

NOISE MAP IN 3 STEPS

A room's noise map is a particularly useful graphic element for the analysis and the choice of acoustic treatments to be implemented, but also for presentations and project follow-ups. With RAP-ONE, a noise map is rapidly obtained in three steps:

- [Designing the room](#)
- [Positioning the noise sources](#)
- [Calculating the noise map](#)

1) Designing the Room

RAP-ONE rapidly defines the configuration of your room with the help of one-click-accessible tools to add walls, acoustic barriers, absorbing panels, and fitting areas.



Other functions are used to determine the acoustic properties of the room's surfaces. The program can be used for rooms of any shape, the only premise being that the ceiling and floor are flat and parallel.

By simply using the mouse, the user traces straight lines to define the room's plan ([image](#)).

To define the acoustic properties of the room, a list of predetermined values is integrated in the program. You need only to choose the value corresponding to the type of material that interests you (cement, aluminum, wood, etc.).

Note: You may now import bmp files which will be used as a background image in the current document, making the modeling task easier. In order to change the position or size of the bmp, activate the bmp mode by clicking on the bmp mode button on the toolbar.



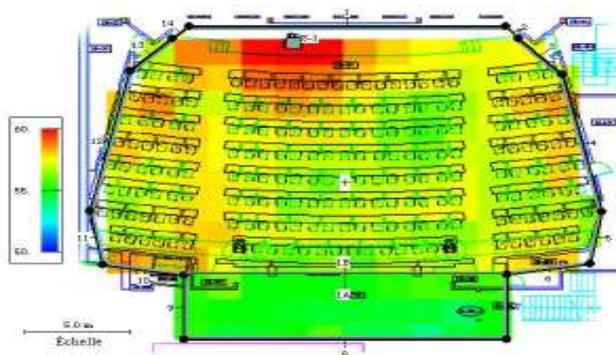
2) Positioning the noise sources

With the source tool, it is easy to add and position the noise sources on the room plan. Once this step is done, all that is left to do is determine the acoustic power of the sources. A source's power may be provided by the manufacturer. If not, the program will assist you in estimating the power with a series of specifically designed dialog boxes ([image](#)).



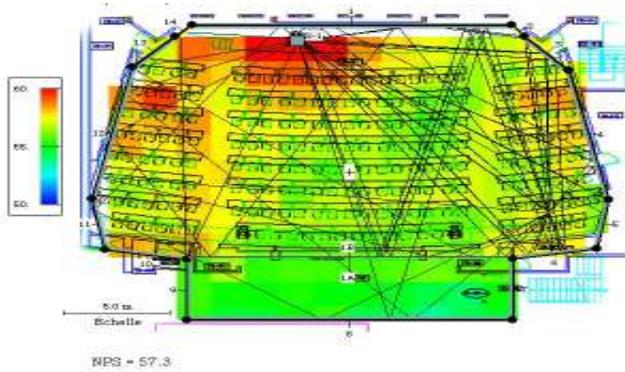
3) Calculating the noise map

To obtain the room's noise map: Click on the Noise Map button. In less than a few minutes, the noise map will appear.

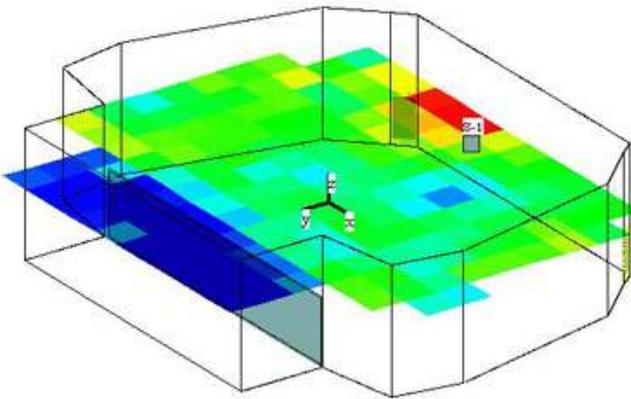


Microphone tool: Move it using the mouse to obtain the exact noise level at the location where you place it. Also, the rays that contribute to that noise level will be drawn on the image.

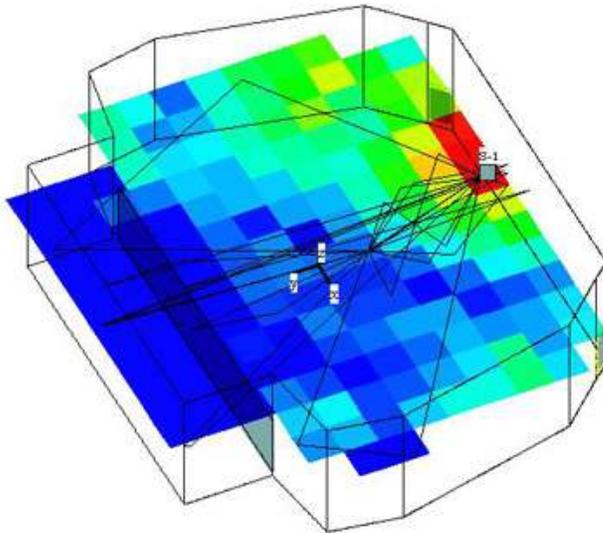




You may also see the room in 3D using the 3D View tool :



With rays when using the microphone tool:



Industrial Noise Control and Management Tool

- [RAP-ONE can predict the efficiency of the noise treatments you are planning](#)
- [RAP-ONE can rapidly and efficiently estimate the noise doses perceived by the workers](#)
- [Choice of optimal treatments](#)
- **Treatment Efficiency Prediction**

All too often, noise reduction treatments are applied without producing the expected results. With RAP-ONE, these problems are avoided, since the program evaluates the efficiency of a treatment or of a treatment combination in real time before it is

implemented.

Some questions that you probably have, and that RAP-ONE can answer:

- What will the noise increase be if I add another machine?
- What will the impact of that new machine be on noise doses perceived by the workers?
- What will the noise reduction be if I install a silencer on a vacuum cleaner or if I add an acoustic treatment to the ceiling?
- How can I be sure my noise reduction process is structured?

The evaluation of the performance of various possible treatments is simple: Apply the acoustic treatments being considered for the room using the Absorbing Panel or Acoustic Barrier tools, and then click on the Calculate Noise Map button. The room's new noise map displays the noise levels obtained with the added treatments. A similar process can be applied on the room's noise sources (ex., adding a silencer).



● Estimate of Noise Doses Perceived by Workers

Is it time-consuming for you to evaluate the noise doses perceived by workers after round shifts, the modifications brought to noise sources, or the noise treatments that have been implemented in a room? RAP-ONE allows you to do those calculations in a short amount of time. Use our 3-step process, and voila!

1) Position the receivers with the Receivers tool



2) Define the various groups of workers (name and exposure time at each receiver)

3) Calculate the noise doses perceived by each worker ([image](#)).

● Choice of Optimal Treatments

RAP-ONE not only predicts the efficiency of the acoustic treatments in terms of acoustic attenuation, but also in terms of cost-efficiency (decrease in decibels per invested dollar).

Using the previously entered data (potential treatment types, costs, noise reduction, etc.), the program calculates every possible treatment combination and indicates the most cost-efficient solution. With a click of the mouse, you can obtain the noise map of that combination or of any other calculated combination ([image](#)).