

Chesky 6.0 Layout Assistant

Contents

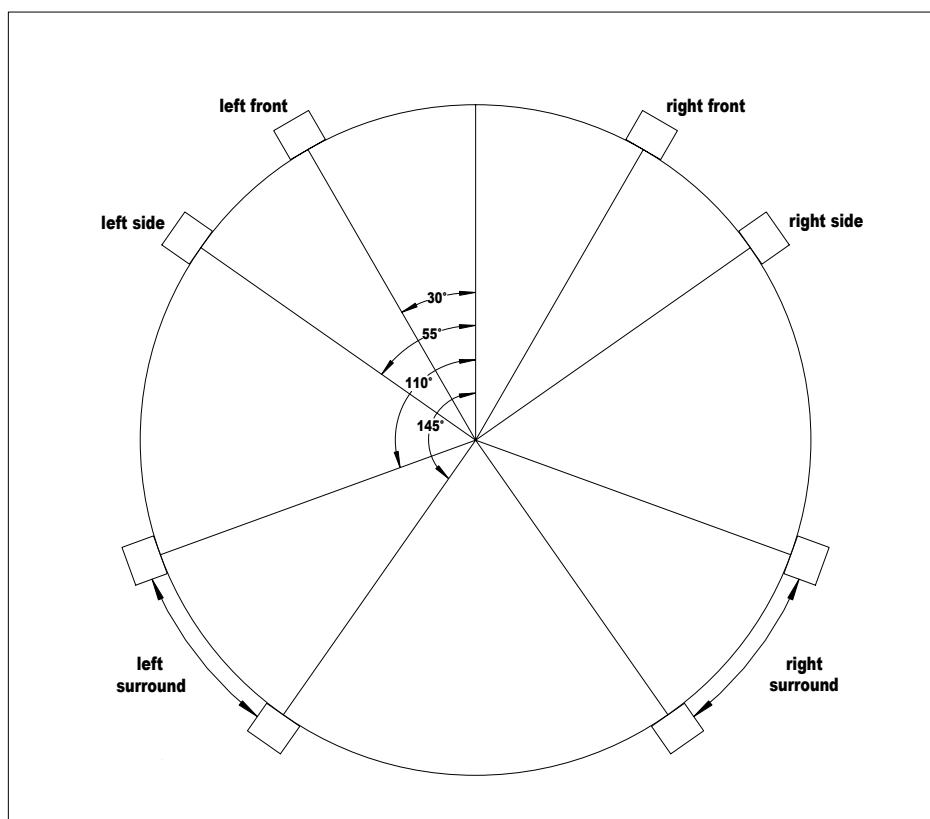
Chesky 6.0 Layout Assistant is supplied as a zip file, cheskyassistant.zip. When unzipped it should contain:

Chesky6LayoutAssistant.exe
CT_Pro.dll

and this information file.

Description

Chesky 6.0 Layout Assistant performs geometric calculations based on supplied room dimensions to determine speaker positions for the 6-channel layout used by Chesky Records for some of its multichannel recordings and illustrated below.



In the absence of electronic delays within the replay system, the distance of all six loudspeakers from the listening position should be identical. Chesky 6.0 Layout Assistant makes its calculations on this basis, also allowing for the surround speakers to be located above the listener's ear height.

```

Chesky 6.0 Layout Assistant
(c) 2007. Keith Howard
www.audiosignal.co.uk

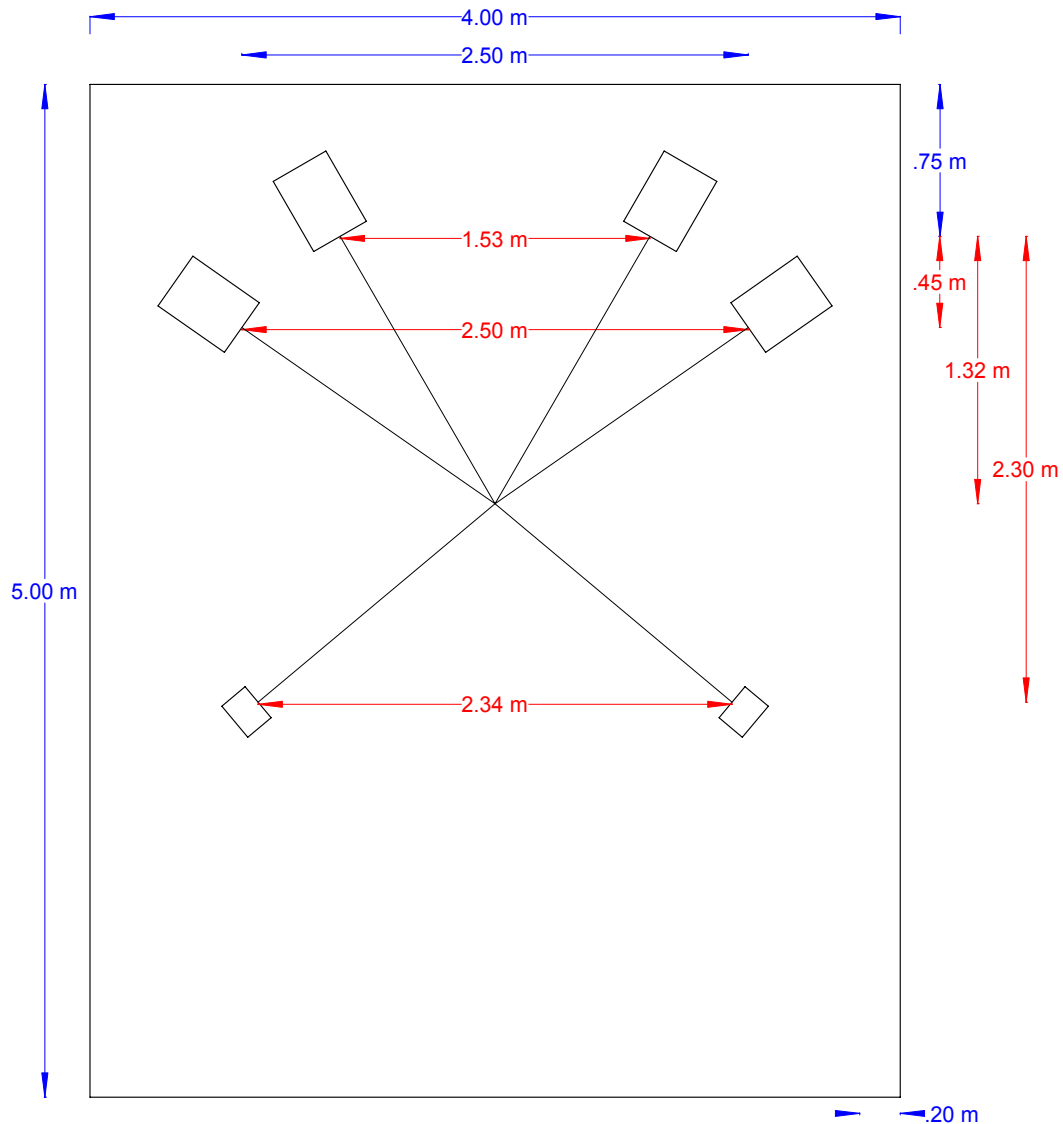
Maximum front-back spacing of the front and surround speakers? 3.5
Maximum side-side spacing of the left-side and right-side speakers? 2.5
Is the surround speaker side-to-side spacing fixed [Y/N]? n
Maximum side-to-side spacing of the surround speakers? 3.6
Height of surround speakers above the listening position? 0
Angular position of surround speakers in degrees [110 to 145]? 130

Front-back spacing of the front L/R and surround speakers 2.30
Front-back spacing of the front L/R and front side speakers 0.45
Front-back spacing of the front L/R speakers and listening position 1.32
Listening distance and side-side spacing of the front L/R speakers 1.53
Side-side spacing of the front left-side and right-side speakers 2.50
Side-side spacing of the surround speakers 2.34

press any key to quit

```

A plan view of the room below shows how Chesky 6.0 Layout Assistant's output dimensions are used to determine the speaker layout. Those dimensions predetermined by the user are shown in blue; the output dimensions are shown in red.



Two points to note are:

1) The front-back distance between the front left/right and surround speakers (2.3m) is much less than the maximum specified (3.5m). This means that there is a considerable flexibility in the positioning of the speaker array along the room's long dimension: the front left/right speakers can be positioned much further from the front wall than 0.75m if desired.

2) The side-side spacing of the left-side and right-side speakers is the maximum specified (2.5m). This means that the maximum listening distance has been achieved for the specified room dimensions.

If we try to achieve a setup in the same room using exactly the same dimensions only with the surround loudspeakers now fixed to the wall at their maximum spacing, this is the result:

```

Chesky 6.0 Layout Assistant

Chesky 6.0 Layout Assistant v1
(c) 2007, Keith Howard
www.audiosignal.co.uk

Maximum front-back spacing of the front and surround speakers?      3.5
Maximum side-side spacing of the left-side and right-side speakers?  2.5
Is the surround speaker side-to-side spacing fixed [Y/N]?           y
Side-to-side spacing of the surround speakers?                      3.6
Height of surround speakers above the listening position?           0
Angular position of surround speakers in degrees [110 to 145]?      130

Front-back spacing of the front L/R and surround speakers            3.55
Front-back spacing of the front L/R and front side speakers          0.69
Front-back spacing of the front L/R speakers and listening position  2.03
Listening distance and side-side spacing of the front L/R speakers  2.35
Side-side spacing of the front left-side and right-side speakers      3.85

press any key to quit

```

Both the maximum front-back spacing of the left/right and surround speakers and the maximum side-side spacing of the left-side and right-side speakers have been exceeded, so they are displayed in red. It is therefore impossible to achieve the desired setup. Although we can improve matters by reducing the angular position of the surround speakers to 110 degrees:

```

Chesky 6.0 Layout Assistant

Chesky 6.0 Layout Assistant v1
(c) 2007, Keith Howard
www.audiosignal.co.uk

Maximum front-back spacing of the front and surround speakers?      3.5
Maximum side-side spacing of the left-side and right-side speakers?  2.5
Is the surround speaker side-to-side spacing fixed [Y/N]?           y
Side-to-side spacing of the surround speakers?                      3.6
Height of surround speakers above the listening position?           0
Angular position of surround speakers in degrees [110 to 145]?      110

Front-back spacing of the front L/R and surround speakers            2.31
Front-back spacing of the front L/R and front side speakers          0.56
Front-back spacing of the front L/R speakers and listening position  1.66
Listening distance and side-side spacing of the front L/R speakers  1.92
Side-side spacing of the front left-side and right-side speakers      3.14

press any key to quit

```

the side-side spacing of the left-side and right-side speakers is still too large. So in this room layout, small surround speakers mounted on the side walls are unsuitable.

Once an appropriate layout has been determined, the loudspeakers can be positioned accordingly within the room. This can be achieved using just a tape measure but is easier with a template (one can be downloaded from www.audiosignal.co.uk/setupguides.html) and a laser line projector.

Licence

This software may be freely distributed on the condition that it is unaltered and distributed in its entirety, including the supplied DLL and this information file.

You use Chesky 6.0 Layout Assistant at your own risk. No warranty or support is implied or given.

If you encounter any bugs or have suggestions for improvements you are invited to email them to freeware@audiosignal.co.uk.

Keith Howard
February 2007