Introduction

This technical bulletin provides the key information for a correct use of L-Acoustics CLF files in CATT-Acoustic™.

For more information and general support on L-Acoustics CLF files, please contact soundvision@l-acoustics.com.

CATT-Acoustics™ is a trademark of CATT.

Library content

The CLF library contains all L-Acoustics point source loudspeakers.

For each loudspeaker, a directivity file CF2, a drawing file MRK and a configuration file CBA are provided.

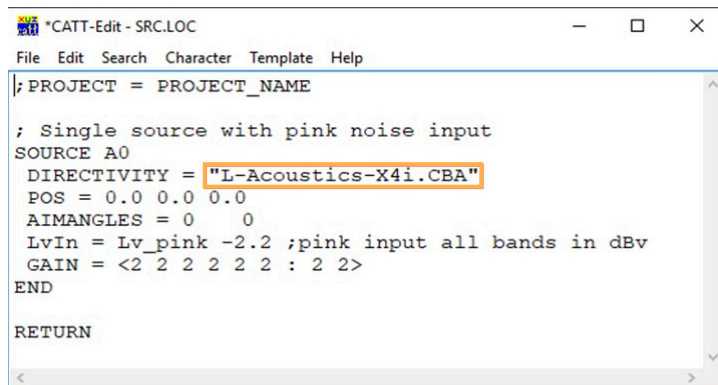## Exporting 3D rooms to Soundvision and CATT-Acoustic

Soundvision provides a SketchUp plug-in for the export of 3D room data from SketchUp to its respective file format.

Refer to the **Third-party software** section of the Soundvision user guide for more information on Soundvision's SU4SV SketchUp plug-in.

Plug-ins for the export of 3D room data from SketchUp to CATT-Acoustic .geo format are also available for download from third-party providers (**Sk2Geo** by Euphonia, France, http://www.euphonia.fr/ and **SU²CATT** by K5 GmbH, Germany, https://www.k5-akustik.de/en/).

Source definition

Every loudspeaker in L-Acoustics CLF library is represented as a powered loudspeaker. CF2 files for powered loudspeakers do not embed any values in the **Sensitivity** and **Impedance** data fields.

However, the source behaviour and response are described by the **Axial Spectrum** and **Input Voltage** data fields. The axial spectrum corresponds to the SPL at 1 m in free-field conditions, measured for an input voltage of 2.83 V.

For each loudspeaker, the one-element CBA file calls the corresponding directivity file CF2 and displays the enclosure with the MRK drawing file.

Calling the source

The CBA file is called in CATT-Acoustic source file as shown below:

CATT-Acoustic source file calling the one-element CBA file of X4i

A template of this source file layout is provided in CATT-Acoustic.

1. In the source file edit window, click on the **Template** drop-down menu.
2. Click on the **Source block (and data)** category.
3. In the template list, click on **El.-ac. Source With Line Input**.

Positioning the source

Set the position and aim of the source in CATT-Acoustic via the **Pos** and **Aimangles** fields.

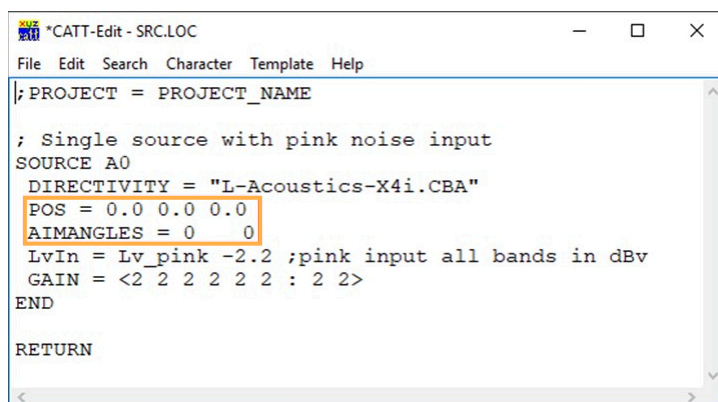Soundvision and CATT-Acoustic coordinates and aiming angles relate as shown below:

POS = X Y Z

AIMANGLES = Azimuth -Site

Position and aiming of the source in Soundvision

Position and aiming of the source in CATT-Acoustic

Setting gains

To obtain identical SPL between Soundvision and CATT-Acoustic, use a pink noise input signal. Levels in CATT-Acoustic should be defined using the console output level in dBV from Soundvision.

> *i* **Use the console output level drop-down menu in Soundvision to switch from dBu to dBV.**

Switching the console output level unit from dBU to dBV (0 dBU = -2.2 dBV)

The pink noise input signal level in CATT-Acoustic source file is set accordingly.

Setting the pink noise input signal level in CATT-Acoustic

In CATT-Acoustic, the gain applied to the source must be defined for all eight octave bands from 125 Hz to 16 kHz. For each octave band, enter the same gain as displayed in the **Gain (dB)** column of Soundvision for the loudspeaker.
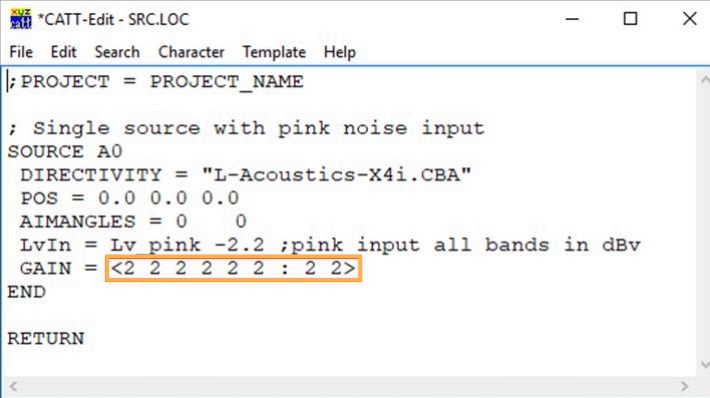
> ⚠️ **Refer to Soundvision to check for gain limits.**

The example below shows a 2 dB gain on X4i.

2 dB of gain in Soundvision

The gain per octave band in CATT-Acoustic file is set to 2 dB accordingly.

Gain matching in CATT-Acoustic source file

SPL variations between Soundvision and CATT-Acoustic

Overall SPL

Due to differences in the calculation methods between Soundvision and CATT-Acoustic, small differences can be observed in Direct SPL.

These differences shall be kept in mind when comparing designs between Soundvision and CATT-Acoustic.

Banded SPL

Due to the use of different conventions, banded SPL differ between Soundvision and CATT-Acoustic.

SPL per band displayed in Soundvision is higher than in CATT-Acoustic. The value in Soundvision corresponds to:

banded SPL (CATT-Acoustic) + 10 x Log (number of considered octave bands in CATT)

Mechanical safety

Mechanical safety limitations are not accounted for in CATT-Acoustic
Always refer to the mechanical data and warning indications in Soundvision (in **Mechanics View**) to check the mechanical conformity of the system before installation.

Refer to the rigging procedures of each product for additional instructions.