

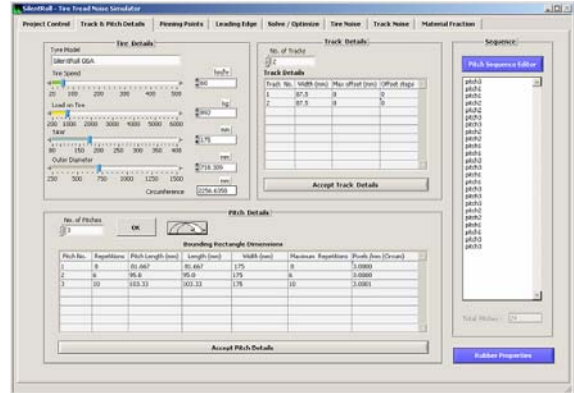


Fast and Accurate Tyre Noise Simulation and Tyre Tread Design Optimization

SilentRoll brings state of the art Tyre Noise Simulation and Tread Optimization capabilities to your desktop. The software has three seamlessly integrated modules: Preprocessor, Solver and Postprocessor.

Software Feature List

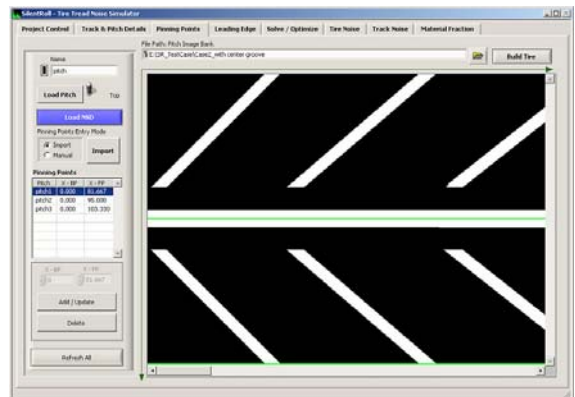
- Tyre Geometry data entry through image files
- Unlimited Pitches and up to 8 Tracks
- Speed vs. Noise
- Vehicle Load Effect
- Material Properties
- dB & dBA Graphs
- Compare Multiple Designs
- Robust Optimizer for Pitch Sequence and Track Offset Optimization
- Total Noise, Fundamental Harmonic & Maximum Noise based Optimization Functions
- Handles ANY Tread Geometry including but not limited to Asymmetric, Symmetric, Directional, Bi-directional Treads
- 0-5kHz Frequency Range
- Generates Noise Data for each Track and Full Tread
- Creates Hi-Fidelity (41.1KHz) .WAV Files for Playback on any Media Player
- Single-click MS Word Report Generation



Below is a brief introduction to each module:

Preprocessor

Data input through pitch images and orthographic section details for NSD surface allow discretisation of tyre into slices for mathematical impact simulation model.



Tyre Tread Arc Width can be divided into multiple tracks to achieve design control on individual track geometry. The track offsets can be specified for each track. During optimization offset step specification is used to arrive at an optimum offset combination between the tracks. The user can enter a specific pitch sequence for analysis or could ask the software to generate an optimum pitch sequence.

The building block approach in the preprocessor enables quick and easy creation of new tyre design cases for analysis.

