L-Series

Curved & Straight Cylindric Wave Radiators





Ultra thin, low-profile loudspeakers for sophisticated applications in acoustically problematic rooms like churches, auditoriums and theatres. The horizontal coverage and the coupling of the 3" broadband drivers have been optimised by the use of waveguides. The L-Series comprises a total of six models of varying line length and curving and which can be combined as desired. The system is suitable for tackling a multitude of sound applications.





Speakon connectors are a standard feature.

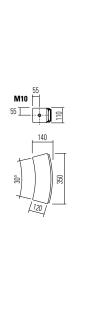


Other colours on request.

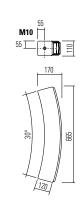


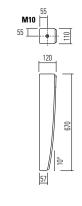
PRODUCT SPECIFICATIONS

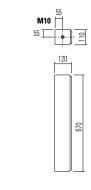
L 4c	L 8c	L 8j	L 8i	L 16j	L 16i
4 x 3" wideband	8 x 3" wideband			16 x 3" wideband	
Curved Cylindric Wave Radiator	Curved	Curved	Straight	Curved	Straight
80 W / 240 W	160 W / 480 W			320 W / 960 W	
8 Ω (32 Ω optional)	16 Ω (4 Ω / 64 Ω optional)			8 Ω (32 Ω / 128 Ω optional)	
92 dB / 112 dB (*)	94 dB / 118 dB (*)			96 dB / 124 dB (*)	
150 Hz - 16 kHz	150 Hz - 16 kHz			150 Hz - 16 kHz	
80° x 37°	80° x 37°	80° x 17°	80° x 7°	80° x 17°	80° x 7°
30°	30°	10°	0°	10°	0°
2 x Neutrik Speakon NL4MP in/out, Coding: 1 +/- HiMid, 2 +/- loop thru, (Phoenix on request)					
3 x M10 / 4 x M6	3 x M10 / 6 x M6			3 x M10 / 6 x M6	
Black Polyurea coating and black textile cover, other colours on request					
3,0 kg	5,0 kg	5,0 kg	5,0 kg	9,0 kg	9,0 kg
35,0 x 11,0 x 12,0 cm	67,0 x 11,0 x 12,0 cm			132,0 x 11,0 x 12,0 cm	
00710	00720	00725	00715	00735	00730
	4 x 3" wideband Curved Cylindric Wave Radiator 80 W / 240 W 8 Ω (32 Ω optional) 92 dB / 112 dB (*) 150 Hz - 16 kHz 80° x 37° 30° 2 x Neutrik Speakon NL4MP in/ou 3 x M10 / 4 x M6 Black Polyurea coating and black to 3,0 kg 35,0 x 11,0 x 12,0 cm	4 x 3" wideband 8 x 3" wideband Curved Cylindric Wave Radiator Curved 80 W / 240 W 160 W / 480 W 8 Ω (32 Ω optional) 16 Ω (4 Ω / 64 Ω 92 dB / 112 dB (*) 94 dB / 118 dB (* 150 Hz - 16 kHz 150 Hz - 16 kHz 80° x 37° 80° x 37° 30° 30° 2 x Neutrik Speakon NL4MP in/out, Coding: 1 +/- HiN 3 x M10 / 4 x M6 Black Polyurea coating and black textile cover, other 3,0 kg 5,0 kg 35,0 x 11,0 x 12,0 cm 67,0 x 11,0 x 12,0	4 x 3" wideband 8 x 3" wideband Curved Cylindric Wave Radiator Curved Curved 80 W / 240 W 160 W / 480 W 8 Ω (32 Ω optional) 16Ω (4 Ω / 64Ω optional) 92 dB / 112 dB (*) 94 dB / 118 dB (*) 150 Hz - 16 kHz $150 \text{ Hz} - 16 \text{ kHz}$ 80° x 37° 80° x 37° 80° x 17° 30° 10° 2 x Neutrik Speakon NL4MP in/out, Coding: $1 + / - \text{HiMid}$, $2 + / - \text{loop throws: } $	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	4 x 3" wideband 8 x 3" wideband 16 x 3" wideband Curved Cylindric Wave Radiator Curved Curved Straight Curved 80 W / 240 W 160 W / 480 W 320 W / 960 W 320 W / 960 W 8 Ω (32 Ω optional) 16 Ω (4 Ω / 64 Ω optional) 8 Ω (32 Ω / 128 M 92 dB / 112 dB (*) 94 dB / 118 dB (*) 96 dB / 124 dB (* 150 Hz - 16 kHz 150 Hz - 16 kHz 150 Hz - 16 kHz 80° x 37° 80° x 17° 80° x 7° 80° x 17° 30° 10° 0° 10° 2 x Neutrik Speakon NL4MP in/out, Coding: 1 +/- HiMid, 2 +/- loop thru, (Phoenix on request) 3 x M10 / 6 x M6 3 x M10 / 4 x M6 3 x M10 / 6 x M6 3 x M10 / 6 x M6 Black Polyurea coating and black textile cover, other colours on request 3,0 kg 5,0 kg 5,0 kg 5,0 kg 9,0 kg 35,0 x 11,0 x 12,0 cm 67,0 x 11,0 x 12,0 cm 132,0 x 11,0 x 12,0 cm

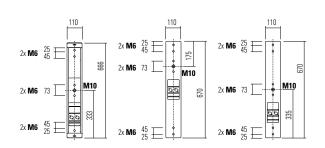


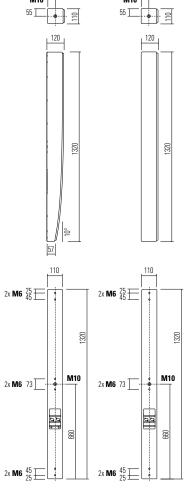
*(Measured in 4,0 m distance, converted to 1,0 m)











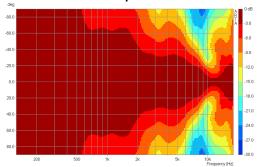


2x **M6** 45 =

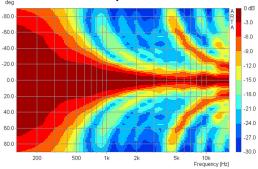
Conventional column speaker

Undefined horizontal dispersion below 2 kHz, narrow beam at higher frequencies (20° at 10 kHz). Vertically: Insufficient coupling above 5 kHz leading to so called "side lobes".

horizontal - 2D Directivity Plot



vertikal - 2D Directivity Plot



The acoustical coupling of the L-Series single sources leads to strong vertical beaming, making for longer throw and a more homogeneous sound dispersion.

The curved design (j- or c- versions) improves the dispersion for the near field. With increasing length of the total column, the ratio of direct sound to reflections will be improved, resulting in more gain before feedback and notably better speech intelligibility.

Controller Setups:

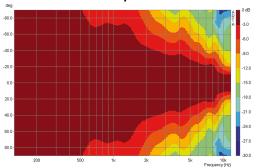
http://www.seeburg.net/en/downloads

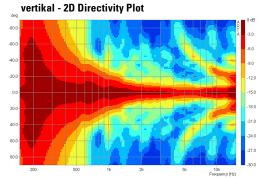
L 8i - Column speaker with waveguide-technology

Enhanced horizontal directivity at the mid frequencies, notable widening at high frequencies.

Vertically: Cylindric wave characteristics up to 9 kHz, strong reduction of the side lobes.

horizontal - 2D Directivity Plot







Optimized waveguides for improved vertical coupling and smooth horizontal dispersion.

Dispersion: L 16i and L 16j

The L 16j system is suited for distances of 2 m to 25 m. Longer throw can be accomplished by adding a L 16i on top.

Perfect sound from the first to the last row of seats.



All six versions of the L-Series speakers can be combined as desired.

Special accessories are available for installation. The free software EASE Focus can be used to simulate the acoustical results. For more complex designs, the data for simulation software like EASE, Ulysses and CATT-acoustic is available.



Connection of two L-Series elements by an M10 thread bolt and washer. The two elements can be faced in different horizontal directions.



Mounting to the wall by a bracket with elongated hole. This also enables a slight inclination of the speaker line.



Connection of two elements by tilt adapter. The main dispersion is preadjusted in two directions. Tilt adapters are available with 5°, 10° and 15° angles.



For wall mounting above the field of vision, plates for depth compensation can be used to incline the system without significantly increasing the distance to the wall.



L 16i / L 16j Classic long throw application.



L 8i / L 8c / L 4c Application for higher mounting



L 16i / L 8j L8j turned inside for better horizontal coverage of the near field.



L 8i / L 8i / L 8j Three L8 mounted to the wall above the field of vision with small distance to the wall. Separately powered, with delays.

Truss Clamp



incl. M10 Adapter, max. load 15 kg Order No. **01221**

Flange



with ball and socket joint, with additional locking screw, M10 x 15, max. load 15 kg

Order No. **08125**

Flange



for flying brackets, $35 \text{ mm } \emptyset \rightarrow M10$,

Order No. 08126

Pole Mount



for L-Series, 35 mm Ø -> M10, adjustable

Order No. 08126/adj

Pole Mount



for L-Series, 2 x fixing holes (d=73 mm), adjustable

Order No. 08126/L-Series

Wall Mount



M10, max. load 15 kg, for permanent installation, incl. tilt angle stop

Order No. **08131/F**Order No. **08131/F/W** (white)

Wall Mount



ball and socket joint flange (08125) + 08125/plate

Order No. 08125/set

Wall Mount



2 x M6 fixing holes (d=73 mm), 1 x M10 fixing hole (center), max. load 25 kg

Order No. 03034

Speaker Pole













ACCESSORIES L-SERIES



Tilt Adapter

for L-Series, 0° - 5° - 10° - 15°

Order No. 08149/tilt/0°

Order No. 08149/tilt/5°

Order No. **08149/tilt/10°** Order No. **08149/tilt/15°**

Angle Bracket



for L-Series

Order No. 08149/angle bracket

Plate for Depth Compensation



Order No. **08149/depth compensation**

Thread Bolt

for L-Series



M10 x 30 mm, incl. rubber washer

Order No. **08149/bolt**



Steel Safety

4 mm x 600 mm, black, max. load 10 kg (BGI 810-3), quick connector undetachably

Order No. 01376/4

Base Plate, Small



for GL 16 / GL Sub / L-Series with M20 flange, 61,5 x 48,0 cm

Order No. 01278/M20

Base Plate, Round



M20, K&M, ø 450 mm, height: 21 mm black zinc die-cast, felt strips on the bottom, weight: 6,7 kg

Order No. 01278/round

Bag



Universal bag for small base plate and accessories with side pocket 62,0 x 23,0 x 51,0 cm

Order No. 01227

Bag



for 2 x L 16 and accessories

Order No. 01231

Tool Set for Powerstick



consisting of: wooden plate with M20 and M10 screws, matching keys, magnetic bits

Order No. 00750/tool

Powerstick



for L-Series and multiple use, 2 x 500 W RMS, DSP, 4 x presets, size (h x w x d): $50.8 \times 8.5 \times 8.2$ cm

Order No. 00750/dp

Monopods for L-Series



Size and design like L 16j, to be fixed with M20 on bottom and M10 on top

Order No. 00750/L16j

Size and design like L 8i, to be fixed with M20 on bottom and M10 on top

Order No. 00750/L8i

