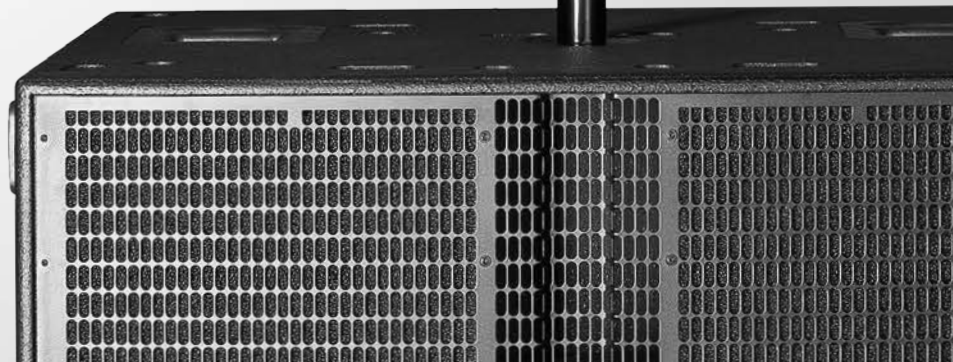
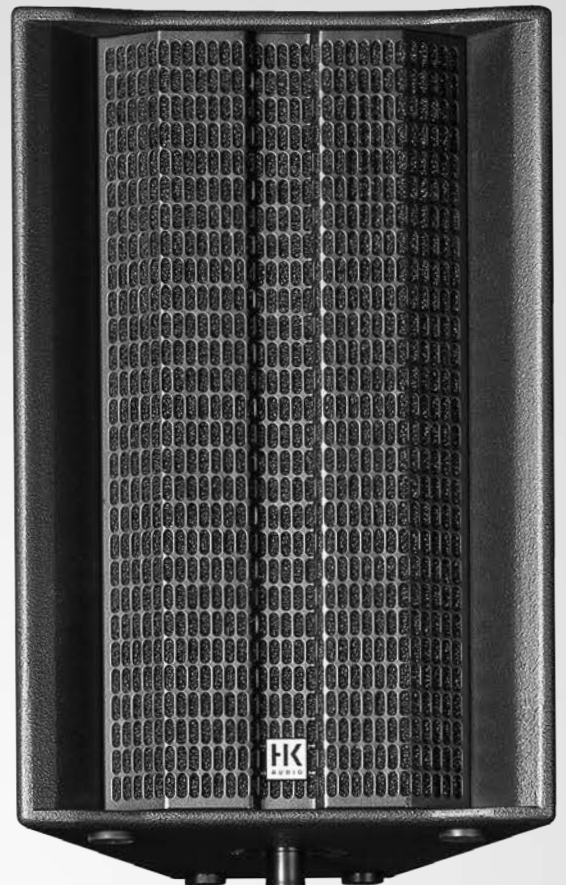




THE SOUNDMAKERS

LINEAR 5 LTS LINEAR SUB 4000

THE NEW PERFORMANCE CLASS >



PASSIVE

LINEAR 5 LTS

**LONG THROW.
ULTRA COMPACT.
ECONOMICAL.**

What does it take to throw the entire frequency spectrum over 30 meters and beyond? Only large line arrays pack a punch powerful enough to deliver that kind of performance. Until now, that is.

The LINEAR 5 LTS passive speaker has arrived, and it's the first speaker to deliver real long throw performance in an ultra-compact format. Now you can hit the road with fewer speaker components in tow, saving valuable space on your truck. What's more, you can set up, stack and fly rigs that much faster and easier.

The new LINEAR 5 LTS passive is not only the easiest way of treating small to midsize Live-, and corporate events as well as installation projects to the best sound; it's also the most economical option out there.

LONG THROW.

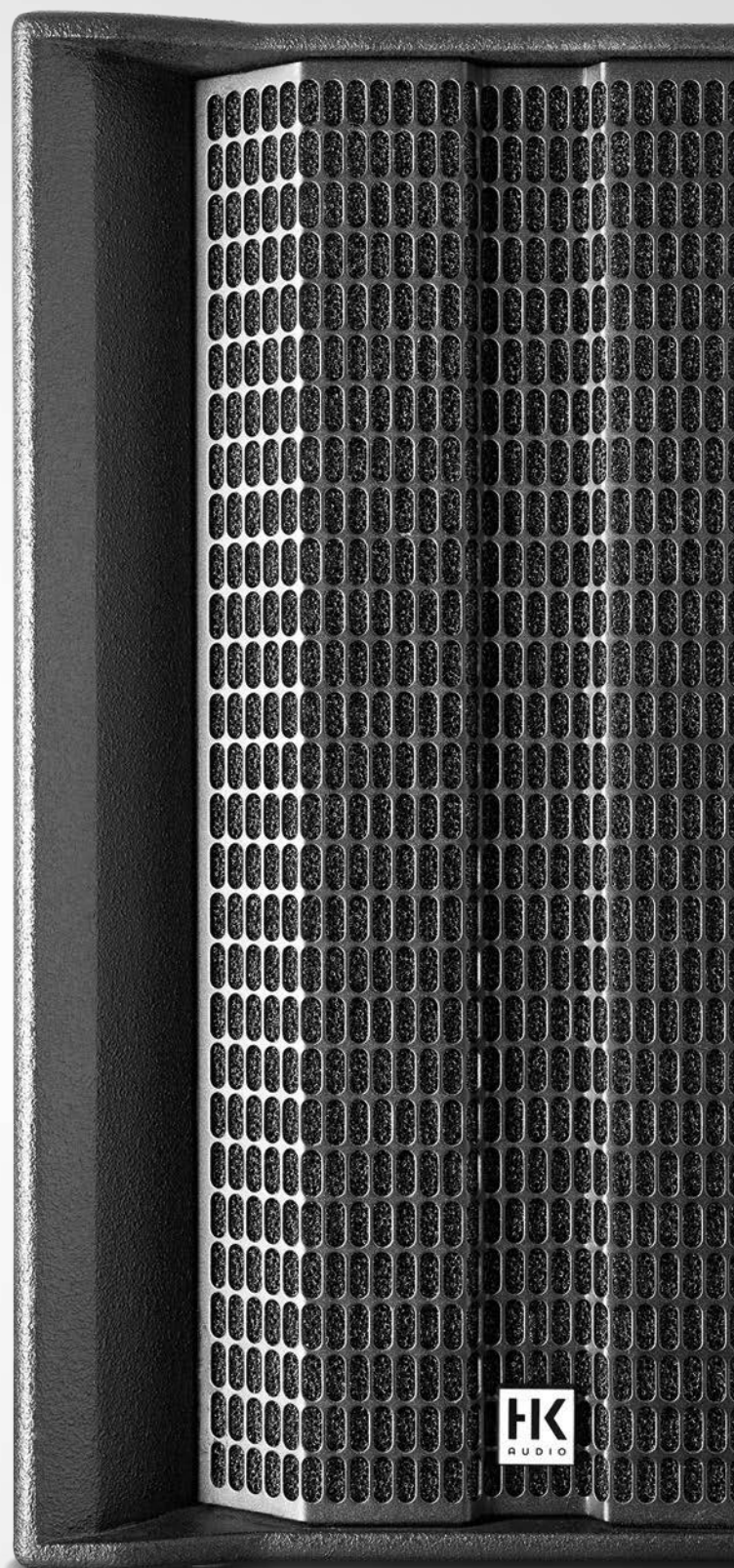
Whether it's 30, 40 or 50 meters – the new LTS mid/high unit throws the sonic image as far as it needs to go, sending even silky top-end frequencies all the way to the back row. This is made possible thanks to HK Audio's ground-breaking Multicell Transformer technology. This ingenious invention drastically reduces high frequency distortion, thereby solving a major problem of legacy horn and waveguide designs: they generate distortion that limits the amount of useful sound pressure. Equipped with this proprietary technology, the LTS is able to deliver 138dB SPL, an exceptionally high maximum by any standard. This awesome power, paired with a curved array created by the multiple cells, extends the range to cover the entire sound field with a crystal-clear audio image.

ULTRA COMPACT.

The pioneering Multicell Transformer makes setting up compact speaker systems an exercise in convenience. The latest generation LINEAR 5 series model is housed in an ultra-compact 68x44x46cm enclosure. Tipping the scales at just 26.4kg, the LTS can easily replace speakers twice its size and weight to save truck space and make installation in a rig so much easier. The LTS's classic streamlined format is certainly a refreshing change. Talk about intuitive handling: finally, here's a straightforward design that can be stacked on the ground or on its head, and clustered with remarkable ease and flexibility. All this contributes to making the LTS easily the most flexible tool in its class.

ECONOMICAL.

Sophisticated features, a remarkably affordable price, a small footprint and fast setup. With the LINEAR 5 LTS, your savings are threefold: peoplepower, truck space and time. This gives you far greater leeway for planning the given production's budget, as well as making the LTS the most economical solution in its application range.



THE INNOVATIVE MULTICELL TRANSFORMER

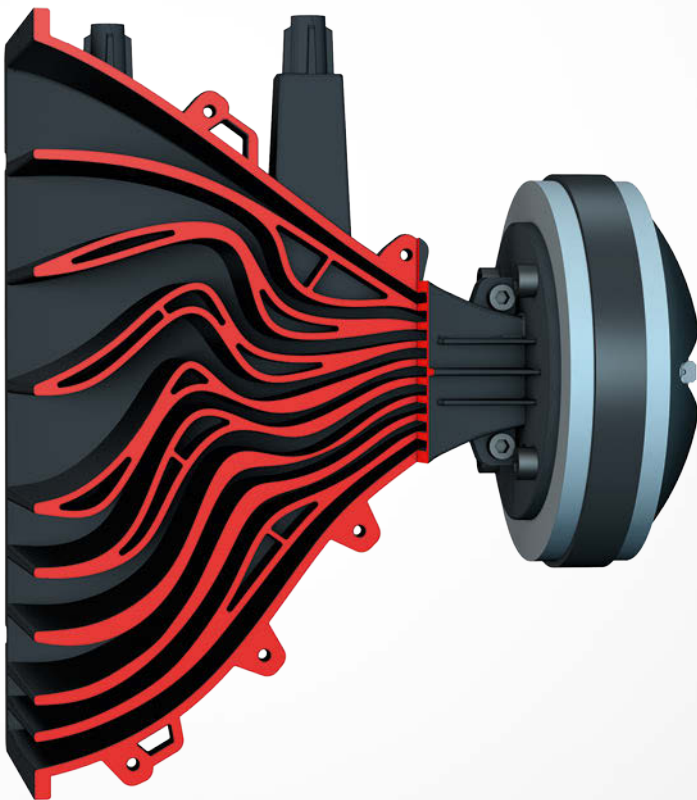
To date, there have been two ways to construct long range speaker systems. The time-tested approach is to use long throw horns. They have to have very large mouths and deep enclosures to accommodate the horn's throat, so the housings are huge. Plus, there's a lot of real estate inside the horn. These surfaces cause resonances and reflections that manifest as distortion, particularly at high frequencies. This distortion puts a very low cap on the maximum achievable sound pressure.

The other option for long throw applications, the line array, has been around for about 20 years. Waveguides shape the wave-front so that the line array is able to render even high frequencies well. The downside is that you have to haul, assemble and align a whole lot of speakers even for small or medium-scale events, which costs you truck space, time and money.



HK Audio engineers took up the challenge of reinventing the long throw speaker and came up with a ground-breaking solution: the Multicell Transformer (MCT). This ingenious invention makes the most of horns' and waveguides' physical advantages, with none of the drawbacks. The mouths of the nine horn channels form a line array, with sound traveling down channels of different lengths to achieve different delay times. This yields a perfect vertical curve and a very precise $+5^{\circ}/-25^{\circ}$ pattern of throw.

With these unique properties, the MCT achieves the performance of comparable horns and waveguides at a fraction of their size. This revolutionary advance in technology is the key to building sensationally small and streamlined speakers.

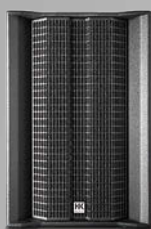


Here's a simplified run-down of how it works: the MCT splits the wave-front into nine small wave-fronts. Each of these partial waves is directed through the flaring duct of a horn of different length and mouth size. These horns don't have acres of real estate that can cause interference, so the only distortion they generate is beyond the range of human hearing. This increases useful sound pressure by up to 10dB.



Thanks to the MCT horn's asymmetrical directivity, two LINEAR 5 LTS units can be set up together in an "acoustically correct" head stack.

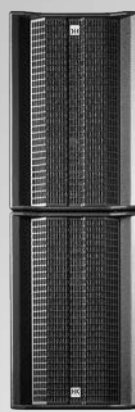
SETUPS



Solo



Horizontal Cluster



Head Stacking



Head Stacking Cluster

VIEWS



Rear view



Top view



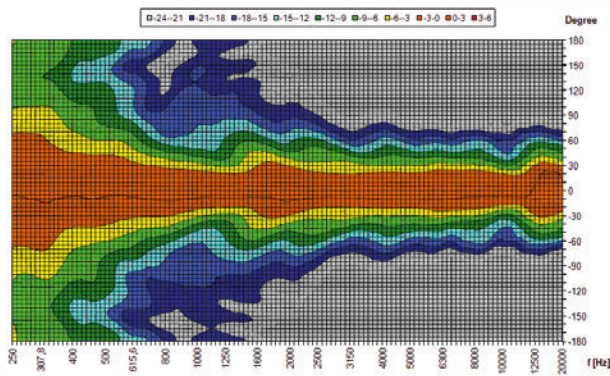
Side view



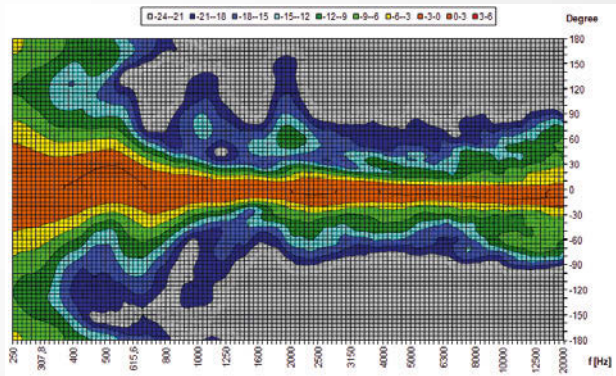
Bottom view

TECHNICAL DATA

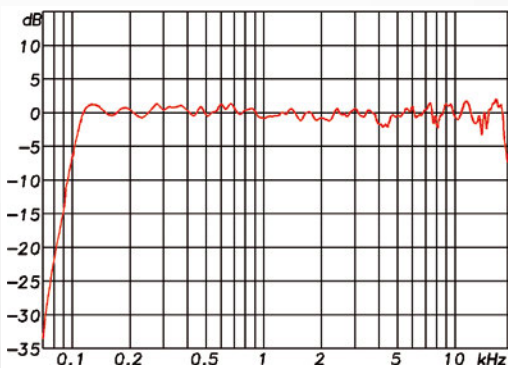
Frequency Response +/- 3 dB	108Hz – 14kHz
Frequency Response -10 dB	100Hz – 20kHz
Sensitivity HF, 1W/1m	116dB half space
Sensitivity LF, 1W/1m	110dB half space
Max. SPL @ 10% THD	133dB half space
Max. SPL Peak @ 10% THD	138dB half space
Max. SPL Calc.	141dB half space
Power-handling Nominal (RMS)	600W
Power-handling Programm	1200W
Power-handling Peak	2400W
Nominal Impedance	8ohms
Connections	2 x Speakon NL4, Pin assignment switchable between 1+/1- and 2+/2-
Low Mid Speaker	3 x 8" (32 Ohm) Neodymium
HF Driver	1 x 1" (16 Ohm) Neodymium
Horn Characteristics	60° x +5°/-25° MCT Horn
X-over Frequency	1.7kHz; 12 dB/Okt. passiv
Pole Mount	Mono Tilt 0°
Rigging Points	7 x M8
Handles	2, integrated
Optional Accessories	Protective Transport Covers, Tilt Bracket, Tilt Bracket Head Stack Extension Set, Pick Point / Cluster Plate, AP-8 Rigging Point
Housing	Birch Multiplex 15mm
Grille	2mm Metal Grille with Acoustic Foam
Finish	Acrylic Enamel, Black
Dimensions (WxHxD)	44 x 68 x 46.1cm
Weight	26.4kg / 58.2lbs



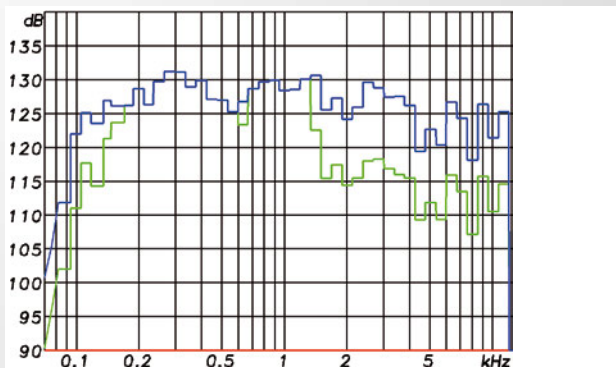
LTS horizontal - 2D directivity



LTS vertical - 2D directivity



LTS - frequency response included flat filter



LTS - max SPL 3% & 10% THD full space

LINEAR SUB 4000

Powerful and Versatile

L SUB 4000 is the flexible new 18" passive subwoofer from HK Audio. Compatible with all LINEAR 5 fullrange speakers and mid/high units, its powerful low end – ranging from 30 to 100 Hertz – is totally and powerfully impressive.

L SUB 4000 can also serve as a sub-low add-on to LINEAR SUB 2000 to beef up the bottom end in the range of 30 to 80 Hertz.

Innovative and Combinable

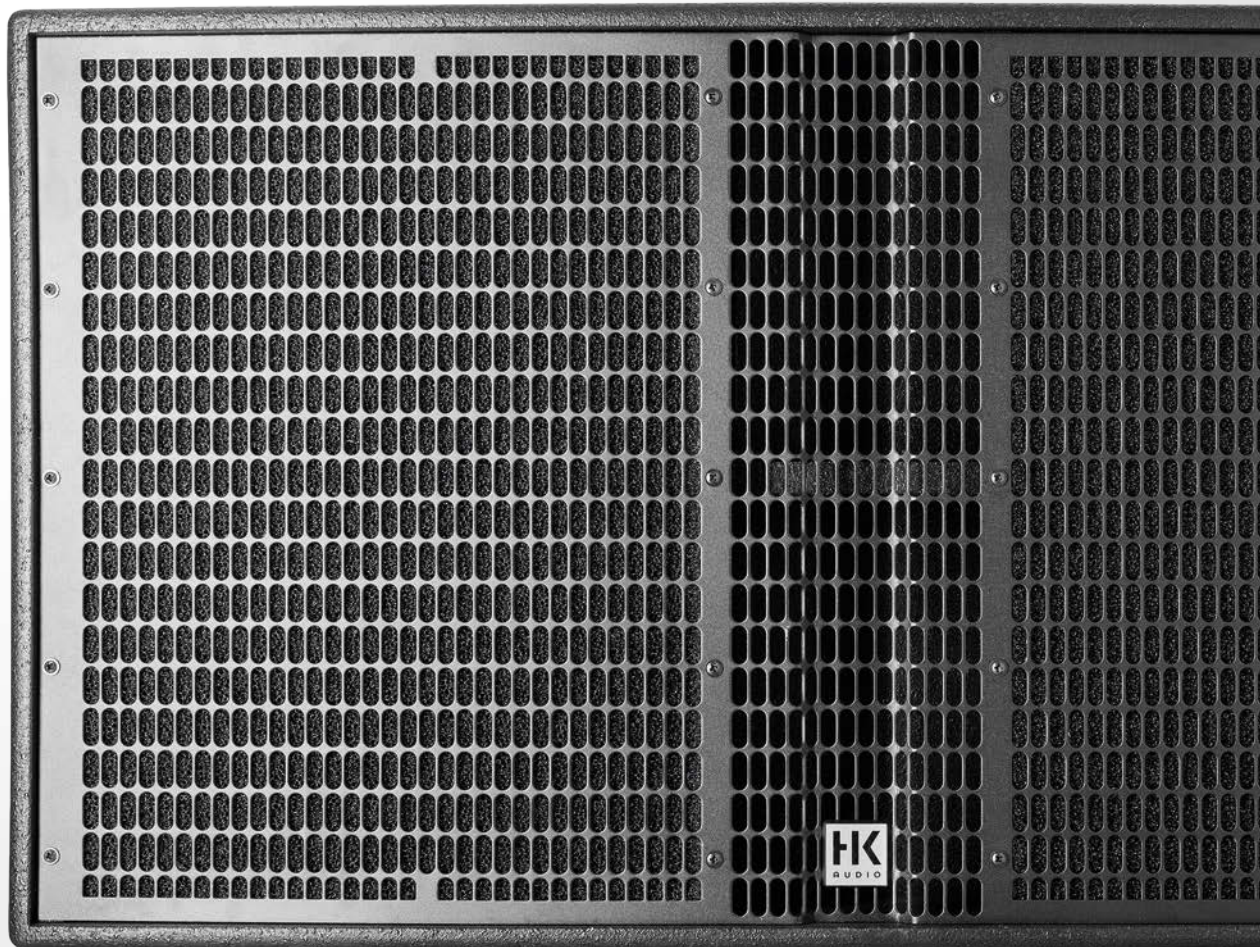
The chambers of this double-ventilated band-pass enclosure were tuned differently, and optimized for ultra-low signals and kick drums. L SUB 4000 can be deployed flexibly as the sole subwoofer for a PA or as a sub-low extension unit.

HK Audio engineers tuned the L SUB 4000's band-pass enclosure and the filter presets to deliver phase-corrected response when paired with the L SUB 2000. This means the L SUB 4000 can be added to a legacy system without requiring additional outboard controllers. To this end, the freely assignable terminals, which are switchable between the first and second pair of NL4 connectors, give you even more cabling options.

Dynamic and Faithful Response

Rugged high-tech courtesy of German engineering: HK Audio has decades of experience developing advanced sound reinforcement solutions, and the L SUB 4000 has also benefitted from our engineers' unique skillset. This subwoofer delivers high maximum SPL paired with dynamic, deep-ranging response, and renders signal peaks with remarkable fidelity even when pushed very hard. Its robust wood housing is built to withstand the wear and tear of daily use.

L SUB 4000 is perfectly suited for professional gigs and installation in clubs. Presets that include the correct limiter thresholds for the system controllers / amplifiers protect electronic components from overloads to ensure this unit will keep delivering reliable performance for many, many tomorrows to come.



VIEWS



Rear view



Top view

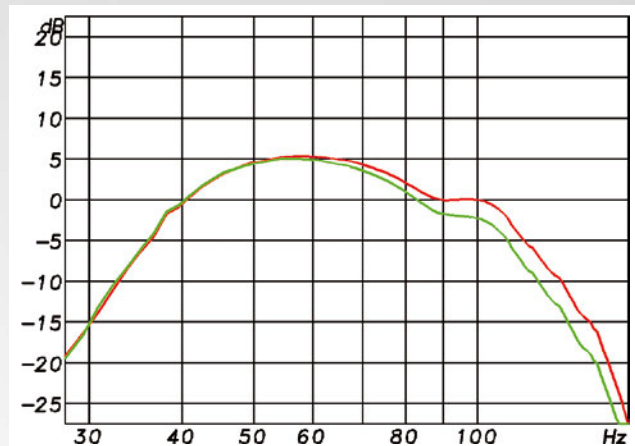


Side view

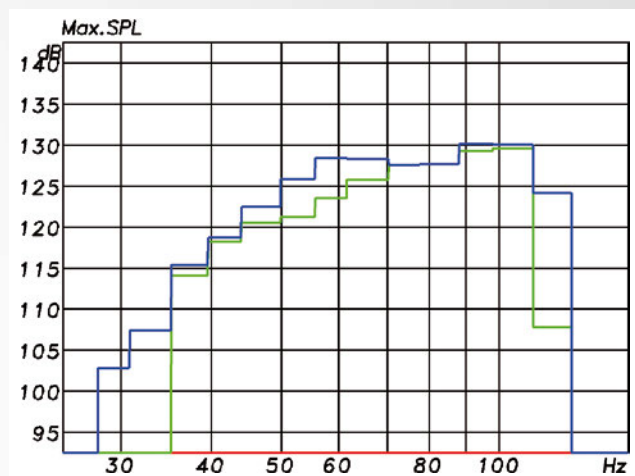


TECHNICAL DATA

Frequency Response +/- 3 dB	39Hz - X-over
Frequency Response -10 dB	31Hz - X-over
Sensitivity 1W/1m	106dB half space
Max. SPL @ 10% THD	135dB half space
Max. SPL Peak @ 10% THD	137dB half space
Max. SPL Calc.	141dB half space
Power-handling nominal (RMS)	1200W
Power-handling Programm	2400W
Power-handling Peak	4800W
Nominal Impedance	4ohms
Connections	2 x Speakon NL4, Pin assignment switchable between 1+/1- and 2+/2-
Low Frequency Speaker	1 x 18" (4 Ohms) with 2.5" voice coil featuring Advanced-Ventilated voice coil gap (Neodymium)
X-over Frequency	100 Hz, active X-over with controller amp (can be set lower when used as a sub-low)
Pole Mounts	2 x M20
Handles	8, integrated
Optional Accessories	Protective Transport Covers, Mounting Hardware for Casters, Tilt Unit
Housing	Birch Multiplex 15/18mm, 9/13ply
Grille	2mm Metal Grille with Acoustic Foam
Finish	Acrylic Enamel, Black
Dimensions (WxHxD)	90.8 x 50.8 x 80.7cm
Weight	59kg / 130,1lbs



L SUB 4000 - frequency response sub/sub-low



L SUB 4000 - max SPL 3% & 10% THD full space



Key Rack 2.24

Key Rack 2.24 is a light, compact rack that is three rack units in height. It is equipped with the new, groundbreaking IPD 2400 controller amps (2 x 1200W @ 4 Ω) made by the Swedish specialist Lab.gruppen. With the two IPD 2400s, integrated power distribution, and the LoadLibrary, you get an astonishingly efficient, turnkey power-pack to drive the HK Audio series Linear 5, ConTour and ConTour Array.

A complete library of filter sets is already archived in the power amps' memories. A unified amp rack for professionals, versatile enough for use with smaller and larger systems, is the key to making configuration, setup and service easier, as well as maximizing the operational lifespan of your gear.



Easy to handle, ultra efficient and remarkably affordable, with elegant remote control via PC or iPad to boot.

TB-N

Tilt bracket for loudspeakers in the LINEAR 5 (L5 112 F/FA, L5 115 F/FA, L5 LTS/LTS A) and HK Audio PULSAR (PL 112 FA, PL 115 FA) series. For attaching to trusses using appropriate half-couplers or trigger clamps (M12). Mounts to the speaker via clamping levers (M10). Also suitable for installation on ceilings, wall brackets or tripods. Flexible vertical and horizontal alignment.



TB-NQ (QRP)

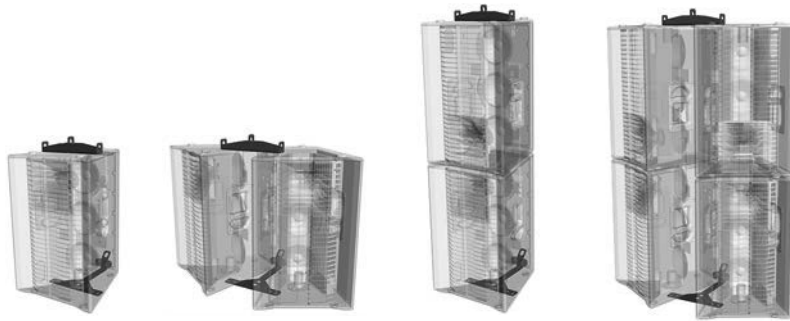
Tilt bracket with quick release pins for loudspeakers in the LINEAR 5 (L5 112 F/FA, L5 115 F/FA, L5 LTS/LTS A) and HK Audio PULSAR (PL 112 FA, PL 115 FA) series. For attaching to trusses using appropriate half-couplers or trigger clamps (M12). Quick installation through ball lock pins. Also suitable for installation on ceilings, wall brackets or tripods. Flexible vertical and horizontal alignment.



TB-HES

Tilt bracket extension (compatible with TB-N/TB-NQ) for L5 LTS head stacking applications.





PP-2/CP

This set, composed of one pick point and one clustering plate, offers either two or three attachment points for flying and angling L5 LTS units. Suitable for use in single, head stack, cluster, and head stack cluster operating modes.



TC LTS

Perfect-fitting padded protective transport covers are available for all LINEAR 5 series models as an optional accessory. Openings afford access to the enclosures' carrying handles.



AP-8

This attachment point has a workload limit (WLL) of 360kg/794lbs. It safely attaches enclosures with M8 rigging points to steel cables or chains.



SUGGESTED SYSTEM SETUPS



LTS Half Stack - Efficient Long Throw Setup

- 2 x L5 LTS
- 2 x Distance pole with hand crank
- 2 x L SUB 4000
- 1 x Key Rack 2.24

SUGGESTED SYSTEM SETUPS



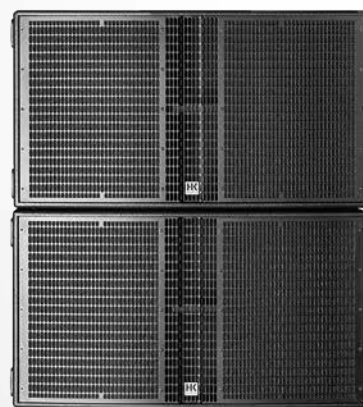
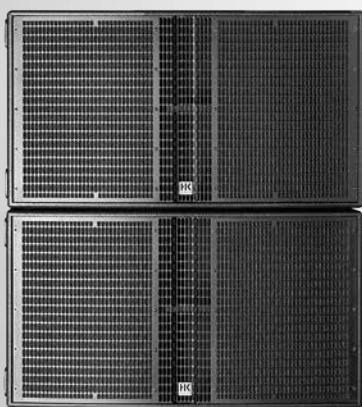
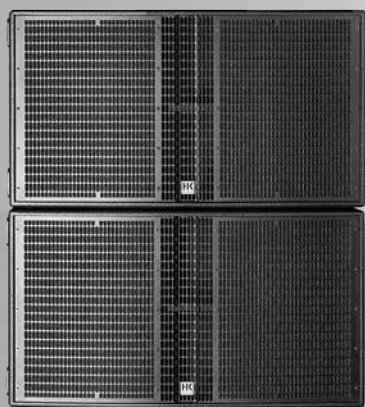
LTS Front PA - Long Throw Sound Reinforcement

- 2 x L5 LTS
- 2 x Distance pole with hand crank
- 4 x L SUB 4000
- 2 x L5 112 X for Near Fill application
- 2 x Speaker Stands
- 2 x Key Rack 2.24



L SUB 4000 A Sub Low Extension for additional Low End

2 x L5 LTS
4 x L SUB 2000
2 x L SUB 4000
2 x Key Rack 2.24



LTS Clustering for broader horizontal dispersion

- 4 x L5 LTS
- 6 x L SUB 4000
- 2 x Key Rack 2.24





LTS Head Stacking for further Long Throw capability

4 x L5 LTS
6 x L SUB 4000
2 x Key Rack 2.24



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