NS3 Acoustic Insulation Module

Building's airborne and impact sound insulation

Classification of buildings sound insulation performances

Reference Standards: ISO 140-3-4-5-6-7-8 and ISO 717-1-2, ISO 3382-1-2, ISO 354, D.P.C.M. 05/12/1997, UNI 11367/2010

Vertical and horizontal partitions airborne sound insulation

Facade sound insulation

Impact noise level

Noise immissions from service equipments with continuous and discountinuous operation

Acoustic classification by acoustic descriptor and by housing unit

Overall acoustic classification of housing units

Type of housing units: residential, hospitals, schools, hotels

Evaluation of background noise contribution on continuous and discontinuous service equipment measurements

Extended uncertainty on measurements

Processing of data obtained from sampling of single measurements and uncertainty calculation

Editing of sound pressure level decays

T60 calculation using both steady noise interruption and impulse response integration techniques

Walls and floors database for experimental - theoretical data comparison

Direct printing of reports according to ISO 717

Possibility to insert buildings layout in bitmap format

Direct sound level meter setup using Noise Studio NS3

The acoustic insulation module of Noise Studio allows to perform the calculation of airborne sound insulation, impact noise and sound absorption indices from measurements made with Delta OHM sound level meters.
Calculations are performed in accordance with international standards and national regulations. A comparison function allows to superimpose the measured data with literature data contained in a walls and floors database. Noise Studio NS3 also allows to perform the classification of acoustic insulation performance of buildings according with the UNI 11367/10 technical regulation.
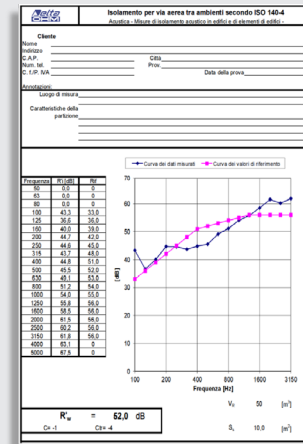
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Main descriptors

R, R' (ISO 140/4) - L_n, L'_n, L'_{nT} (ISO 140/7) - $D_{2m,nT}$, D_{nT}, D_n, $D_{tr,2m,nT}$, - $D_{tr,2m,n}$, - $D_{ls,2m,nT}$, - $D_{ls,2m,n}$ - R'_{45}, $R'_{tr,s}$ (ISO 140/5) - L_{ic} - L_{id} - Alpha Coeff. (ISO 354) - Eq. Absorption Area - EDT, T10, T20, T30, T60
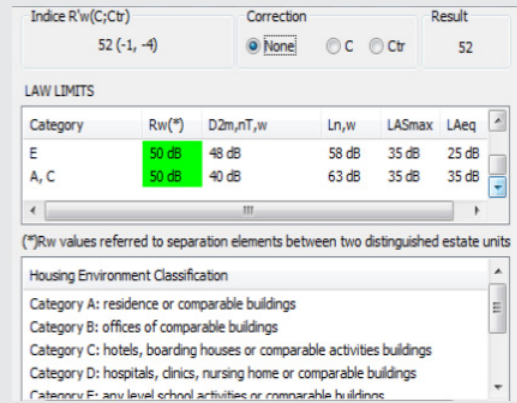
Sound decay editing - Acoustic classification - In situ measurement - Walls and floors database - Acoustic absorbtion - Input and editing of bitmaps

All essential informations are grouped in a single and versatile post processing screen
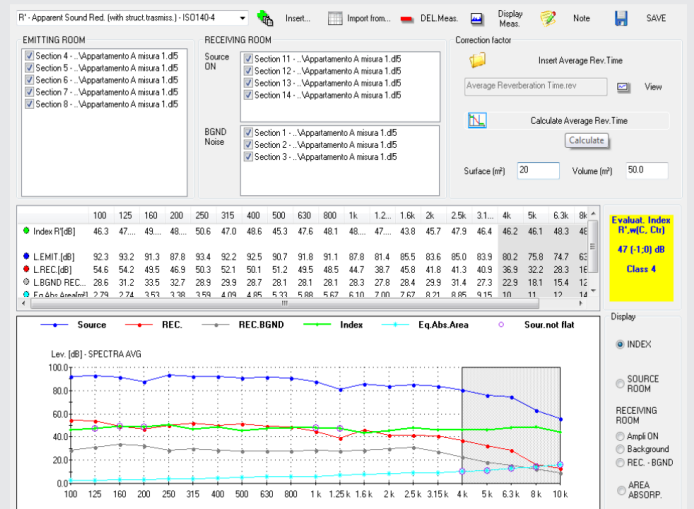
Editing T60
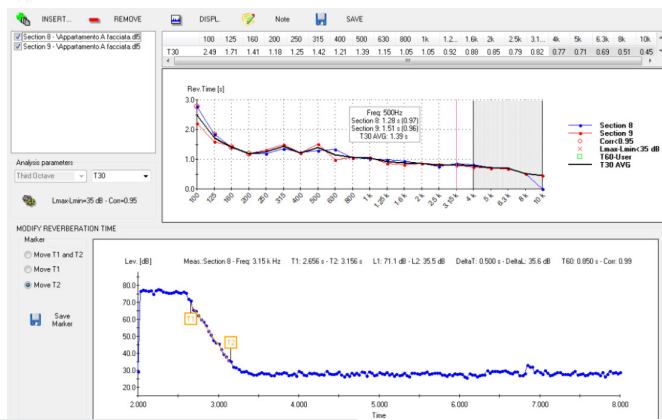
Real time display of data processing

T60 decay curve recalculation

Correlation Index calculation

Indication of User-T60 after processing

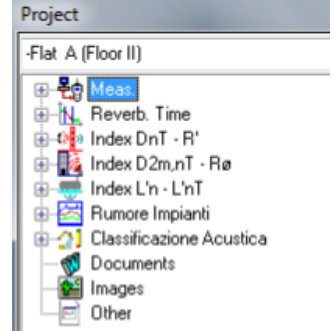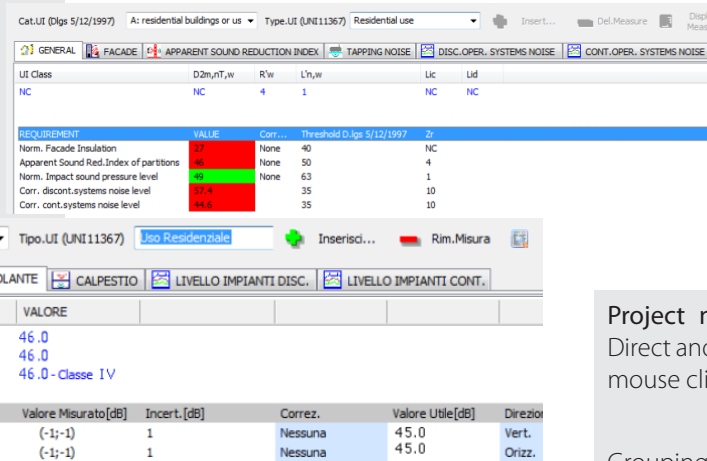Direct display of single and average spectra.

Fast and easy selection of useful data for calculation using check-boxes

MEASUREMENT UNCERTAINTY:

for each acoustic descriptor

the s_m measurement uncertainty is calculated, as the standard deviation of reproducibility of assessment measures

Project management using a tree structure. Direct and fast access to relevant data by a simple mouse click.
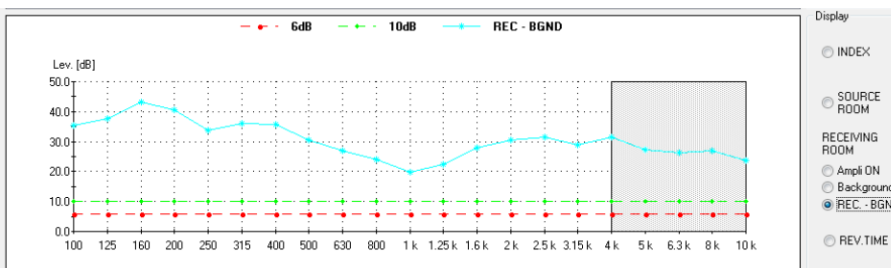
Grouping of data in housing units for a simple and organic access. Possibility to add a name to each unit for a easy identification of measurements.

Word documents integration and images on each project. Editing of data already processed.

CLASSIFICATION OF BUILDING'S INSULATION PERFORMANCE

Noise Studio **NS3** allows to classify building's acoustic performance according to **UNI 11367/10** technical standard.

Sound insulation measurements are loaded in the project and associated with specific housing unit; once descriptors R'_w, $D_{,2m,nT,w}$, $L'_{n,w}$ and continuous/ discontinuous service equipments levels are calculated, classification is generated automatically including single descriptors values, specific descriptors class, and overall class of specific housing unit. A useful graphic function allows to insert and modify bitmaps like floor plans.

POST PROCESSING OF NOISE MEASUREMENTS

Noise Studio also integrates in the building acoustic module the possibility to post process time profile data by the insertion of multiple masks. In this way it's possible to eliminate from calculation unwanted events or calculate specific sources. Evaluation ad processing of **continuous and discontinuous service equipments noise**.

In order to verify that background noise doesn't influence the receiving room spectrum, it's possible a direct graphical comparison between background and received noise spectra. Obtained curve (L_{Rec} — L_{Bgnd}) is compared to 10dB and 6dB thresholds as suggested in ISO technical standards.

Lingue disponibili: inglese, italiano - Compatibilità software: Win98, 2000, Vista, XP, Win7 (32-64), Win8, Win10

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In order to ensure the quality of our instruments, we are constantly re-evaluating our products. Improvements can imply changes in specification; we advise you to always check our website for the newest version of our documentation