Some instructions on using the PC-1860/2360/F- series

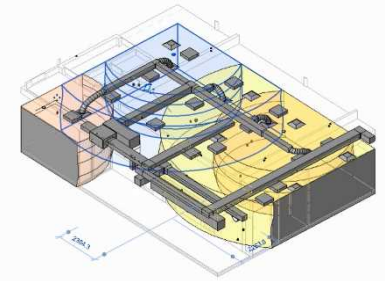
Applicable files

F-122C.rfa, F-122CU.rfa, F-1522SC.rfa, F-1522SC.rfa, F-2322C.rfa, F-2322CEN.rfa, F-2352C.rfa, F-2352CEN.rfa, F-2352SC.rfa, F-2352SCEN.rfa, F-2852C.rfa, F-2852CEN.rfa, PC-1860_EN.rfa, PC-2360_EN.rfa

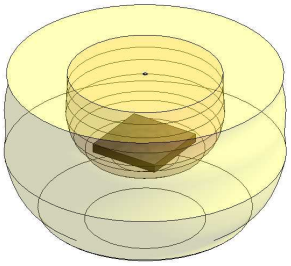
Sound Pressure Guide

These have the ability to display the reach of sound pressures. In this document, the shape representing this reach is conveniently referred to as a "balloon."

The conditions



- This reach range display is simplified based on the actual measurement data.
- The conditions that can be displayed (impedance tap, dBspl) differ depending on the file.
- The input signal can be selected from 1kHz / 4kHz.
- The input signal is assumed to be -5dB smaller than the rated level.
  This assumes of voice and music that are actually used.
- The expected sound pressure level is only on the surface of the balloon, and the sound pressure inside the balloon is higher than that. Simply put, the closer the listening position is to the speakers, the higher the sound pressure level at that location.



- The sound pressure is also distributed outside the balloon and is lower than the sound pressure on the balloon surface. The sound does not disappear outside the balloon's boundaries.
- This data reflects reflections on the ceiling. If the speaker is installed in a place where there is no top plate, the sound pressure distribution will be different from this data.

Display method



Select the family data for which you want to display the sound pressure.

In the properties of the family data, the menu shown on the left is displayed in the item "Graphics". Set the following 4 values according to the conditions of the speakers you plan to install.

1kHz/4kHz: Select the frequency of the input signal. Choose 4kHz if clarity is especially important. If loudness is important, select 1kHz.

Selected Input (W): Enter the corresponding W value in the impedance tap.

Desired SPL: Enter the sound pressure value (dBspl) on the surface of the balloon.

Attenuation: Enter the volume attenuation value by the amplifier or attenuator.

Then click "Apply".

An example of how to use it is introduced at the URL below.

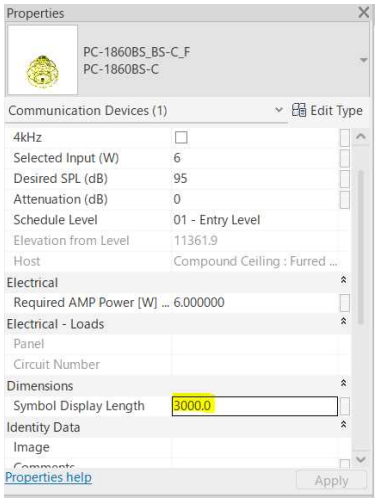
https://www.sound-toa.com/cspd.html

Notes

This is simple data created for BIM.

- The actual sound contains various frequencies and is affected by the complex effects that occur on walls and ceilings. This data is not an exact representation of them. Moreover, it is not possible to represent those effects with one data. Use it as a guide to determine the number and position of speakers in the early stages of design.
- The surface of the Balloon is supposed to have the same sound pressure, but not the inside or outside of it. The closer the listening point is to the speaker, the higher the sound pressure, and the farther away from the speaker, the lower the sound pressure.
- This data reflects reflections on the ceiling. This reflection has a great influence on the spread of sound near the ceiling. Therefore, please note that the sound pressure distribution when only the speaker is installed in a place where there is no wide top plate is significantly different from this data.

Symbol display on floor plan



These family data are mounted on the ceiling, but symbols can be displayed on the floor plan. By default, the symbol is placed 3,000mm below the speaker body, which allows the floor plan to detect the symbol. If ceilings in your project are high and your floor plan does not allow the symbols to be detected, increase the value(mm) of “Symbol Display Length” shown in the image to the left.

About the View Range

Please refer to the Autodesk website to find out which range of symbols the floor plan detects.

https://help.autodesk.com/view/RVT/2024/ENU/?guid=GUID-58711292-AB78-4C8F-BAA1-0855DDB518BF

Your opinion/request

This data is made by simple consideration so far. We aim to create data that is more convenient for actual operations. If you have any opinions or requests for our data, please let us know. Please submit your opinion using the form of the page : https://www.sound-toa.com/your-opinionrequest.html