

Changes in SoundPLAN *essential* 3.0

October 2013

Installation

SoundPLAN *essential* 3.0 can be installed parallel to earlier SoundPLAN *essential* versions, older versions do not need to be un-installed.

For the installation you must be logged on with **Administrator** privileges. Insert the CD/DvD and attach the HASP key to a USB port. The installation program will guide you through the installation.

At the end of the installation you will be asked to select the folder where you have stored the license file (BABExxxx.006). **Make sure to use the license file supplied for the version SoundPLAN *essential* 3.0. License files for the version 1 or 2 cannot be used with the version 3.0!**

Convert projects to SoundPLAN *essential* 3.0

If you want to continue with an older SoundPLAN *essentials* project that was done with an earlier version of SoundPLAN *essential*, it must be converted to the structure of SoundPLAN *essential* 3.0. Please observe that after the conversion the project cannot be opened again with the earlier version, so if this is important, please make a backup copy of the project.

You decide how the conversion is done. Depending on the selection the project will be first packed or copied. Afterwards the database tables are converted.

Projects that have been processed with an older version are marked with a gray SoundPLAN project folder. When you click on the gray folder the program will ask if you want to convert the project.

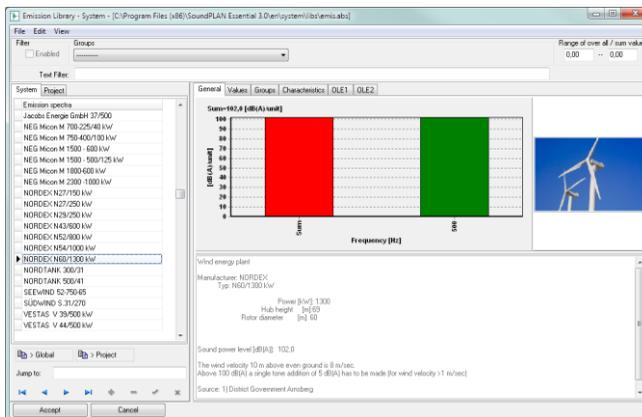
New developments and improvements

New developments

Multi-Threading: all cores of a PC can now be used for calculations. In the Editor under **OPTIONEN** -> **SETTINGS** (tab calculations) select how many cores you want to devote to the calculation.



Reference spectrum from the library:



When you select the option **REFERENCE SPEKTRUM** from the noise source objects, you open a library with over 500 sound source spectra in third octaves and octaves. These spectra were compiled from various sources (handbooks, literature...).

The library is split into two sections: on the left side you can find the emissions spectra, on the right hand side details are listed for various details.

For SoundPLAN *essential* only the first two tabs are of importance. The tab *general*, delivering an overview of the spectrum with the information where the data came from and optionally a picture. The tab *values*, where the values in octaves or third octaves can be found along with facilities to filter the values for dB linear.

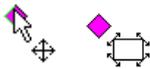
You can find the right emission spectrum by using the group definition or by using a text as a filter to narrow down the number of spectra presented.

Click on **ACCEPT**, when you have chosen the correct spectrum in the system library. The spectrum then is copied into the project library and will be used as a reference spectrum normed to produce 0 dB. Only when you enter the dB value to be used in conjunction with the reference spectrum it will become a valid emission.

You cannot modify the spectra in the system library! Own spectra must be hosted in the project library or in your own global library.

Selection of multiple objects:

With the pressed Ctrl-key and a left click on the object, multiple objects are marked. As an alternative you can pull a frame with a pressed right mouse button around the objects – all objects that have at least one coordinate within the frame are marked. Marked objects can be deleted jointly (popup menu right mouse button or **Ctrl+del**), they can be moved (by moving the pink diamond with the left mouse button) or rotated (Ctrl+ left mouse button on pink diamond).



Movement and rotation cursor on pink diamond

If multiple objects of the same type are marked, it is also possible to jointly modify the objects properties. This however is not possible for objects that have the ability to change properties within the object (road, railway, wall or berm).

Filter elevation points prior to import:

If you have elevation spot heights to be imported as ASCII or DXF data, they often are present as either a grid or a cloud with very small spacing (for example 1x1 [m] grid with little variance in elevations). The amount of elevation information far exceeds the need to correctly model the terrain. As the number of elevation coordinates has a big influence on the size of the DGM and also on the calculations, it becomes advantageous to filter the elevation information and thus minimize the number them.

Elevation filter

Elevation information

Number of elevation points

Elevations are in a grid structure

Filter elevations

Maximum height difference of the elevations [m]

Filtering finished

Filter result

Count of remaining points

Filtered points [%]

In the dialog that opens after selecting the import file, the number of elevation points and the structure (grid or cloud) is presented as the file information. If you want to keep all spot heights 1:1, click on **IMPORT**. If you want to filter the data you need to enter the maximum deviation between the elevation data given in the import file and the elevation model that will be used after filtering the data. Enter the max difference in [m]. With the pre-set max deviation of 40 cm a tolerance of ± 0.40 m is guaranteed between the raw data and the model to be created. Click on the green arrow to start the filtering and import. In the filter result you get the information, how many elevation coordinates will remain and how many percent of the original data will remain.

Assignment of noise sources to buildings

Point, line and area sources can be attached to buildings (for example fans, pipes and window openings).

Set the first coordinate of the source in the vicinity of the building as soon as the cursor changes into the capture cursor.



A dialog opens where you can set the position of the source relative to the facade. The entries have different provisions depending if the source is a point, line or area source.

Point source on a facade

Facade (width / height = 6,17 / 6,00)

Distance to facade [m] 0,01

Source definition

Distance from beginning of the wall [m] 1,50

Height above ground floor [m] 5,5

OK Cancel Help

Assignment dialog, example point source

For your information the width and height of the facade is presented. Enter the distance of the source to the facade. With **DISTANCE FROM WALL BEGINNING** and the **HEIGHT ABOVE THE GROUND FLOOR SLAB** enter the location of the first coordinate for the line or area source or the point source. K0 wall is automatically set to 3 dB(A) and the first reflection on the „own“ facade is suppressed.

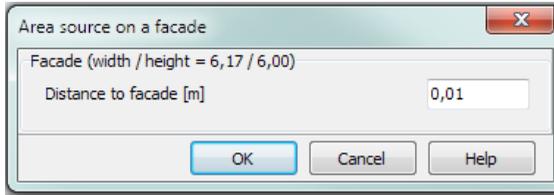
For line source in addition you can select if the line source is horizontal or vertical and how long the source line is, for area source enter the width and height.

For area sources it is also possible to select the **ENTIRE FACADE** if the entire facade is radiating.

To view the source definition later on or modify it, click on the field with the building ID.

assigned to building 2

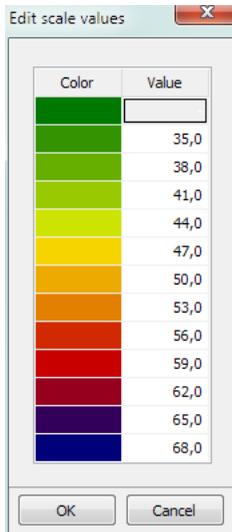
Complex source geometry: The assignment is only covering the standard cases for line and area sources. More complex source – for example line sources at any angle or area sources that are not rectangular, need to be defined via the coordinate list. After defining the coordinates activate the box **BUILDING ASSIGNED** or click on the field with the building ID to assign it to the façade.



In this case the **DISTANCE TO FACADE** is set.

Manually modify scale intervals of the color scale

The interval size of the color scale is still pre-set according to the noise values found in the grid noise map, however it is possible to manually customize the scale. Click on the color scale and set the colors in the dialog **EDIT SCALE VALUES**.



In the color scale value column you can change the upper interval boundary. The intervals do not have to be constant in their size.

New module BA Facade

BA-Facade calculates the required R'_w of the buildings envelope in accordance to ISO 12354. A description of this module is included in the SoundPLAN *essential* 3.0 manual.

Improvements

- When importing a DXF-file you now can enter a conversion factor for example when the drawing was set in millimeter.

Transformation	
Conversion factor	1000,00

- With **F10** toggle between the top view and the 3D-plan.
- In the top view you can set the presentation to **show area fillings**. Areas are then either filled or only show the line around the areas. Suppressing the fill may be helpful when digitizing on top of a background bitmap.

 show area fillings

Settings				
Country / Standards	Time slices	Noise type combinations	Calculation	Editor
Receiver Others				
Further editor settings				
Ground floor height of buildings above DGM [m]				0,0
Line width for area edges on "no filling mode" [mm]				2,0



- The **presentation of the DGM's** in the 3D-Plan can be activated or deactivated.

 show DGM in 3D

Hint: The color with which the DGM is painted is set in the object type „elevation line“.

- **Distance indicator:** The between the current cursor position (in world coordinates) and the coordinate last t digitized is presented in the status bar in [m].

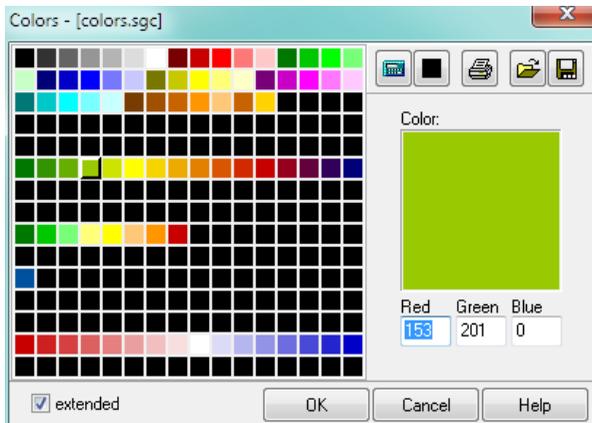
X = 1206,24 Y = 1017,30 Z = 0,0 **d = 4,00**

Hint: The more you zoom into the plan the more exact you can define the spacing.

- The colors are now saved as RGB-values and not as a color number representing the position in the color field in the palette. If you want to use a different color present in your favorites pallet, click on **EXTENDED**.

In the color favorites save colors or color swaths you often use. SoundPLAN is delivered with a matrix of color swaths that you can amend at will.

RGB = Red-Green-Blue-components of a color in values between 0 and 255.



Extended color dialog

The extended color dialog is opened automatically when you click on a color field that is not using a color previously set as favorite.