

# LYNGDORF LS-1000

CUSTOM INSTALLATION LINE SOURCE SPEAKERS



# Scaling up the quality

The quality of movies and music productions is constantly improving. The best studios worldwide create ever more fascinating sound effects and soundtracks, using more channels but also providing ultimately better sound quality. The picture quality of projectors, screens and TVs also progresses every year. Consequently, this also calls for higher quality loudspeakers, especially in spacious large-screen home cinemas and home theaters.

Even in surround systems featuring the latest immersive audio, the front speakers still carry most part of the soundtrack. In larger rooms, where the seats are further away or wider apart, or consist of several elevated rows, special loudspeakers are required to achieve the best sound experience on every seat.

## The solution: Line source speakers

A line source speaker consists of multiple identical drivers in a vertical array configuration. Compared to conventional two-way or three-way speakers with a single tweeter and few drive-units, a line source array minimizes the effect of floor and ceiling reflections in the room by restricting the vertical sound dispersion. Listeners will hear more of the speaker and less of the room.

A line source also retains its sound energy across the room much better than a point source speaker. The perceived volume level is very uniform throughout the listening area; the difference in volume level when moving closer to or further away from the speaker is significantly less.

Due to the multiple tweeters and midrange drivers also the seating height does not matter as with point source speakers, which typically require that the ears are aligned with the tweeter. As a result, the "sweet spot" significantly opens-up in all directions. Line source speakers provide several times the optimal listening area compared to conventional home cinema speaker systems.

# LS-1000 for large home cinemas

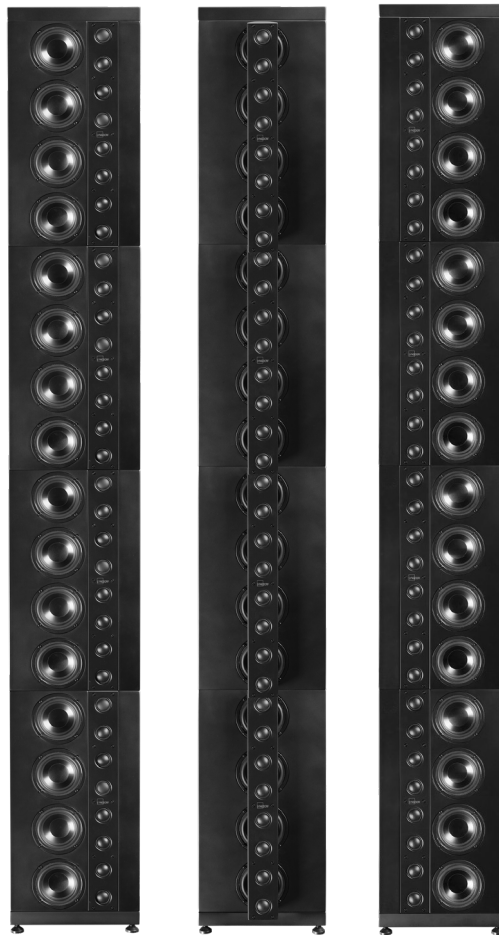
With our experience in creating speakers for Steinway Lyngdorf reference home theaters, especially the outstanding Steinway & Sons LS models, combined with our experience from the Lyngdorf MH and FR speakers, our engineers have developed the LS-1000 for Lyngdorf Audio systems. Four LS-1000 modules combined create a line source speaker, with each module consisting of four 115mm midrange drivers with light aluminum cones, 25mm voice coils and powerful vented magnets, complemented by eight 1" soft dome tweeters. Four LS-1000 modules combined result in a line array with 16 midrange drivers and 32 tweeters. Depending on the room width, seat layout, speaker position and screen size, three different LS-1000 models have been designed for the best sound dispersion into the room:

## Lyngdorf LS-1000 Center

has the tweeters mounted centered, leading to a wider sound dispersion equal to the left and right. This makes it an ideal choice as Center speaker behind an acoustically transparent screen, or even as left and right speakers to achieve the widest possible listening area in a wide room.

## Lyngdorf LS-1000 Left

has a sound dispersion slightly beaming inwards when placed on the left side, away from the sidewall and towards the listening area.



## Lyngdorf LS-1000 Right

has a sound dispersion slightly beaming inwards when placed on the right side, away from the sidewall and towards the listening area.













# Unique features and their functions

## Reduced floor and ceiling reflections and uniform sound energy across the room

The LS-1000 consists of multiple identical drivers in a vertical line source array. Compared to conventional point-source speakers, a line source minimizes the effect of floor and ceiling reflections by restricting the vertical sound dispersion. Listeners will hear more of the speaker and less of the room. The LS-1000 also retains its sound energy across the room, the perceived volume level is very uniform on every seat. The “sweet spot” significantly opens-up in all directions.

## Dedicated LS models for left, right and center placement

Three different LS-1000 models have been designed for the best sound dispersion into the room. The LS-1000 Left beams sound slightly inwards when placed on the left side, away from the sidewall and towards the listening area. The LS-1000 Right beams sound slightly inwards when placed on the right side. The LS-1000 Center has the tweeters mounted centered, leading to a wider sound dispersion equal to the left and right.

## Very rigid and shallow modular construction, easy to install

The LS-1000 is a very rigid modular construction which minimizes mechanical resonance. The overall cabinet design is slim and very shallow, which makes it very easy to install behind acoustically transparent screens. The stacked modules connect through integrated contact pins, so that no external speaker cables are required between the modules.

## Easy to combine with amplifiers

With an IEC power handling of 300 watt, sensitivity of 98 dB 2.83 V/1m, and a combined impedance of 4 ohms when using four modules, the LS-1000 is easy to combine with amplifiers. The high sensitivity combined with a line source's typically uniform sound energy across the room allows the LS-1000 to achieve very high volume levels while sounding very effortless with the given amplifier power. The frequency range of 20,000Hz down to 100Hz allows different woofers or subwoofers to complement the LS-1000 seamlessly, ideally with the Lyngdorf BW-20.

## Specifications

<b>Model:</b>	Lyngdorf LS-1000 Left/Right
<b>Description:</b>	2-way line source, closed
<b>Tweeter:</b>	8 pcs 1" soft dome
<b>Midrange driver:</b>	4 pcs 115 mm, 25mm voice coil, aluminum cone, vented magnet
<b>Enclosure:</b>	MDF
<b>Frequency range:</b>	100 – 20.000 Hz (-3 dB) <i>(for four LS-1000 modules)</i> Frequency extension down to 50 Hz depending on EQ
<b>Nominal Impedance:</b>	4 Ohm <i>(for four LS-1000 modules)</i> (16 Ohm per module)
<b>Sensitivity:</b>	98 dB (2.83 V/1 m) <i>(for four LS-1000 modules)</i>
<b>Power handling:</b>	300 W (IEC) <i>(for four LS-1000 modules)</i>
<b>Maximum SPL:</b>	120 dB <i>(for four LS-1000 modules)</i>
<b>Crossover point:</b>	1,8 kHz
<b>Connections:</b>	Screw terminals
<b>Mounting:</b>	In-wall
<b>Dimensions (W x H x D):</b>	280 x 500 x 85 mm / 11 x 19.7 x 3,35 inches + mounting
<b>Weight:</b>	9,9 kg / 21.8 lb
<b>Finish:</b>	Matte black

<b>Model:</b>	Lyngdorf LS-1000 Center
<b>Description:</b>	2-way line source, closed
<b>Tweeter:</b>	8 pcs 1" soft dome
<b>Midrange driver:</b>	4 pcs 115 mm, 25mm voice coil, aluminum cone, vented magnet
<b>Enclosure:</b>	MDF
<b>Frequency range:</b>	100 – 20.000 Hz (-3 dB) <i>(for four LS-1000 modules)</i> Frequency extension down to 50 Hz depending on EQ
<b>Nominal Impedance:</b>	4 Ohm <i>(for four LS-1000 modules)</i> (16 Ohm per module)
<b>Sensitivity:</b>	98 dB (2.83 V/1 m) <i>(for four LS-1000 modules)</i>
<b>Power handling:</b>	300 W (IEC) <i>(for four LS-1000 modules)</i>
<b>Maximum SPL:</b>	120 dB <i>(for four LS-1000 modules)</i>
<b>Crossover point:</b>	1,8 kHz
<b>Connections:</b>	Screw terminals
<b>Mounting:</b>	In-wall
<b>Dimensions (W x H x D):</b>	280 x 500 x 85 mm / 11 x 19.7 x 3,35 inches + mounting
<b>Weight:</b>	10,4 kg / 22.9 lb
<b>Finish:</b>	Matte black