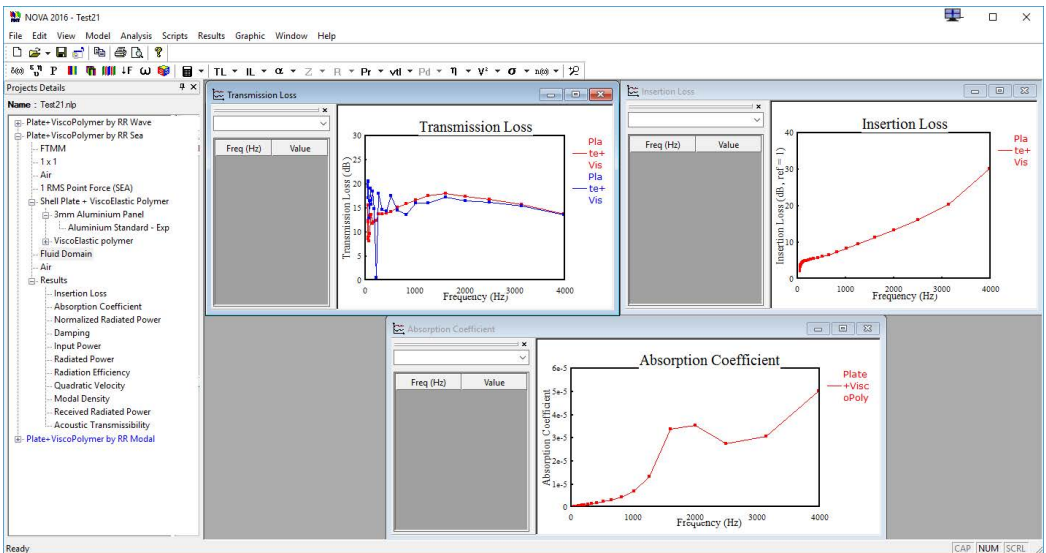




We build silence

## NOVA

Multilayered Material Acoustic Simulation  
and Design Software



NOVA is an easy-to-use, flexible and powerful solution used to predict and optimize the acoustic properties of materials and their integration into multilayered structures.

NOVA applies to foam, fiber, visco-elastic and solid structure and other deadeners. By modeling these materials, design decision can be made to improve the performance in the required application :

- Automobiles (carpets, seats, headliners, hood, trunk and cargo trim linings, floor systems, multilayered treatments)
- Aircraft (trim, damping, seats, floor, panel treatments)
- Buildings (insulation walls, doors, carpets, single/double windows)
- Materials (optimize acoustic performance)

## Benefits and Advantages

- Provides the most advanced models for porous materials (rigid, limp, felts, elastic, screens, and perforated panels);
- Allows unlimited combination of domains including elastic, visco-elastic foam, fiber, felt, screen, septum, solid, perforated plates and fluid to simulate real-life acoustic problems;
- Based on proven and validated technology established by the Université de Sherbrooke (renowned for research in acoustics);
- Excellent application for acoustic consultants, architects and noise control material manufacturers;
- Optimize materials for acoustic performance without having to model a complete structural-acoustic system.

## Software - NOVA



- Easy-to-use graphical interface;
- Automated export functions to various commercial software (VA One, AutoSEA2, Matlab, tab-delimited file);
- Possibility to manually add materials to existing database;
- Compatible with ESI Group's FOAM-X measurement file and other ESI software;
- Fonction of help as well as of verification of errors;
- User defined entry to add to existing materials in database;
- Simple definition of sources for acoustic plane wave, random incidence, mechanical and acoustic excitation;
- Possibility to establish frequency dependent material properties.

### Post-processing

- Narrowband and 1/3 octave band analysis;
- Computes all vibro-acoustic parameters;
- Calculates classic indicators (NRC, STC, RW, etc.).

## Support and Software Disclaimer

The software includes 1-year technical support.

Ask Mecanum for software disclaimer policy.

\* Please note that NOVA is distributed and supported worldwide by ESI Group.

## Features

- Nova includes two modules :
  - Mid and high frequencies based on Transfer Matrix Method with correction for finite size effects.
  - Low frequencies based on FEM/BEM modeling.
- Accounts for orthotropic, sandwich and composite panels;
- Allows for frequency dependent properties;
- Includes automatic detection and coupling of domains (elastic and fluid);
- Studies the effects of different boundary conditions and various types of excitations (plane waves, diffuse acoustic field, mechanical, pistons, point source, turbulent boundary layer, etc.);
- Includes extensive materials database;
- Allows simulation of impedance tube tests; transmission loss tests and random incidence absorption tests;
- Additional script for special studies (e.g.: the effect of compression of a material on its acoustic properties);
- Micro macro scripts for foams and fibers.

