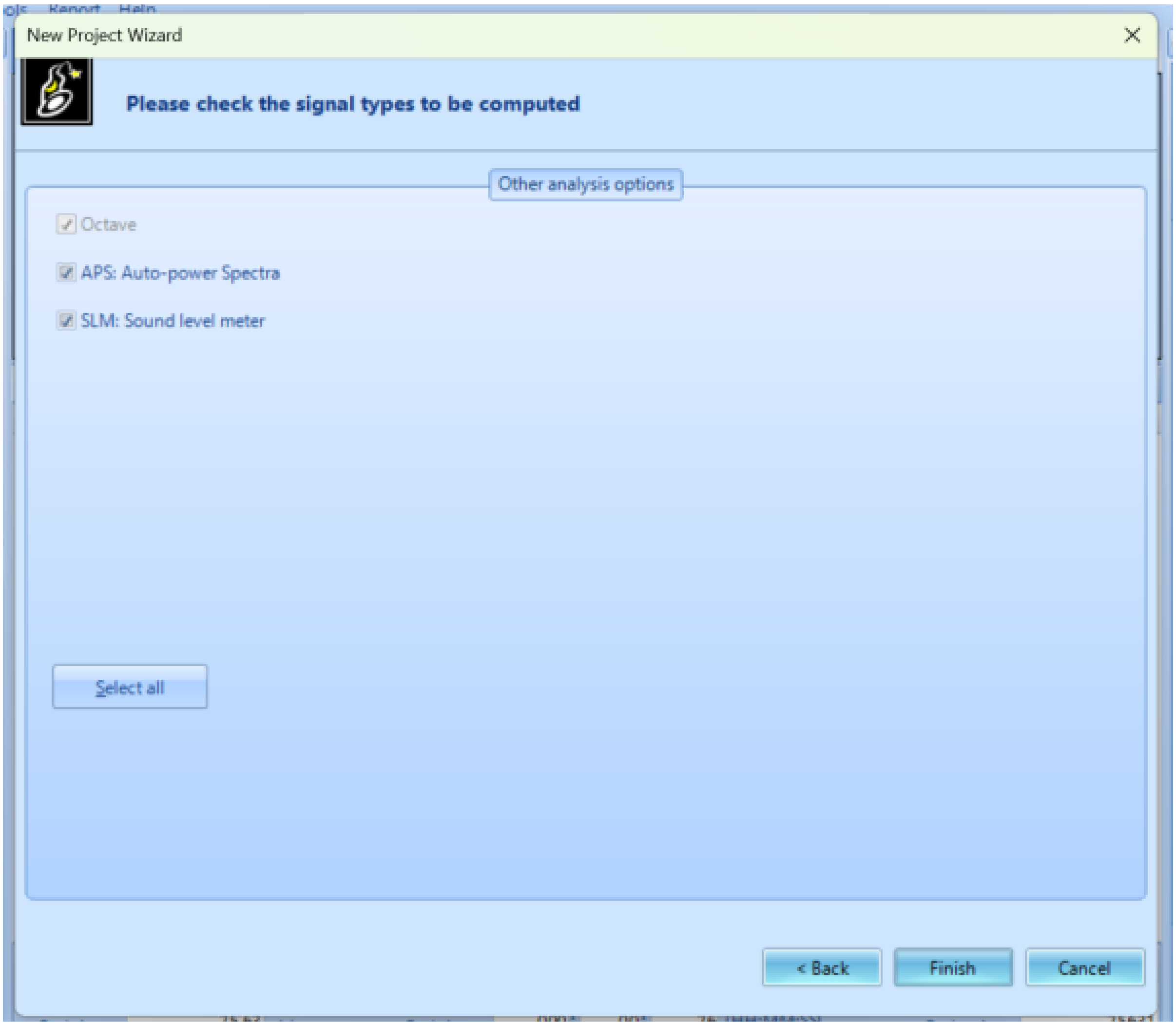
Post Analyzer

Octave & Acoustic Analysis

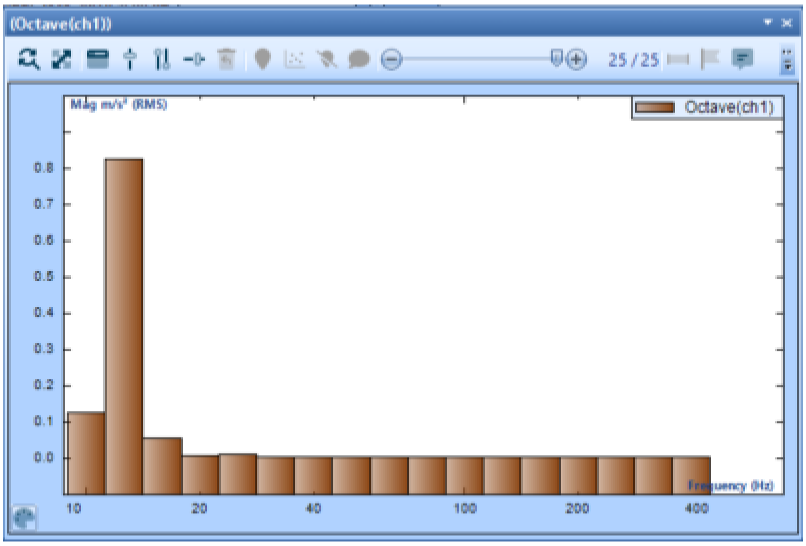
The Fractional Octave Filter Analysis applies a bank of real-time octave filters to the input time streams and generates two types of signals at the same time: fractional frequency band signals and the RMS time history of each filter band.



Octave analysis features two signal computation options, SLM: Sound Level Meter and APS: Auto-power Spectra.



Octaves



Octaves are defined as a doubling of magnitude. Moving a single octave can move from a frequency of 4 Hz to 8 Hz or 1000 Hz to 2000 Hz. Octave analysis often breaks Octaves into bins 1/N times. Octave filter displays responses in frequency bins. Passband filters are applied to time stream data and the resulting magnitude of frequencies are overlaid into single response to show strength of signal by frequency octave.

Auto-power Spectra

APS functions the same in the octave analysis as in FFT spectra analysis. The same filtering and computation occur to provide the APS results for each selected channel input.

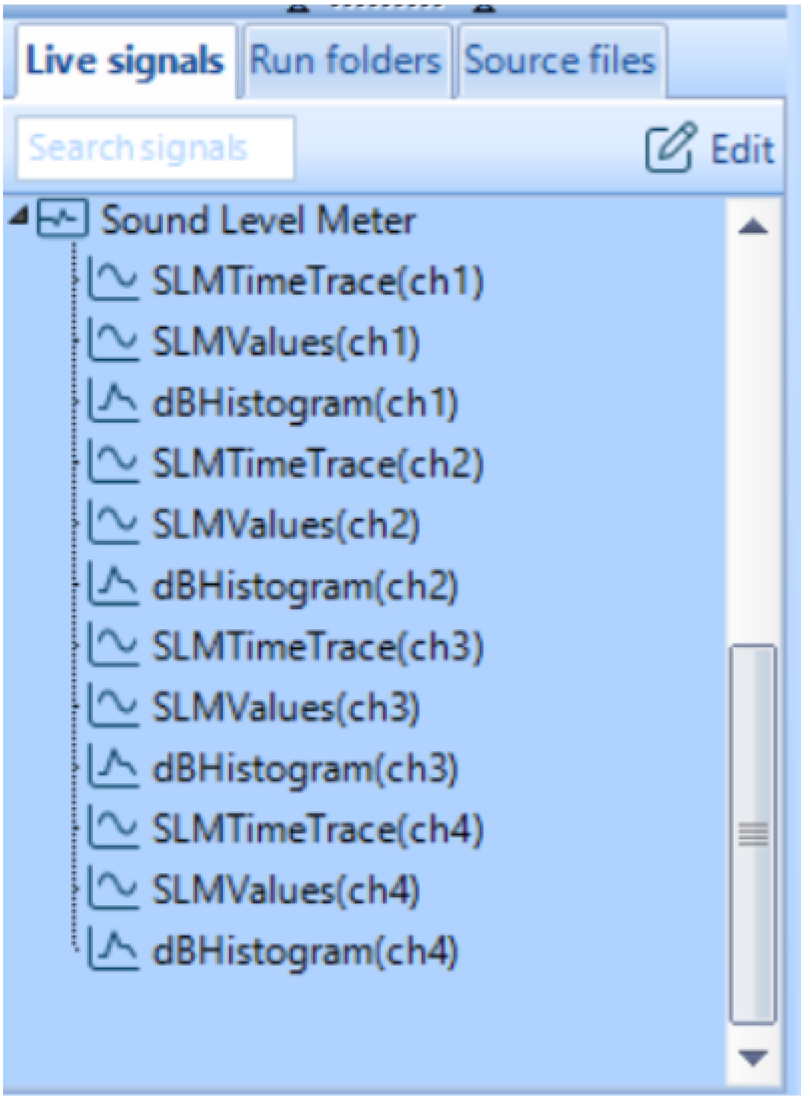
Sound Level Meter

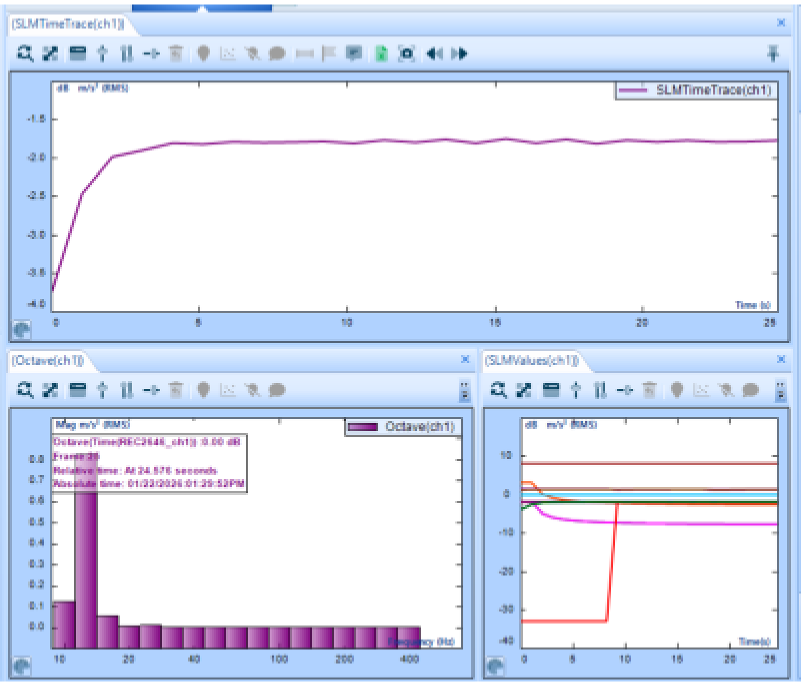
SLM computations results in three output streams for each selected channel.

Sound level meters apply a single frequency weighting filter to better observe frequencies in a desired frequency band. These bands are typically desined to represent the frequency spectrum which humans are naturally inclined to hear.

These frequency bands are described as A, B, C, or Z weighted. A - strongly weights frequencies humans are sensitive to B - Designed for approximate human hearing at moderate sound levels C - Flatter weight response, designed for loud impulsive noises Z - No weighting

Time Streams: SLM Time Trace - continuous sampled time history of Sound level SLM Values - interval based results taken from time stream. dBHistograms - displays number of occurrences of sound level data in bins based on time spent in range and number of times SLm reached the bin

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