SOUND BUBBLE MACHINE
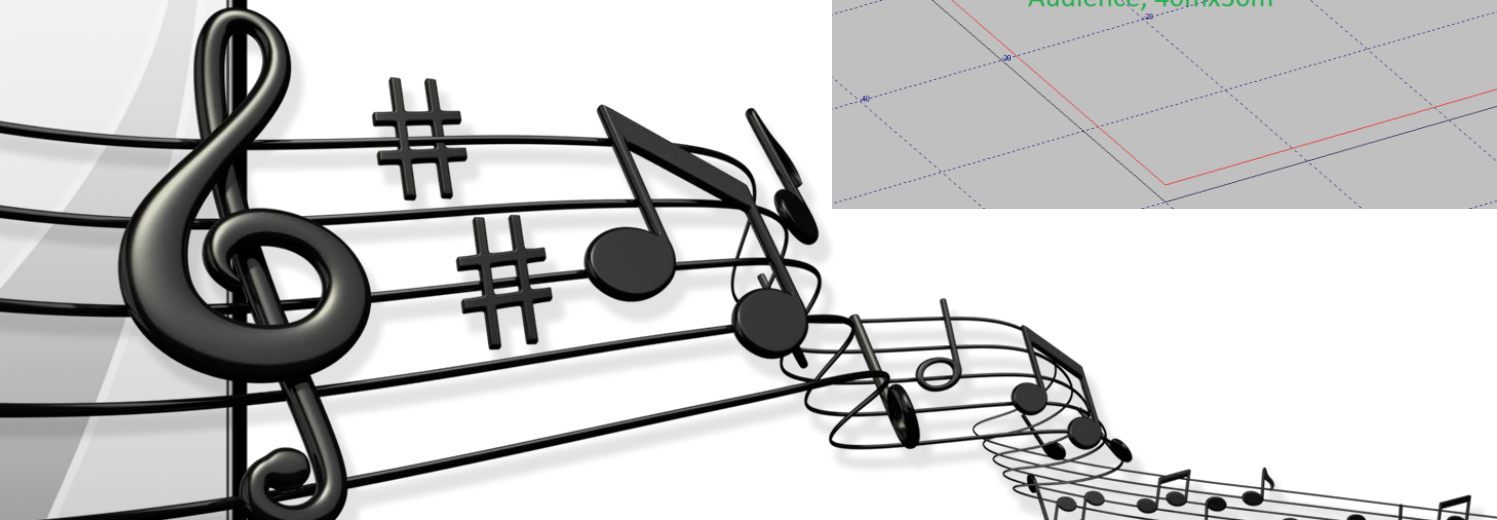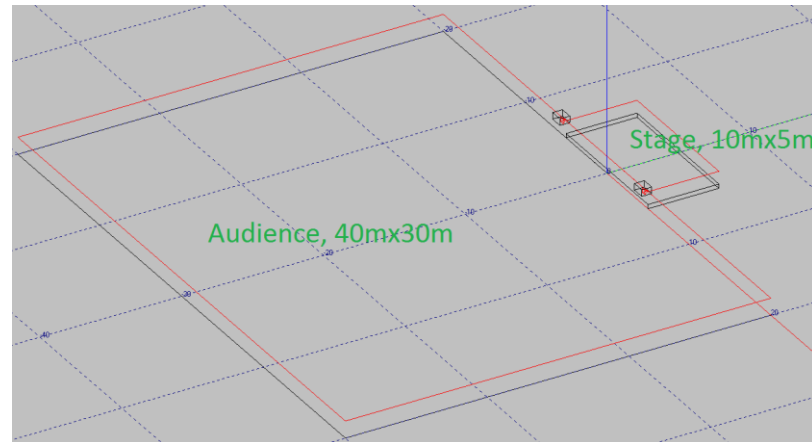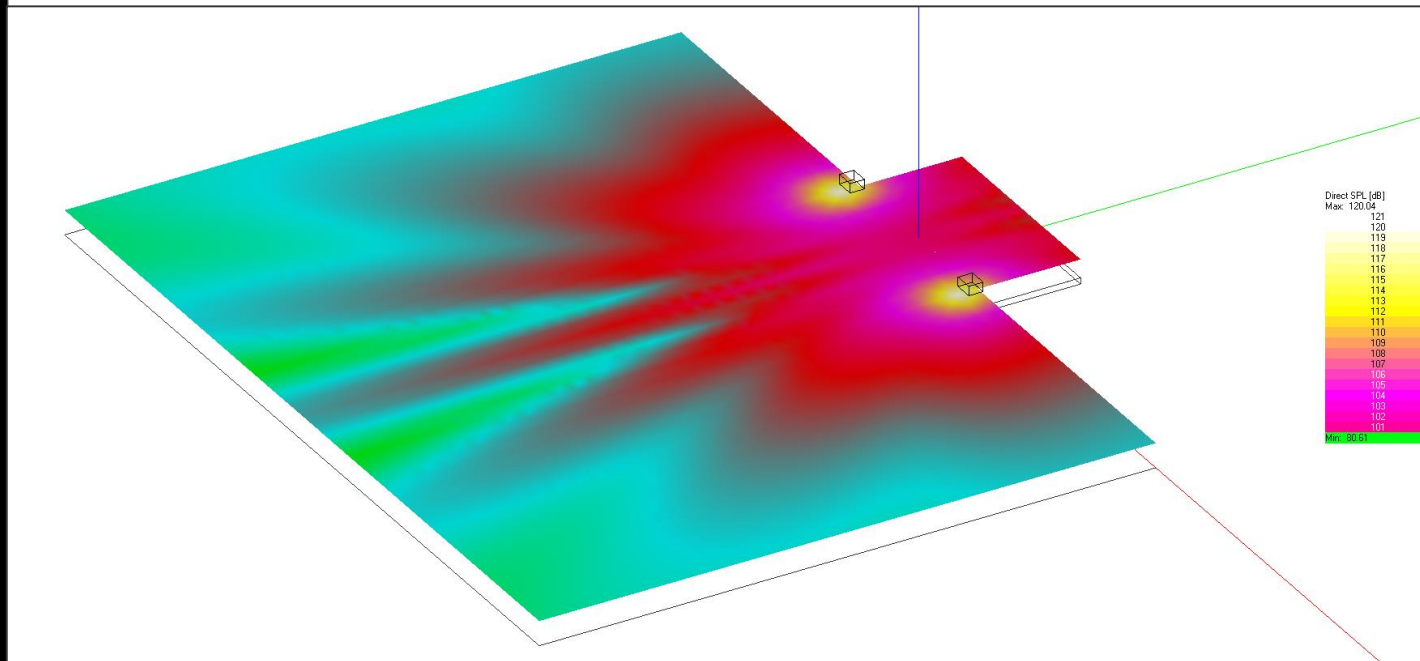
Application Guide

Sound Bubble Machine Application Guide

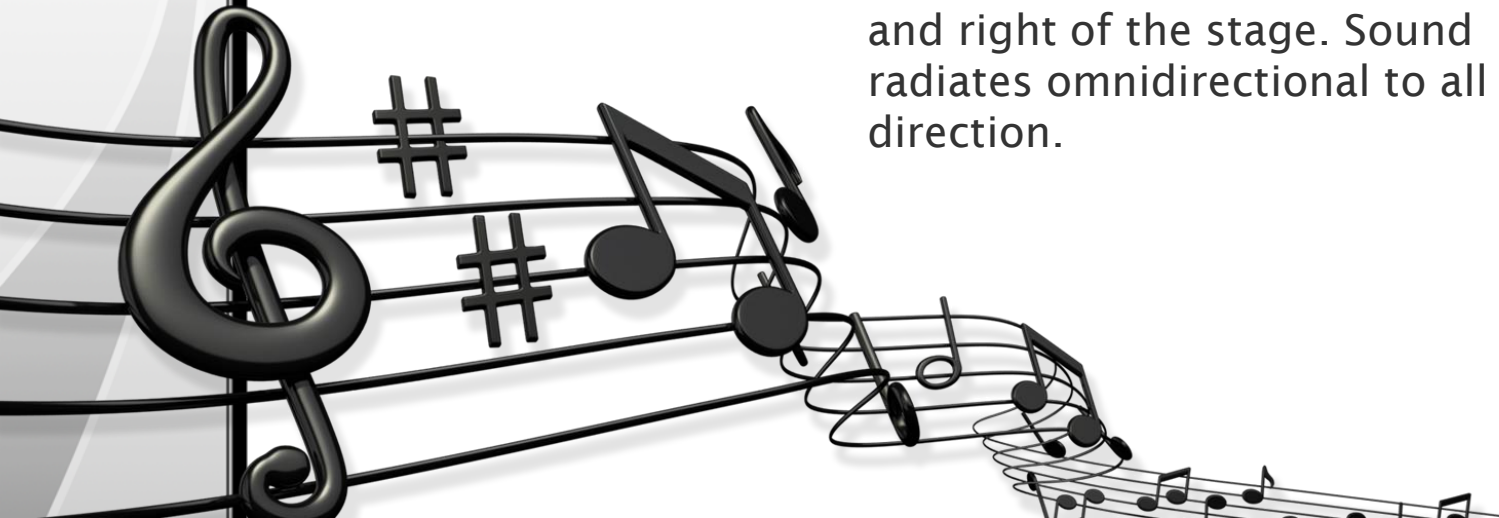## Rendering pictures information:

- Software: EASE 4.3.

- Subwoofer Data: RCF TTS26-A (GLL), double 15", preset: 30-160Hz.

- Direct Sound Pressure Level rendering is calculated at 100Hz, 3 octave bandwidth sum.
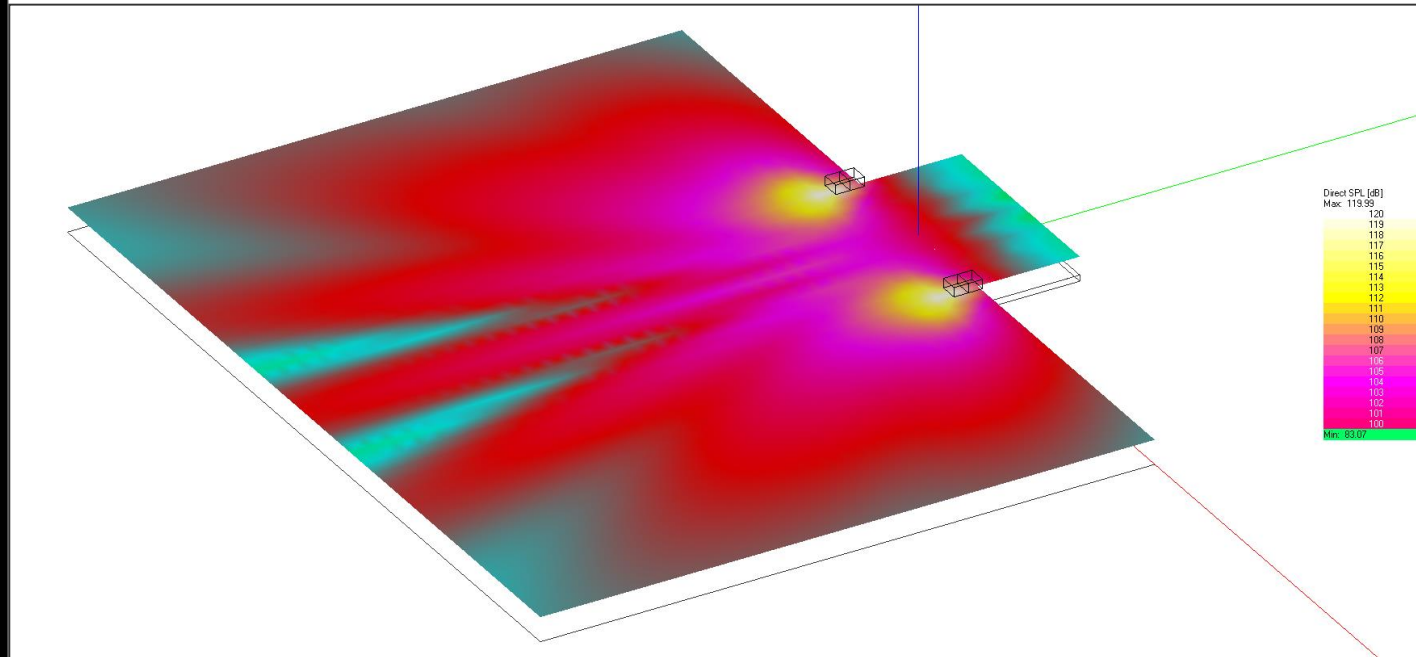
Omnidirectional at Low Frequency

Two subwoofers, located at left and right of the stage. Sound radiates omnidirectional to all direction.
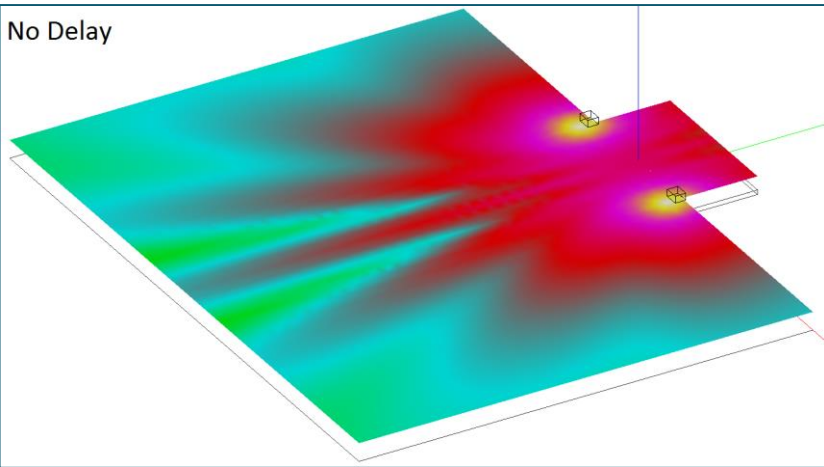
Cardioid Array

Cardioid array setup using two subwoofers (each side), 70cm spacing.

Cardioid Array

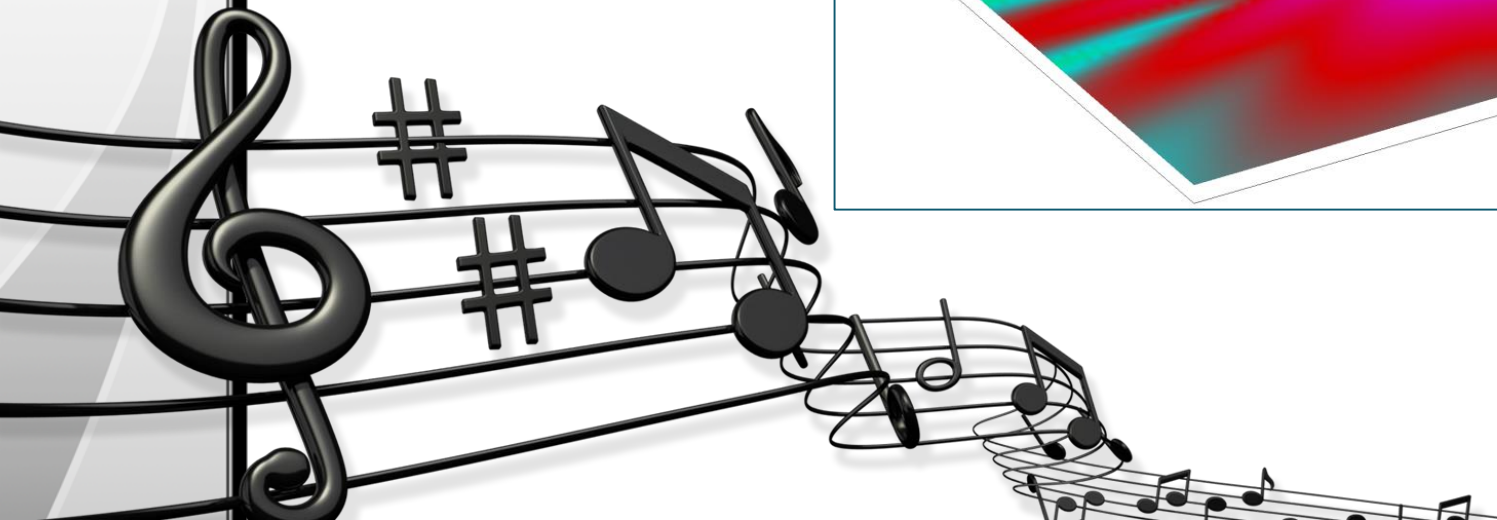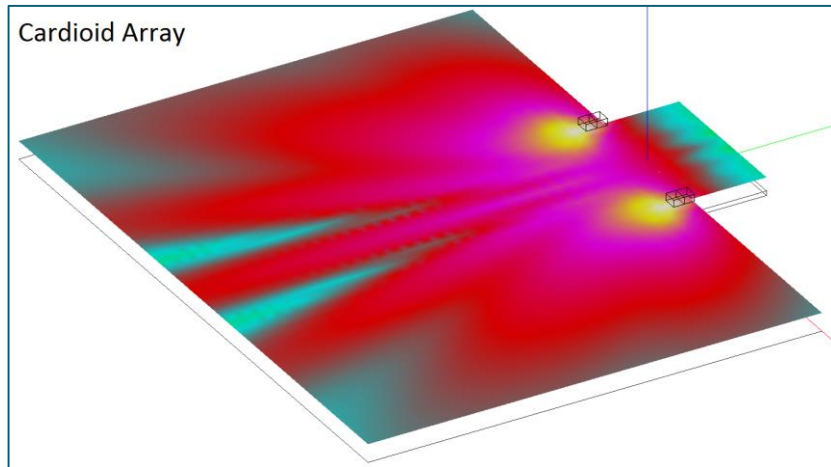Low frequency sound is directed to the audience, less spill to the stage area.
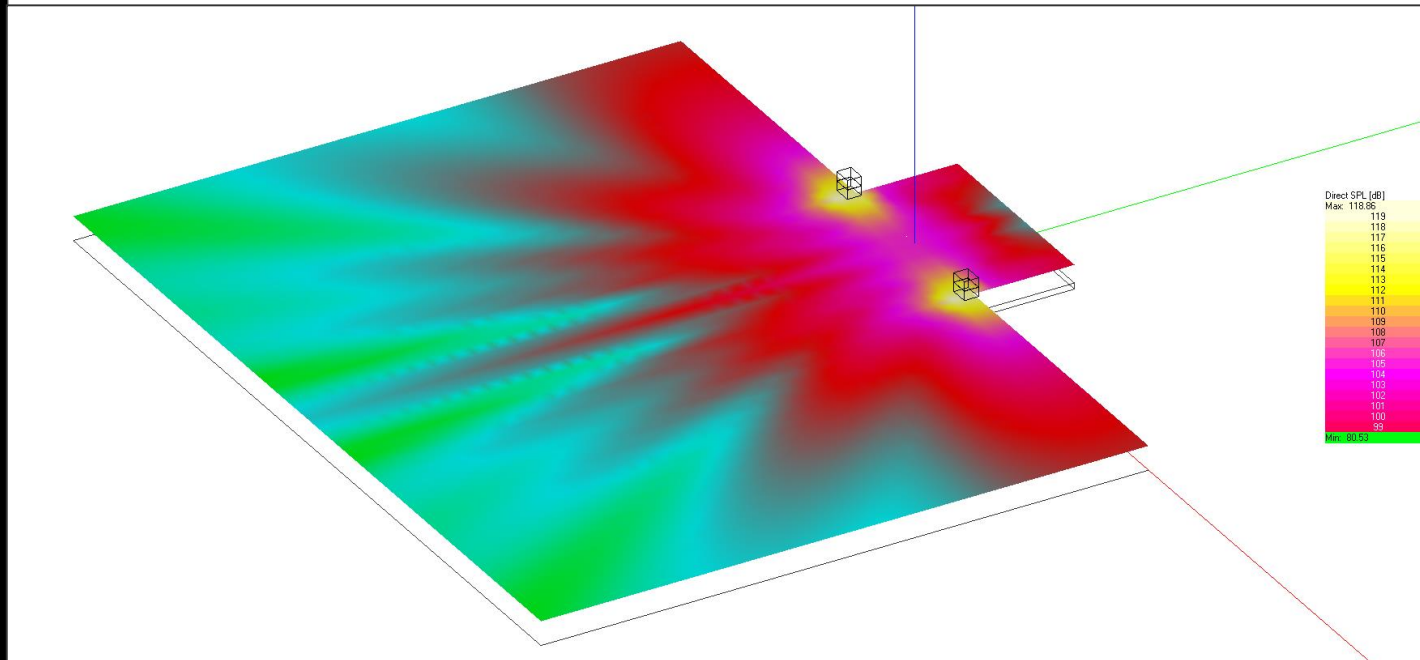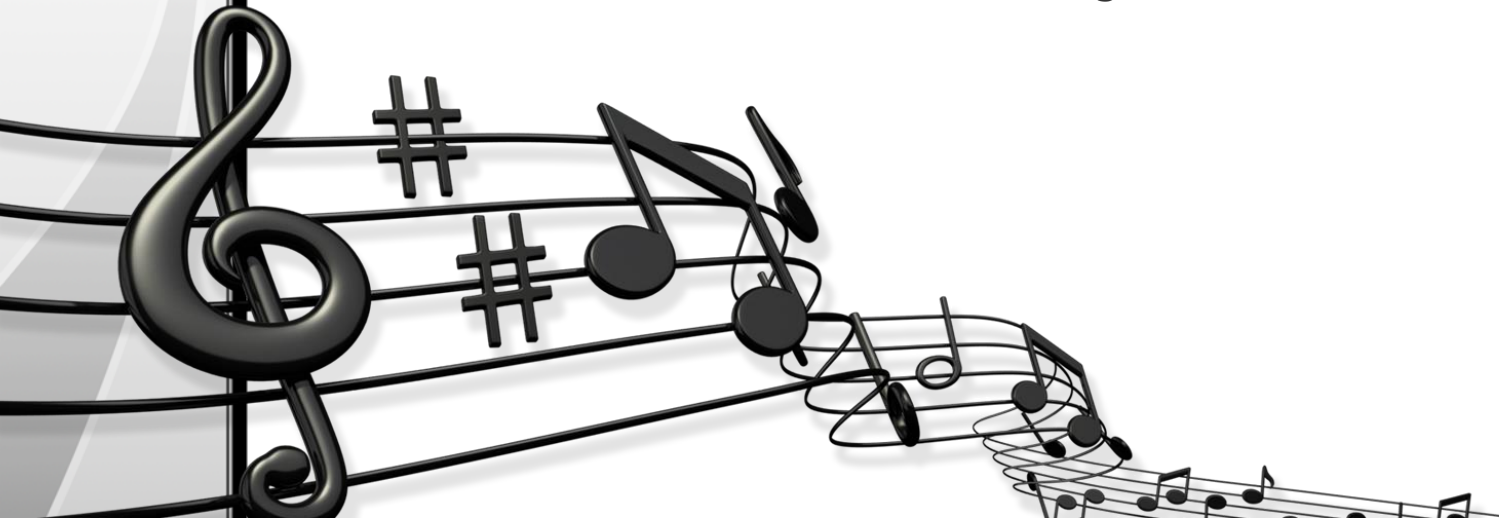
Cardioid Array
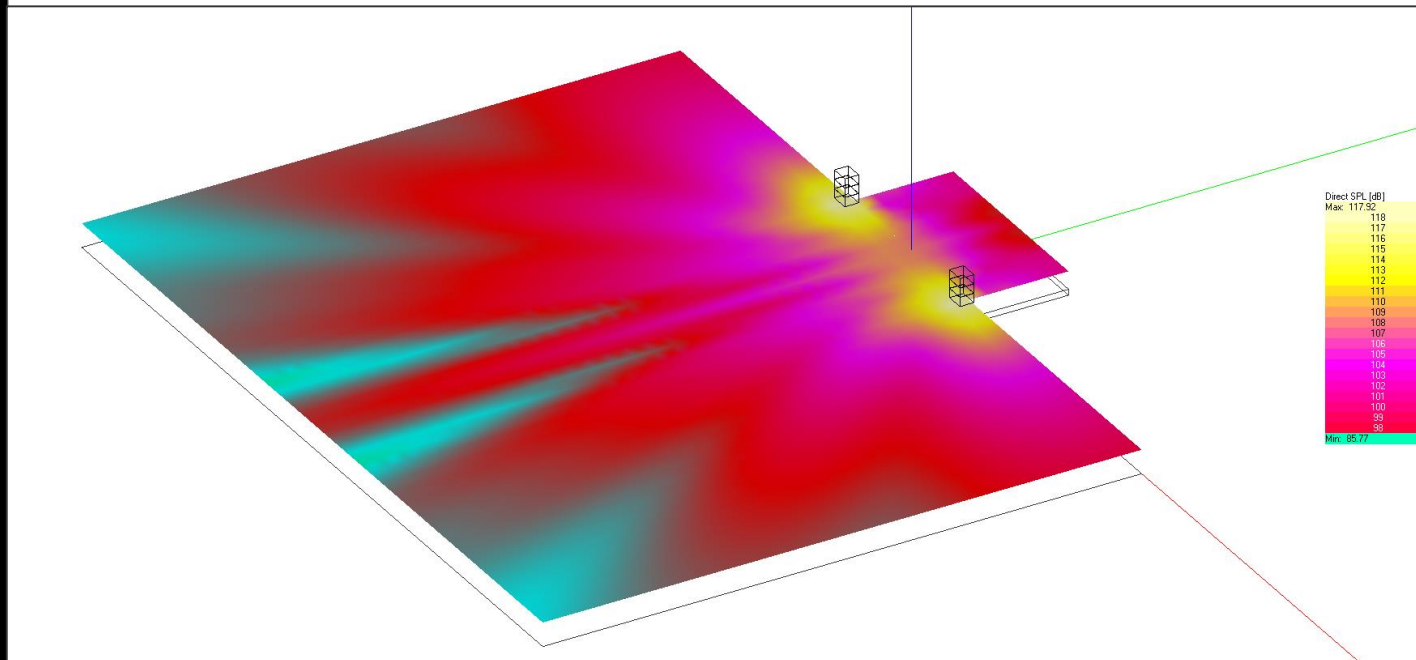

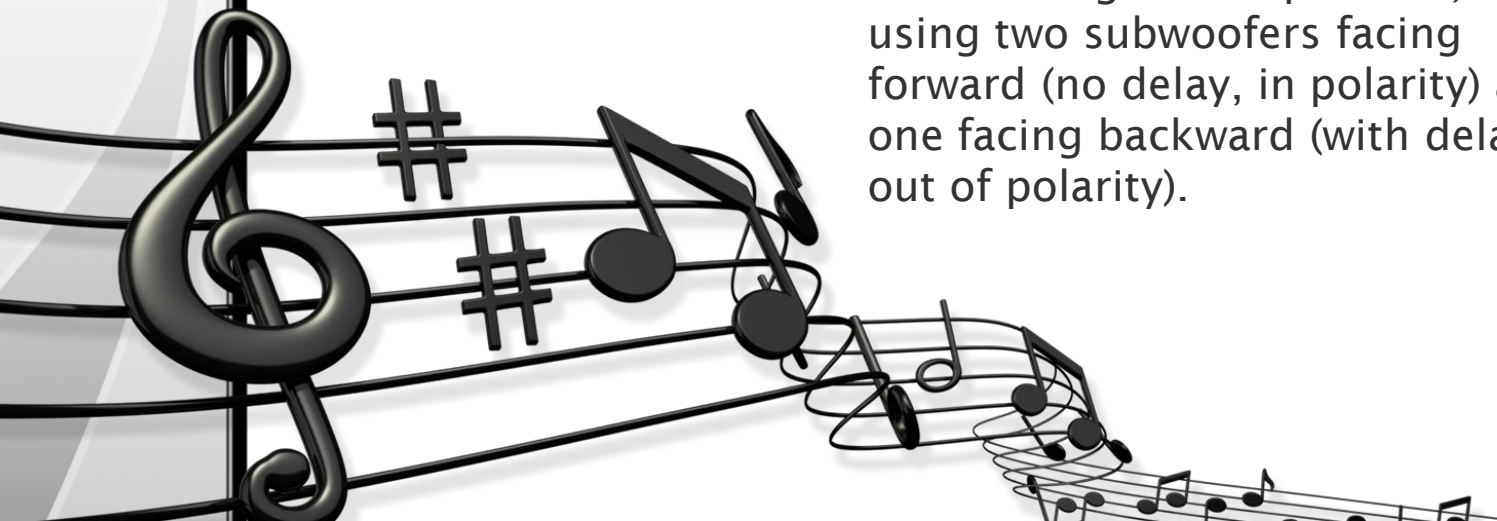No Delay

Cardioid Array

Cardioid Array

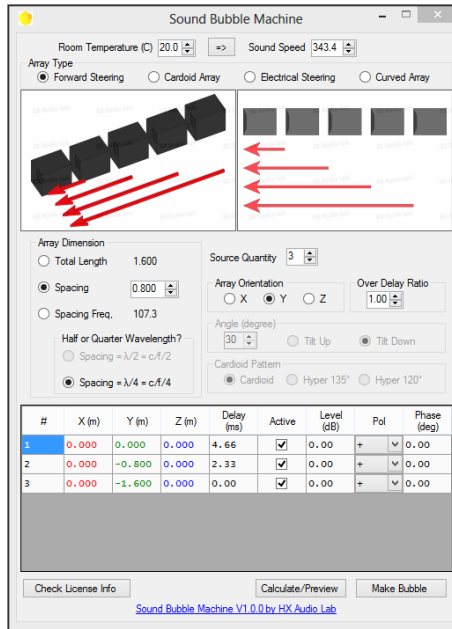Same configuration, but stacked.

Cardioid Array

Same configuration per side, using two subwoofers facing forward (no delay, in polarity) and one facing backward (with delay, out of polarity).
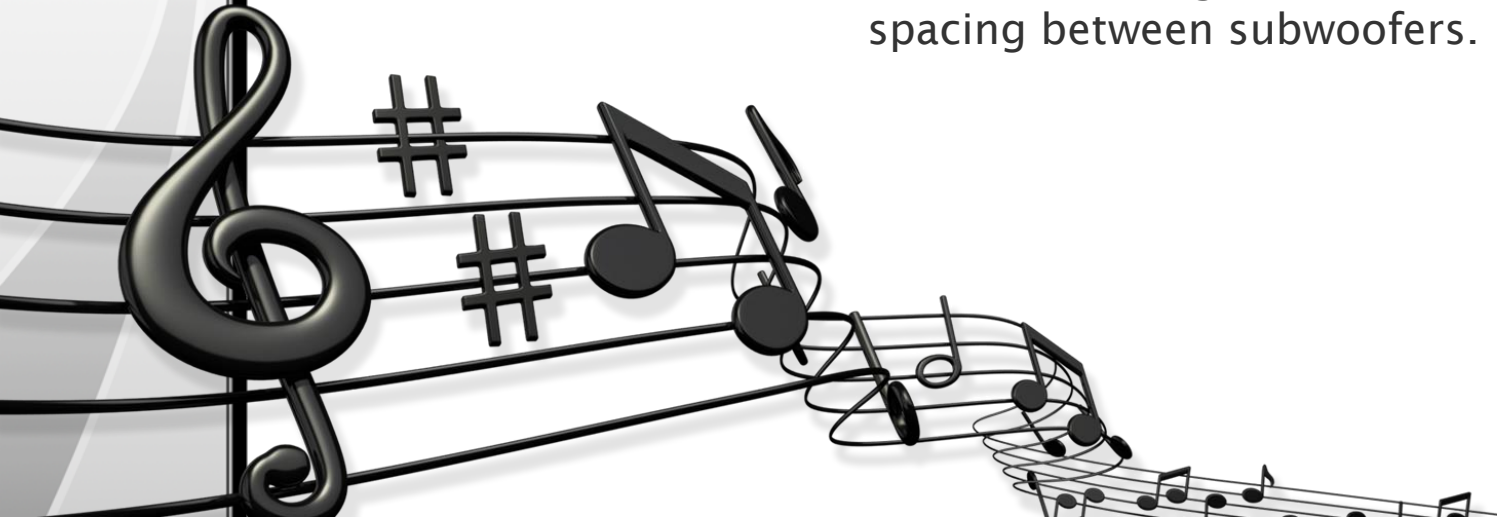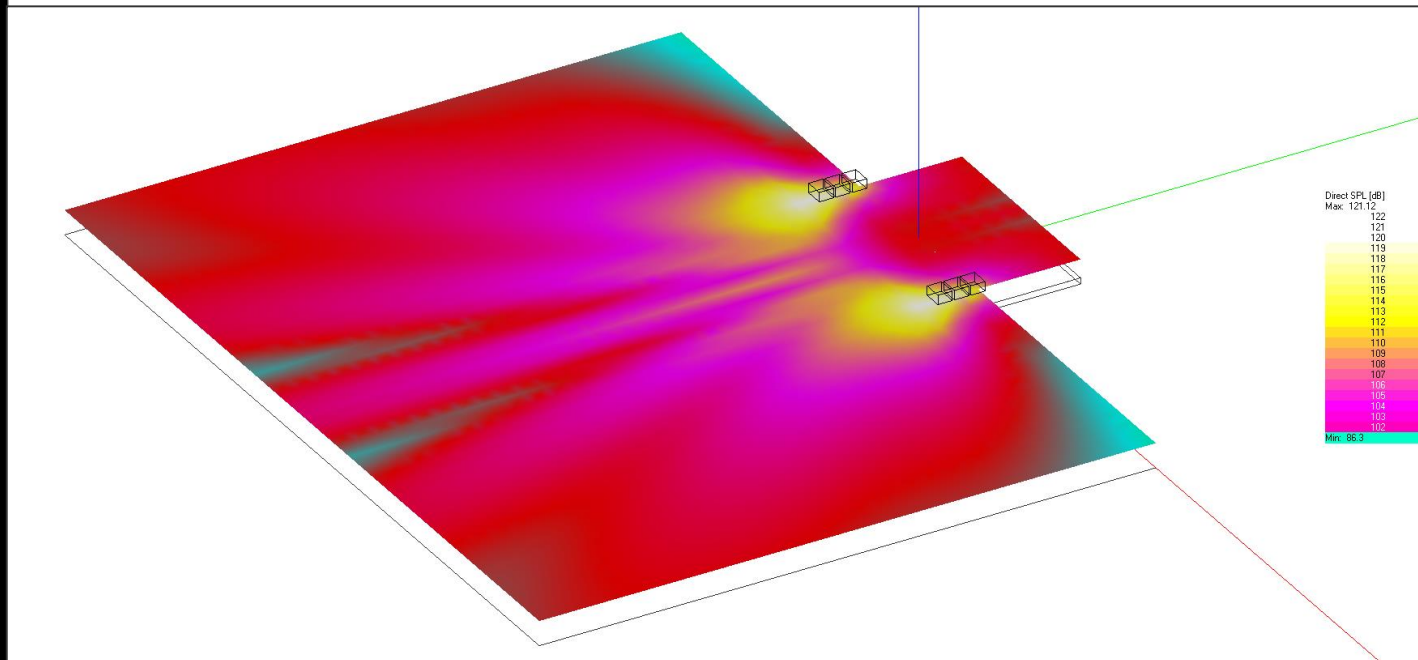
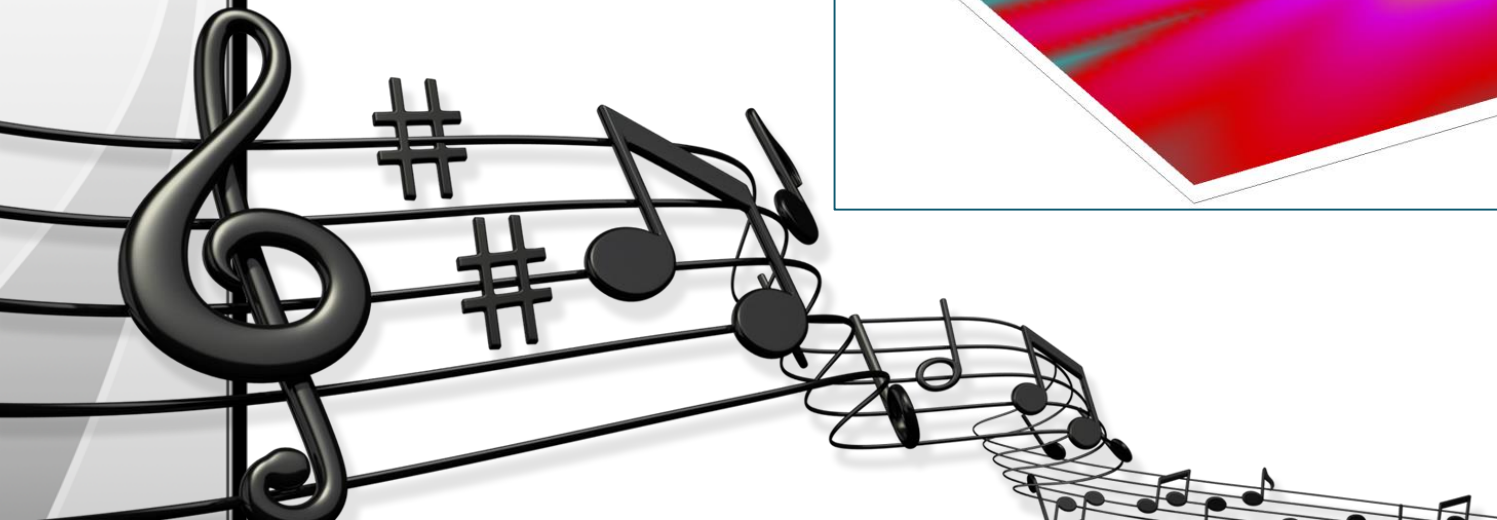# Forward Steering

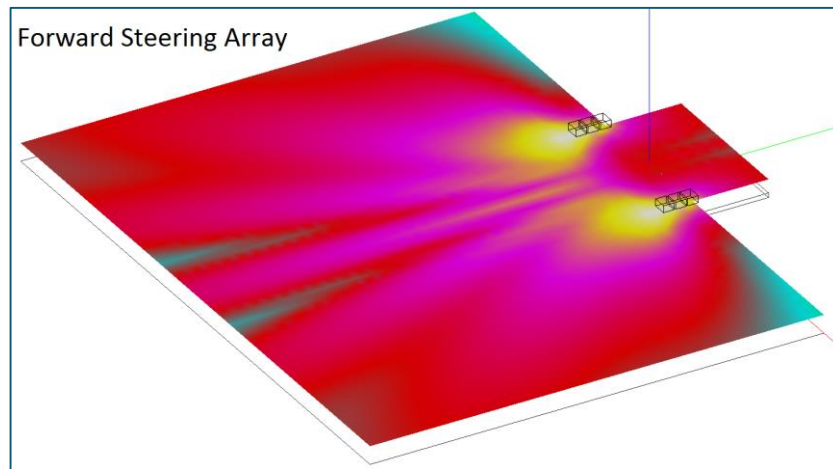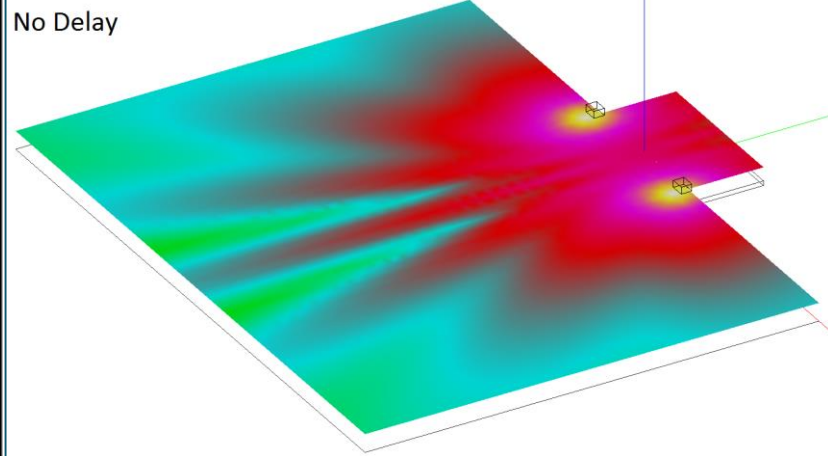
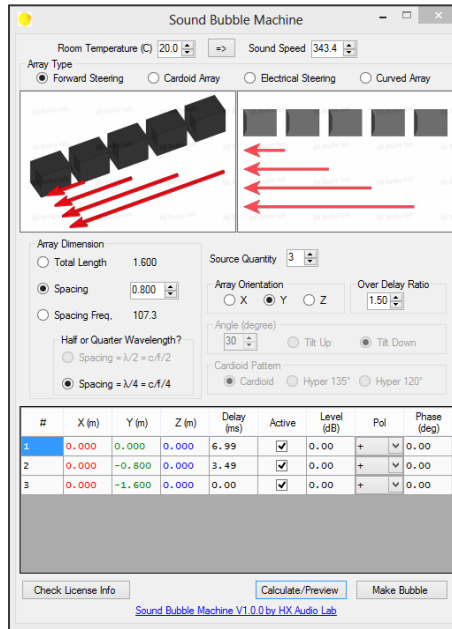Forward Steering with 80cm spacing between subwoofers.

Forward Steering

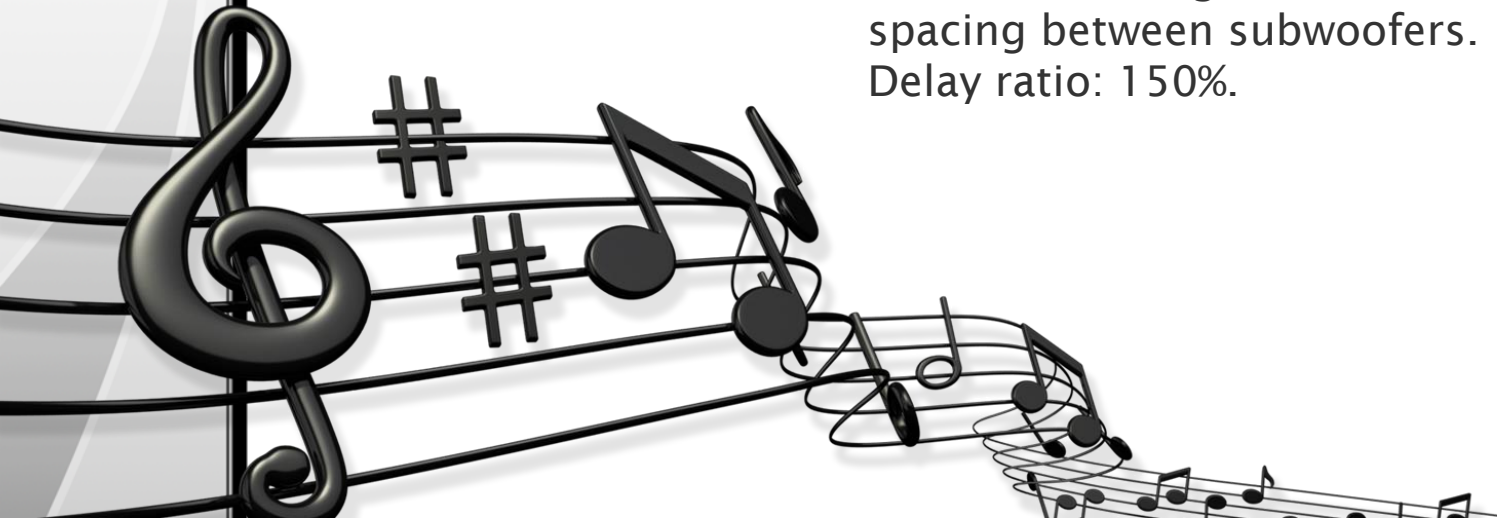Delay Ratio: 100%

Forward Steering
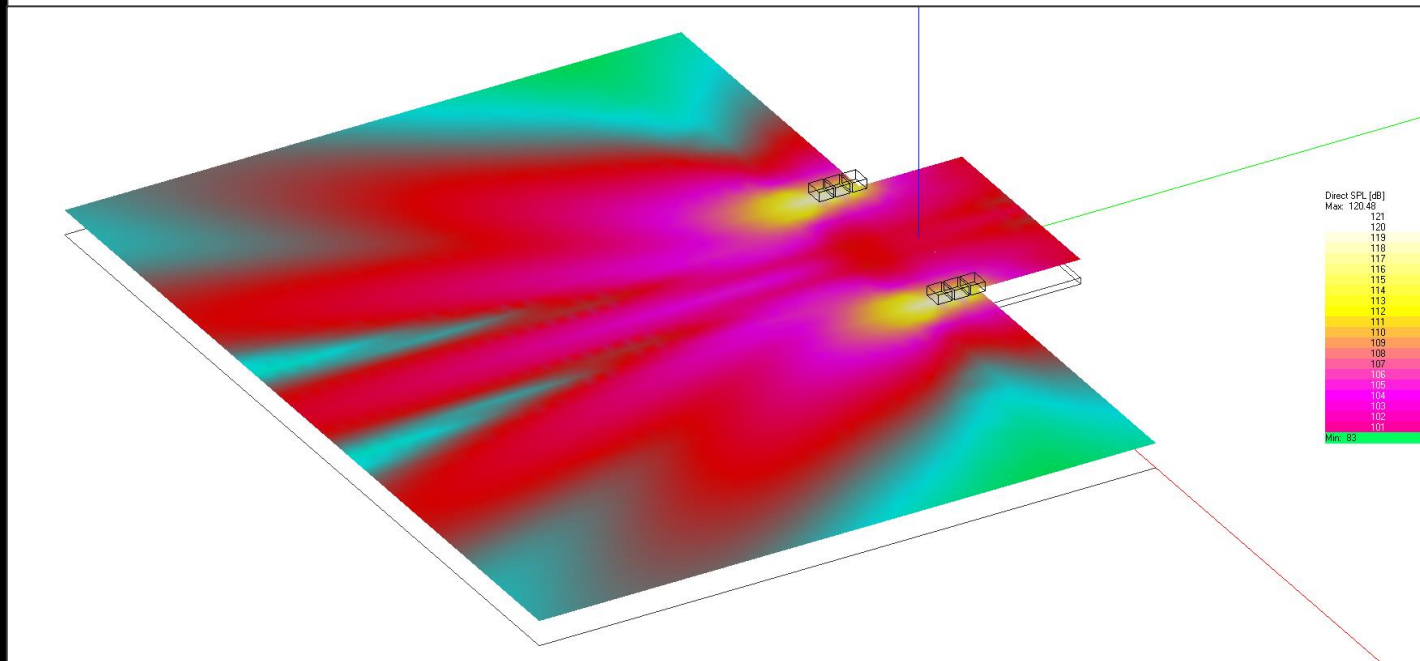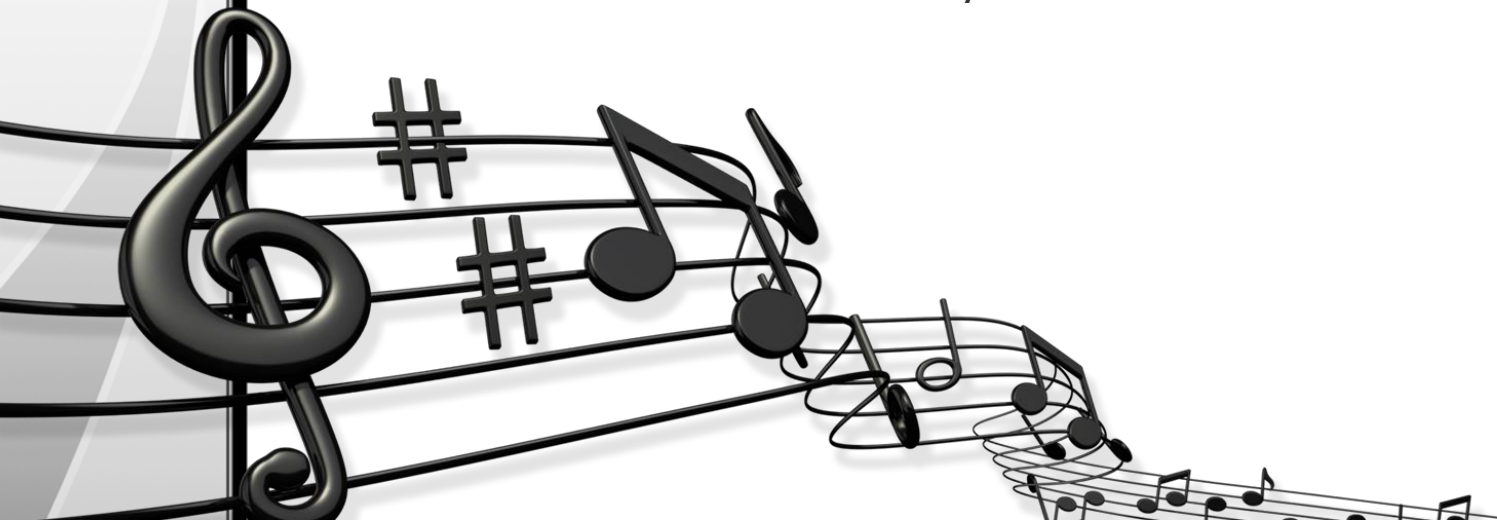

No Delay

Forward Steering Array

Forward Steering

Forward Steering with 80cm spacing between subwoofers. Delay ratio: 150%.

Forward Steering

Delay Ratio: 150%.

Forward Steering

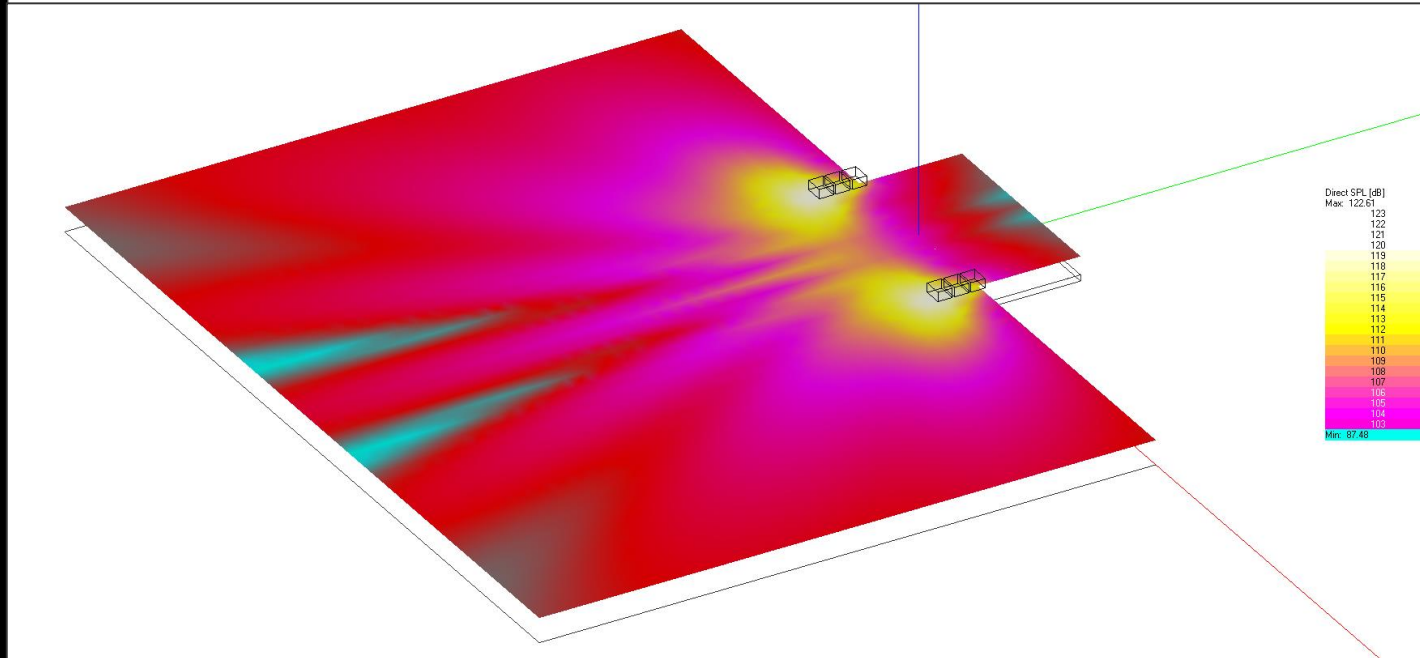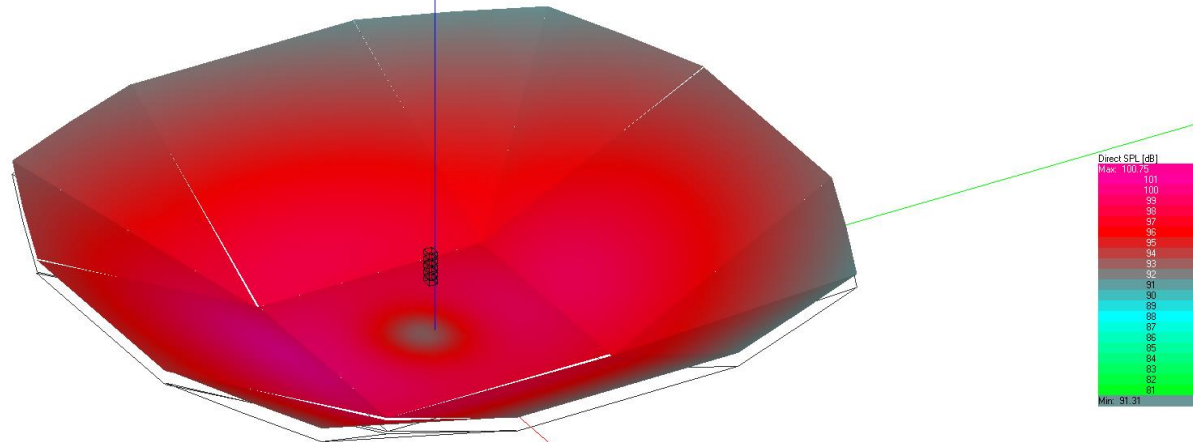Forward Steering with 80cm spacing between subwoofers. Delay Ratio: 50%.

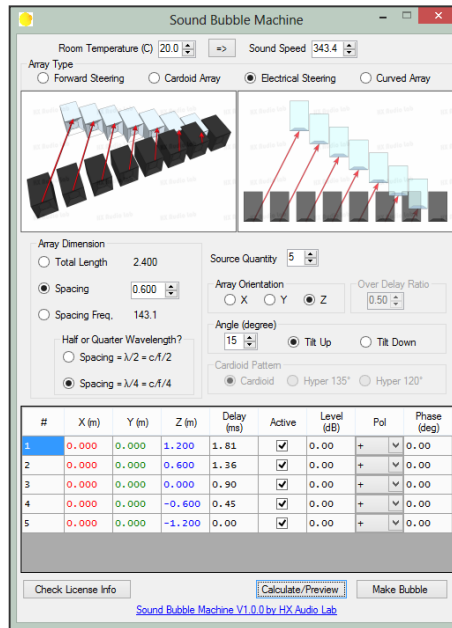# Forward Steering

Delay Ratio: 50%.

Electrical Steering

Five subwoofers in the middle arena (above the main stage) in a straight array.
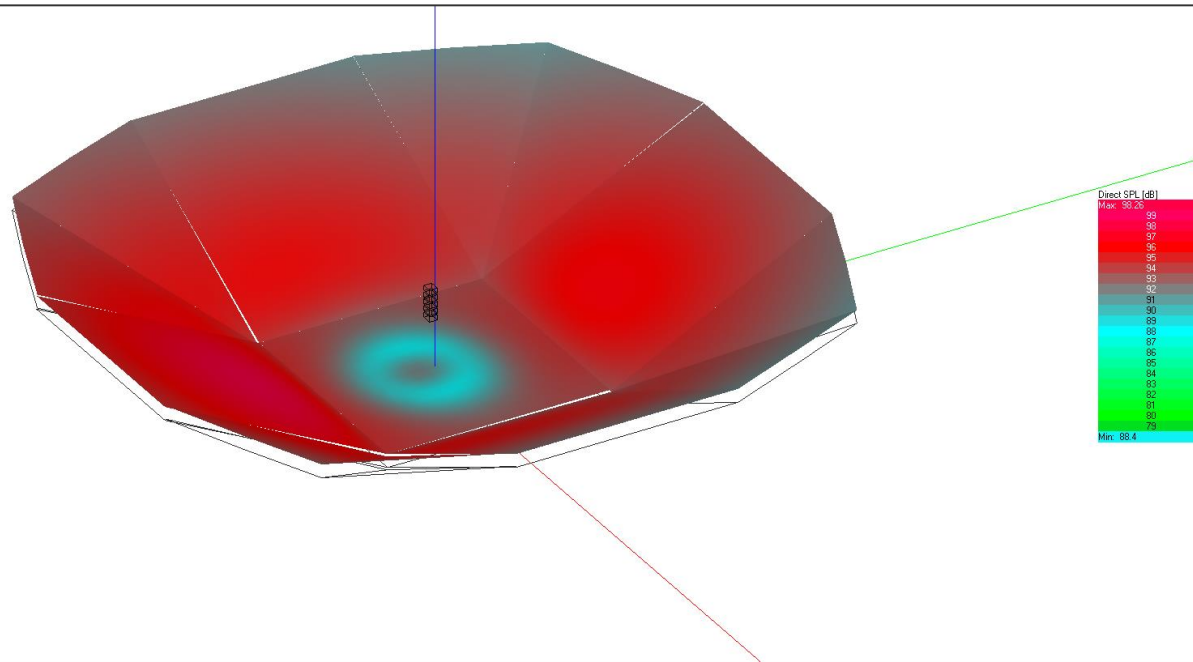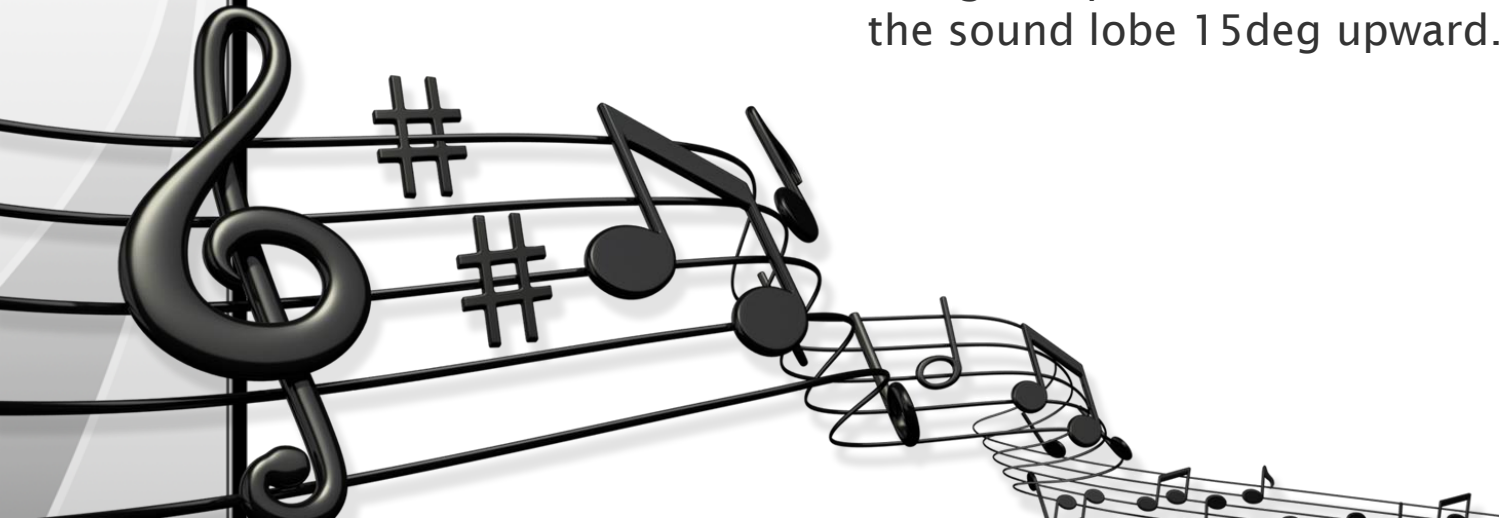
Electrical Steering

Electrical steering to aim the main sound lobe 15deg upward, more to audience area.
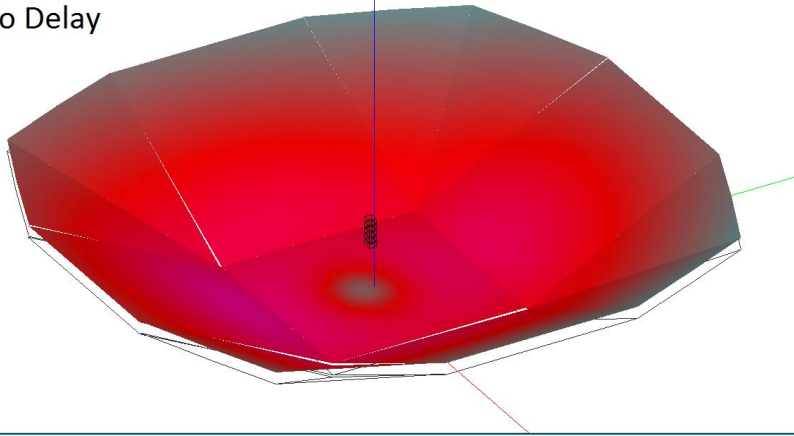
Electrical Steering
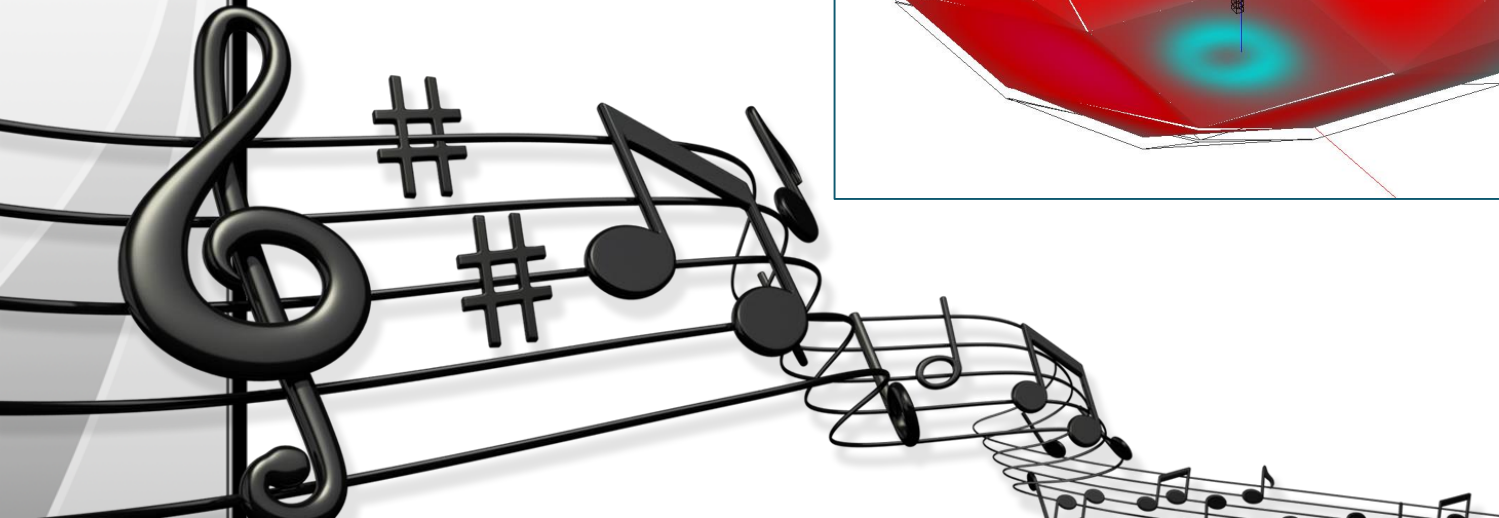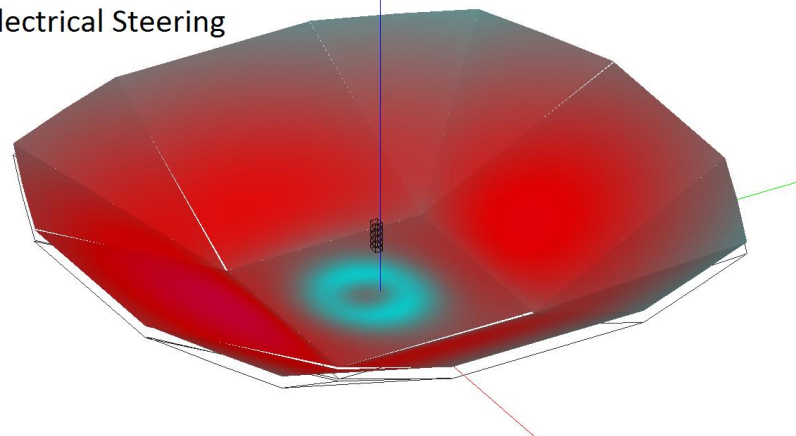

Using delay time calculated to aim the sound lobe 15deg upward.
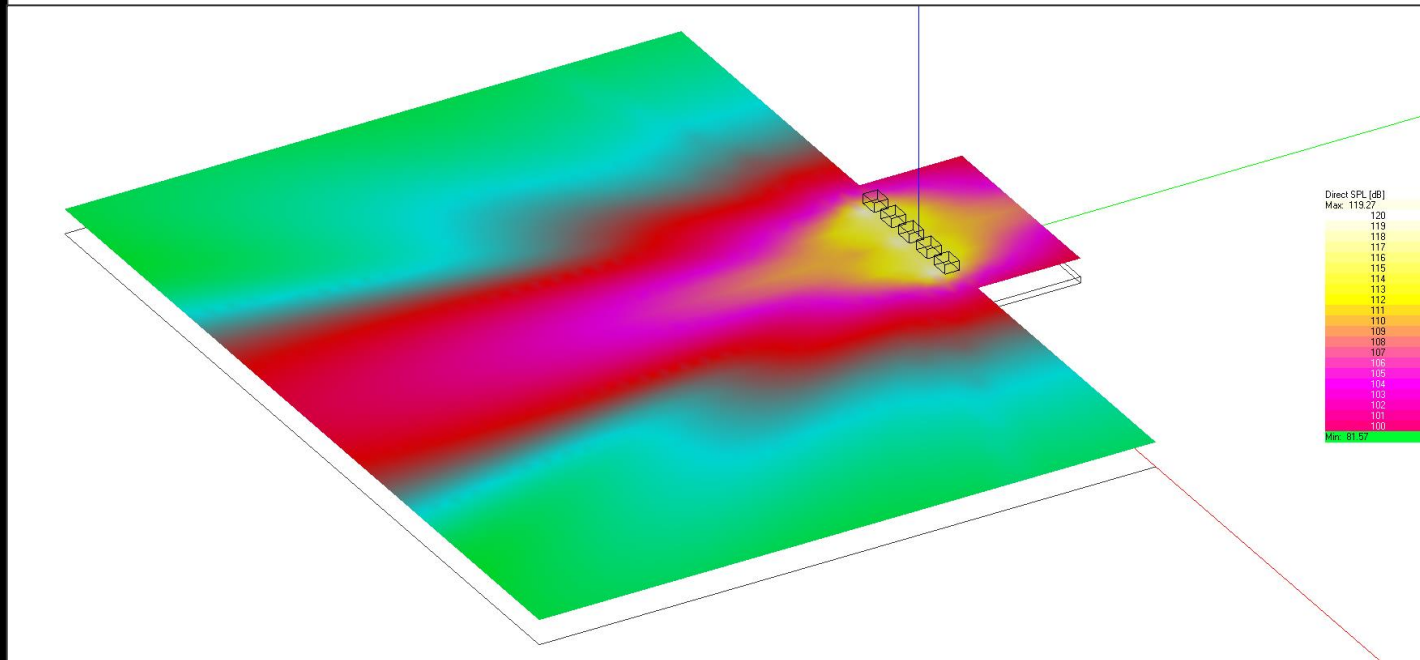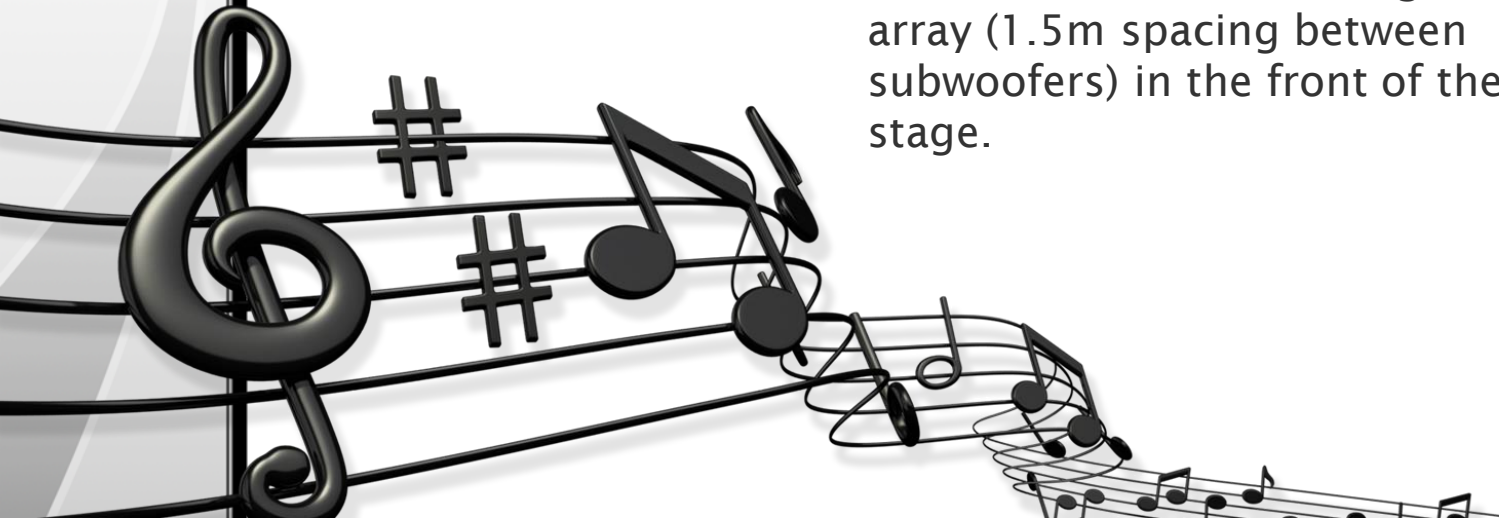
Electrical Steering
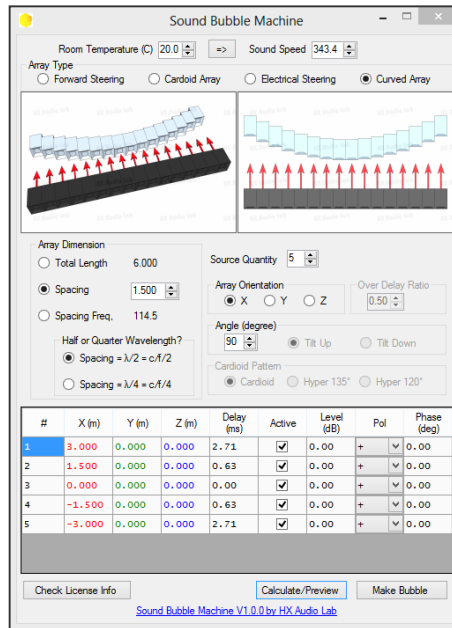
No Delay

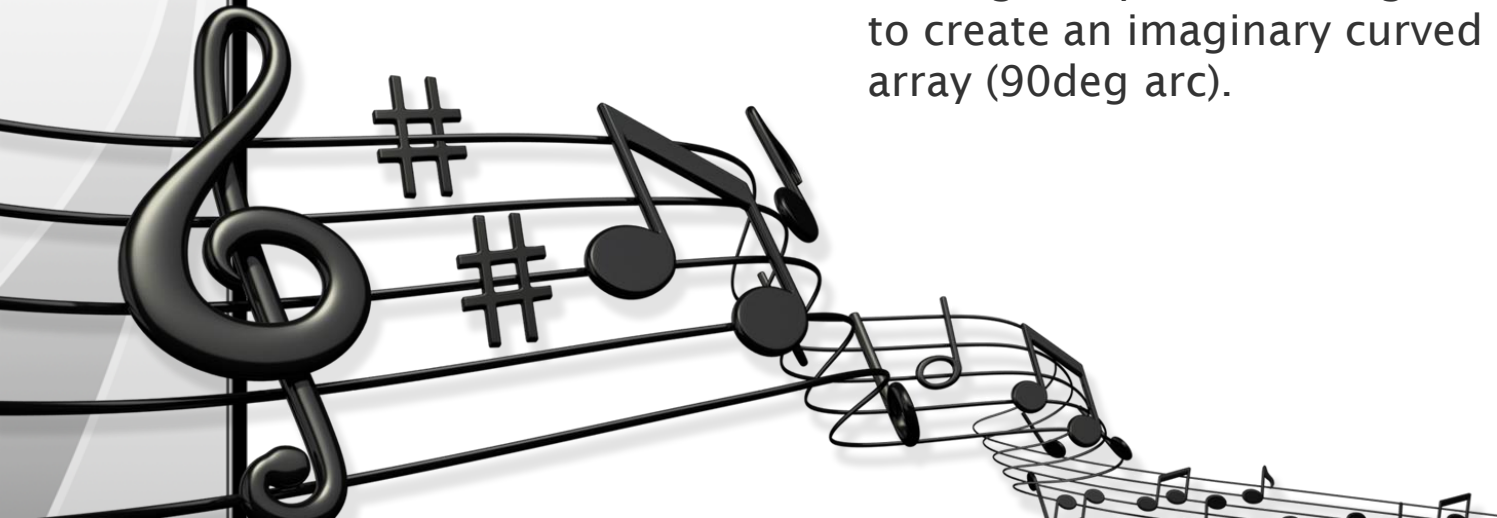Electrical Steering

Curved Array

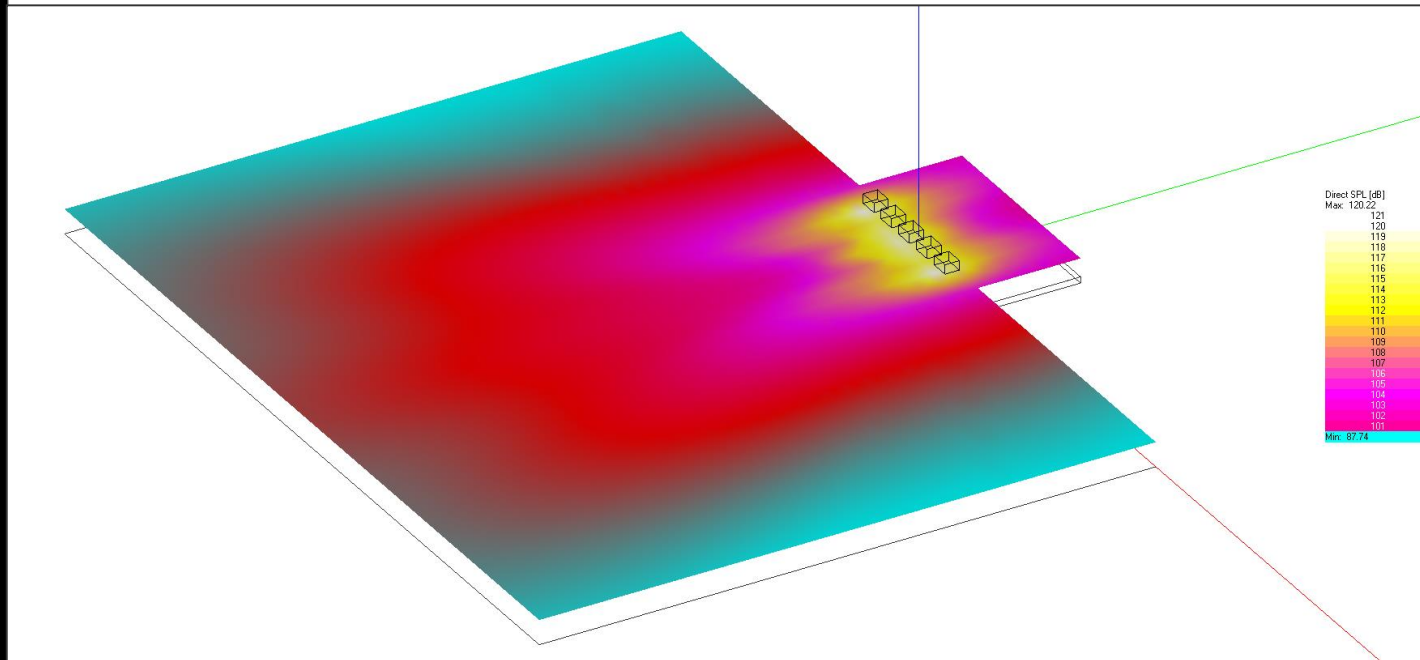Five subwoofers in a straight array (1.5m spacing between subwoofers) in the front of the stage.
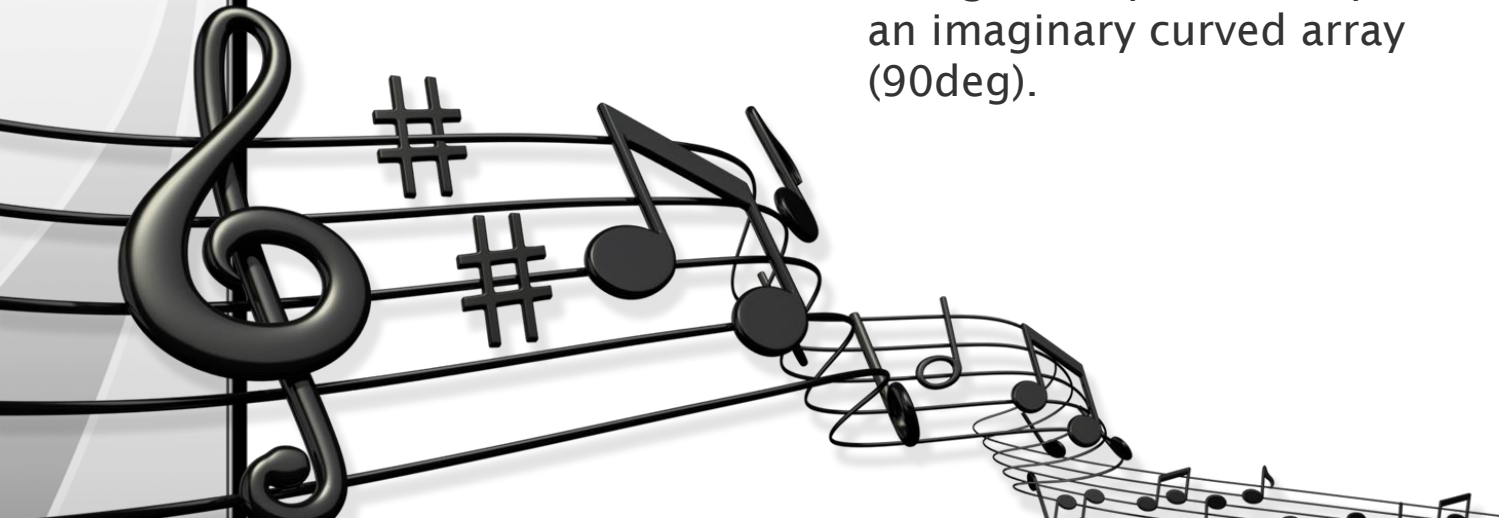
Curved Array

Adding delay to the straight array to create an imaginary curved array (90deg arc).
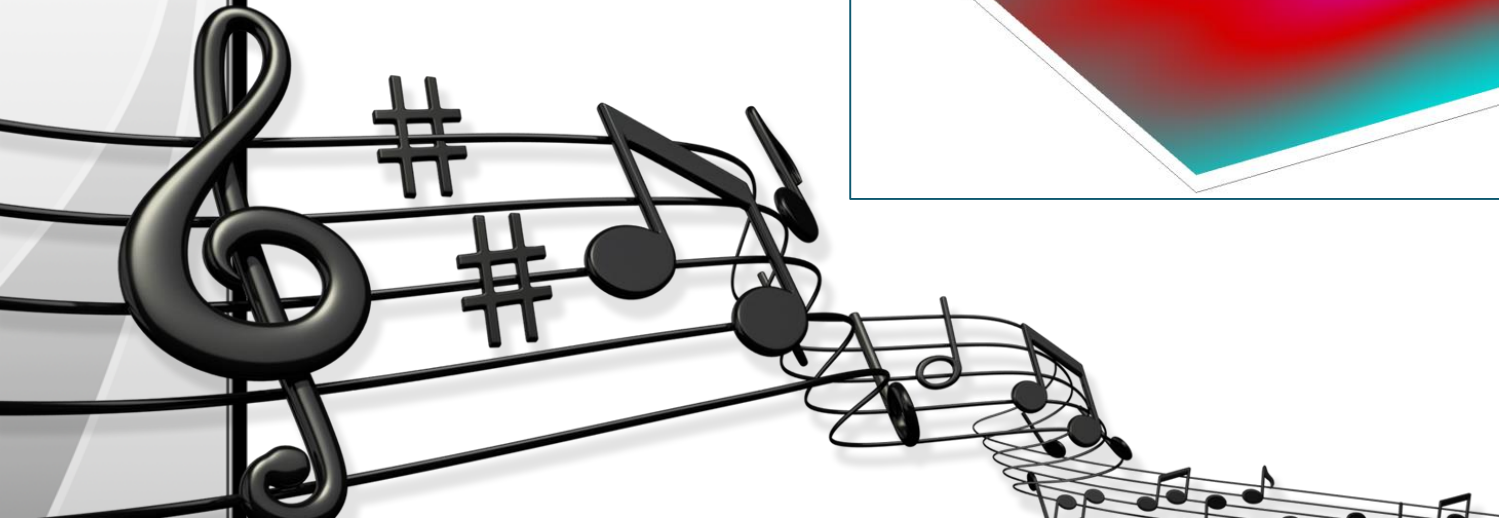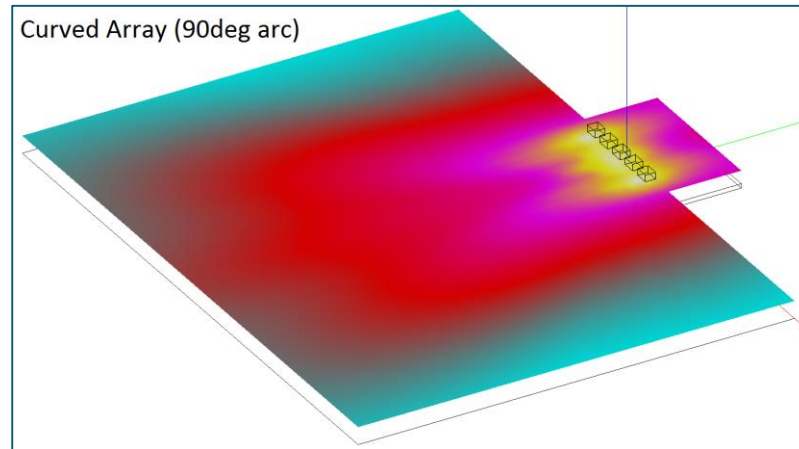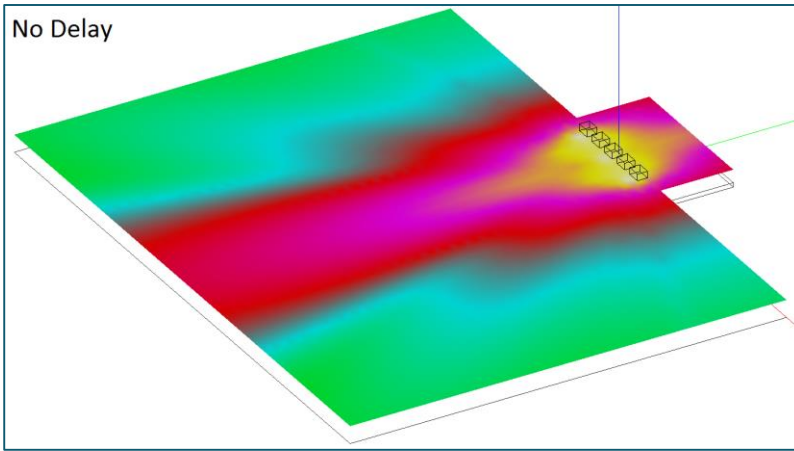
Curved Array

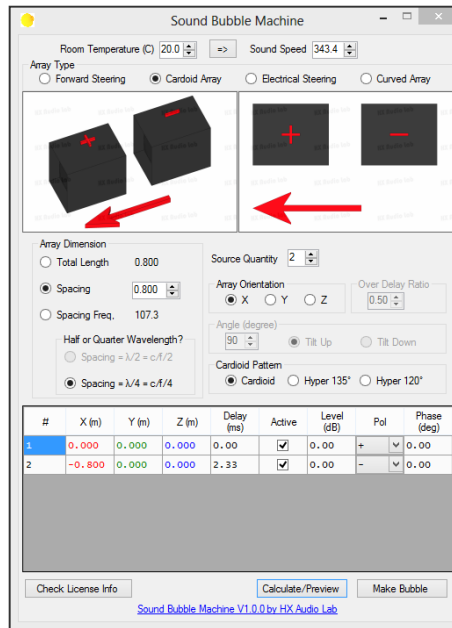Straight array with delay to create an imaginary curved array (90deg).

Curved Array

No Delay
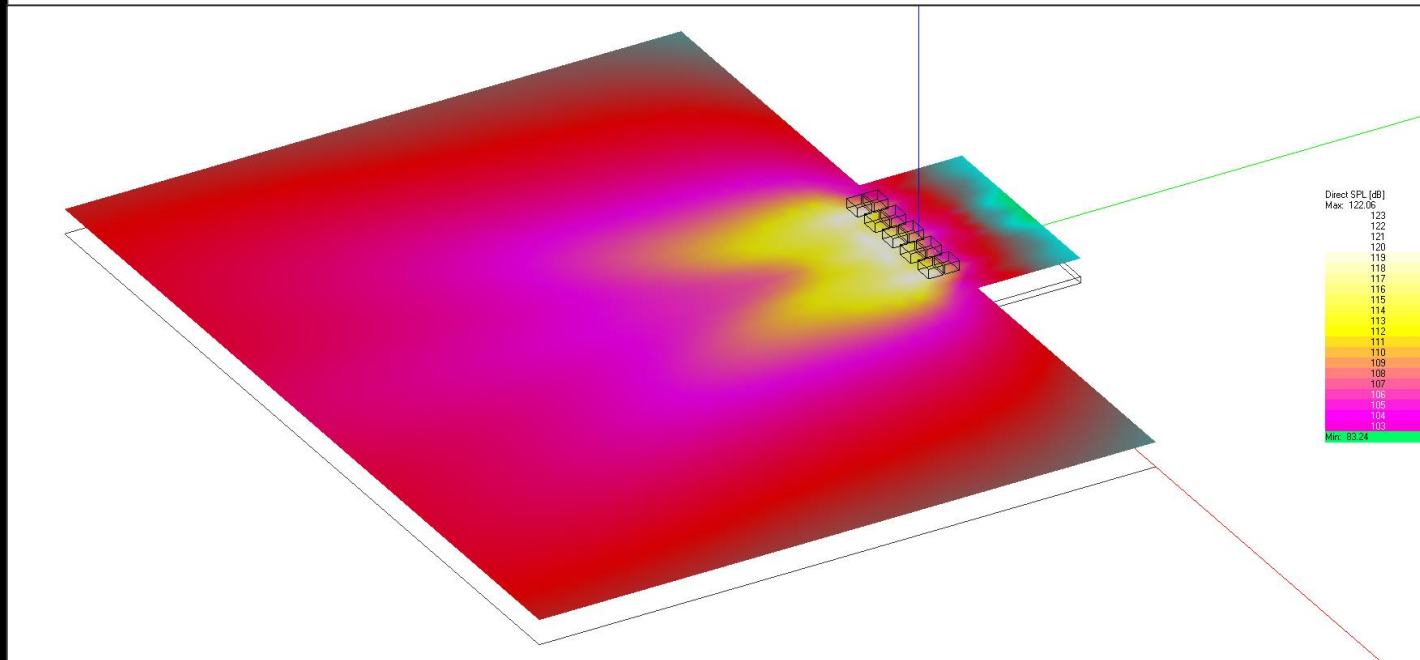
Curved Array (90deg arc)

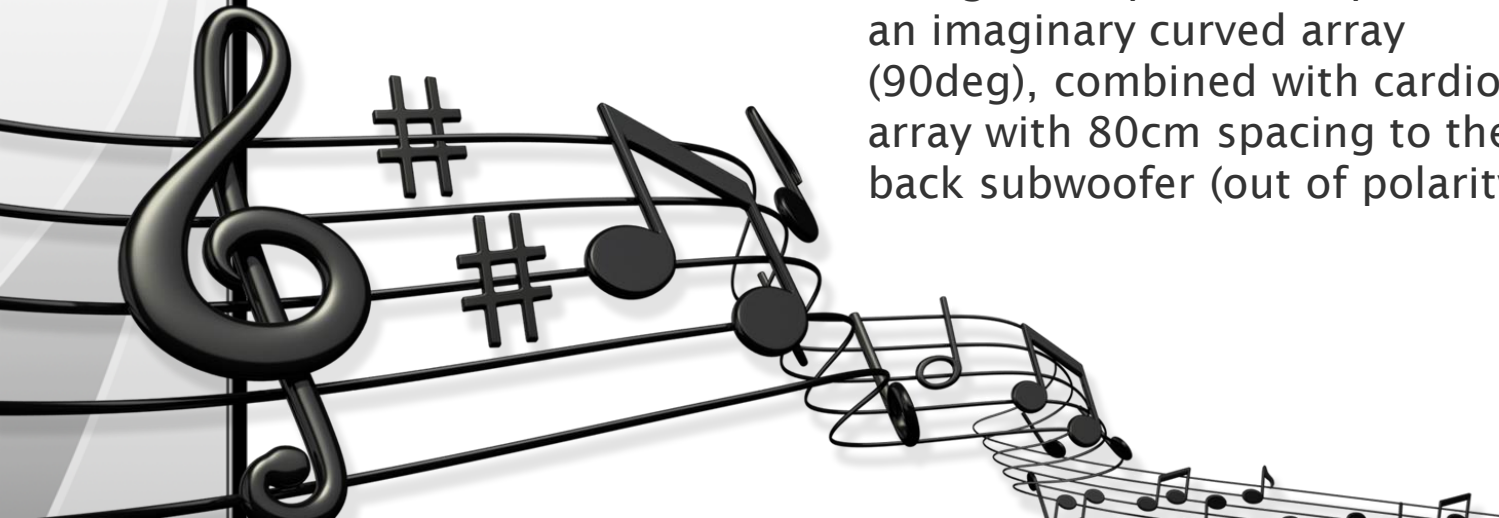# Curved Array and Cardioid Array

Adding subwoofers and extra delay to combine curved array and cardioid array configurations.

Curved Array and Cardioid Array

Straight array with delay to create an imaginary curved array (90deg), combined with cardioid array with 80cm spacing to the back subwoofer (out of polarity).

Sound Bubble Machine