



THE SOUNDMAKERS

LINEAR 3

TOP PERFORMANCE TO TRUST >



TOP PERFORMANCE TO TRUST >

LINEAR 3 is the easiest way to impress your audience.
Strong and confident design. Powerful and well-balanced sound.
Advanced DSP technology. Impressive low-end.
Clear speech reproduction. Crafted in Germany.
Designed to give musicians and DJs a top sound performance to trust.
Every single time.

- **Packs the muscular bi-amped punch of a 1,200 W class D power amp**
- **Beautifully balanced, high-definition audio**
- **135 dB SPL—that's plenty of sound pressure for audiences of up to 500 (with the suitable L SUB 1500 A or L SUB 1800 A subwoofers)**
- **No need for sophisticated audio skills: advanced DSP technology serves up top-notch sound every time**
- **Intelligent Multiband Limiter ensures tonal integrity at every volume level**
- **FIR crossover filtering for transparent midrange**
- **Plenty of sound-shaping options with four EQ presets—Bass Boost, Flat (LF), Flat (MHF) and Contour**
- **Very low total harmonic distortion, so no listening fatigue**
- **System's sound is easy to control and shape, even from the stage**
- **On-target, directional PA aiming to reduce reflections off walls and ceilings**





TOPS - LINEAR 3



L3 112 FA

This active 12"/1" fullrange mid/high unit delivers 1,200 watts of class D power, and offers outstanding performance either as a standalone speaker or in combination with subwoofers from the LINEAR SUB series. Four different EQ presets - Bass Boost, Flat (LF), Flat (HMF) and Contour - allow the LINEAR 3 112 FA to deliver outstanding performance and easy handling in any situation.



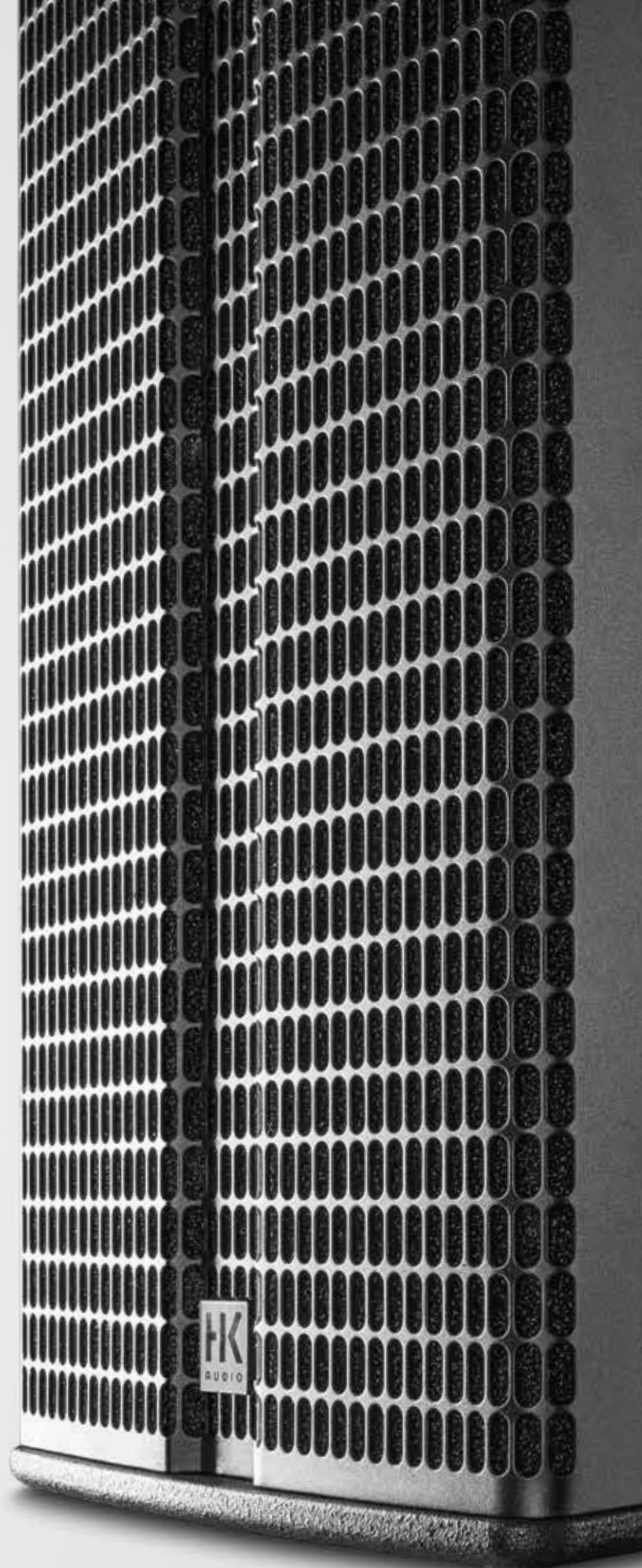
L3 115 FA

The active 15"/1" fullrange mid/high unit delivers 1,200 watts of class D power, and functions either as a standalone speaker or in combination with subwoofers from the LINEAR SUB series. Thanks to its size, the L3 115 FA offers more low-end than the smaller L3 112 FA. Four different EQ presets - Bass Boost, Flat (LF), Flat (HMF) and Contour - allow the LINEAR 3 115 FA to deliver outstanding performance and easy handling in any situation.



L3 112 XA

The clever design and multipurpose enclosure of the active 12"/1" LINEAR 3 112 XA allow it to excel as a front PA with plenty of punch, or as an assertive stage monitor.

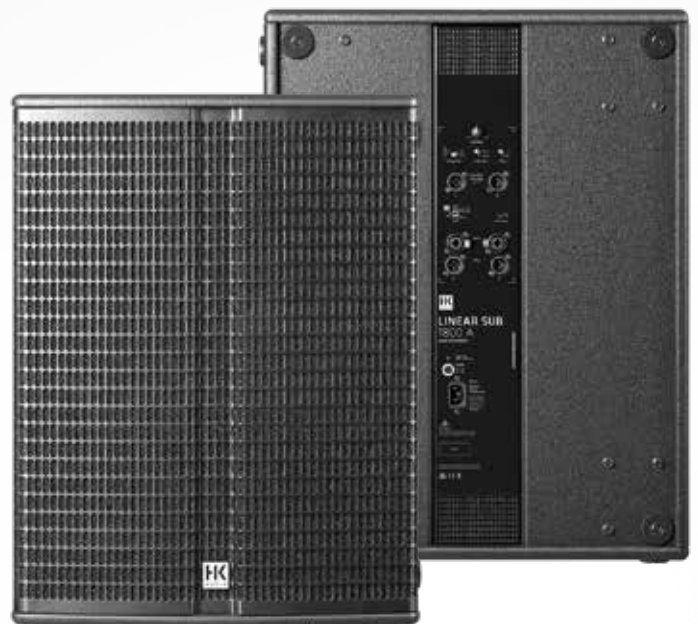


SUBWOOFERS – LINEAR SUB FAMILY



L SUB 1500 A

LINEAR SUB 1500 A is a powerful 15" bass reflex subwoofer – optimized for the LINEAR 3 tops. What's more, LINEAR SUB 1500 A can also be used in combination with mid/high units from the LINEAR 5 family, or as a bass extension to the ELEMENTS EASY BASE, SMART BASE and LINE BASE systems. The L SUB 1500 A is so lightweight and easy to handle that it can easily be transported by just one person.



L SUB 1800 A

LINEAR SUB 1800 A – an 18" bass reflex subwoofer – is packed full of even more low end than its 15" brother. Unrivaled power, SPL of up to 132 dB and thumping bass (all the way to 38 Hz) make this powered sub the ideal add-on to mid/high units from the LINEAR 3 family when you need just a little more loudness and low end. LINEAR SUB 1800 A can also be used in combination with mid/high units from the LINEAR 5 family, or as a bass extension to the ELEMENTS BIG BASE system..



The three following active LINEAR SUB subs can also be combined with mid/high units from the LINEAR 3 lineup.



L SUB 1200 A



L SUB 2000 A



L SUB 4000 A





LINEAR 3 – SYSTEM SUGGESTIONS



L3 2.1 System 12/18

2 x L3 112 FA
1 x L SUB 1800 A



L3 Half Stack 12/15

2 x L3 112 FA
2 x L SUB 1500 A

LINEAR 3 mid/high units and LINEAR SUB basses are highly compatible with one another. Here are four practical system suggestions using models from across the two series.



L3 Full Stack 12/15

2 x L3 112 FA
4 x L SUB 1500 A



L3 Full Stack 15/18

2 x L3 115 FA
4 x L SUB 1800 A

ADVANCED DSP TECHNOLOGY

The advanced DSP technology behind LINEAR 3 is essentially there for one reason only: to make the job easier for musicians and DJs. With LINEAR 3, you achieve a top sound performance in every situation, and with simple handling too.

Intelligent multiband limiting and frequency response filtering on the Contour EQ preset setting deliver a sweet yet assertive sound, always and at every volume level, from whisper soft to super loud.

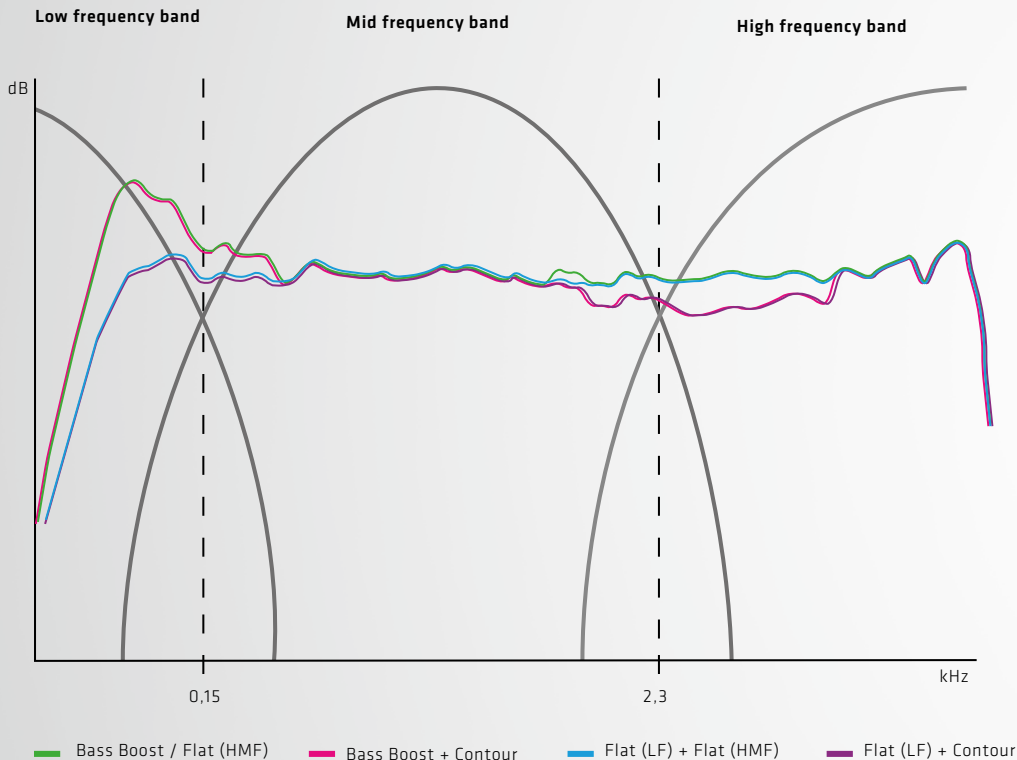
The multiband limiter monitors and controls the target frequency bands separately, intervening only when and where it serves the purpose of achieving great sound.

Our engineers teamed up with musicians to develop, test, tune and optimize all LINEAR 3 components for every target application, and maximize their practical benefits in each.

This is why LINEAR 3 guarantees top notch sound performance, even for semi-professional musicians and DJs who are not fully-fledged PA specialists.

LINEAR 3 liberates performers, making their lives easier on stage and leaving more room for their creativity and music to flourish.

Multiband limiter with filter presets



LINEAR 3 can be perfectly set up for many different live applications in seconds using the two EQ preset switches found on each mid/high unit:

Bass Boost/Flat (LF) switch:



Bass Boost EQ preset:

For standalone operation; provides a broadband boost to beef up the low end at 70 to 80 Hz.

Flat (LF) EQ preset:

For use with subwoofer(s) or as a stage monitor (when using the multipurpose L3 112 XA).

Flat/Contour switch:



Flat (HMF) EQ preset:

Provides linear filtering, particularly in the high midrange.

Contour EQ preset:

Dampens a broad band of midrange frequencies centered at 3.5 kHz. Filters out unwanted frequencies to deliver a softer, smoother sound without having to fuss with the Master EQ.

The four following EQ preset combinations are possible:

Bass Boost + Contour



For standalone use at gigs with up to 100 people.

Ideal for:
Keyboard entertainers, background music and even for dance music.

Bass Boost + Flat (HMF)



For standalone use at gigs with up to 100 people.

Ideal for:
An acoustic band with guitars, cajón and vocals.

Flat (LF) + Contour



For use with LINEAR SUB subwoofers at gigs with up to 500 people (in a full stack).

Ideal for:
Club DJs (especially for MP3s) or rock/pop bands without a sound tech.

Flat (LF) + Flat (HMF)



For use with LINEAR SUB subwoofers for up to 500 people (in a full stack).

Ideal for:
Rock/pop bands with a sound tech or as a stage monitor for soloists and singers.



Also for standalone public address use.

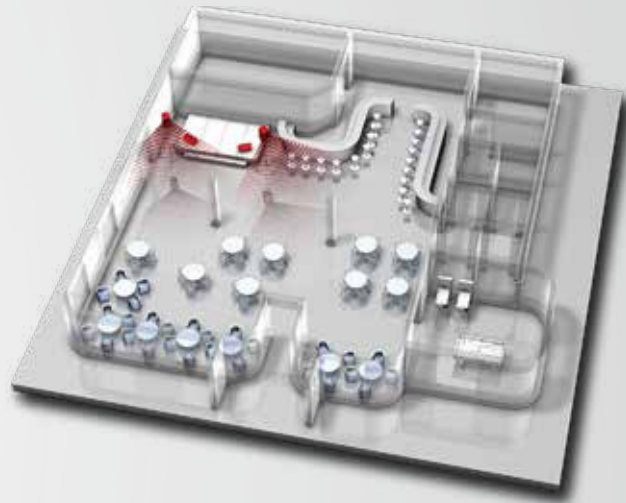


USAGE SCENARIOS

Bar



- For acoustic performances in smaller, narrow bars and pubs with crowds of between 50 and 100 people*, a balanced fullrange sound is required even without a subwoofer.
- For this example, an acoustic duo consisting of two singers and one acoustic guitar or keyboard performs on a 3.5 x 1.5 m stage platform.
- In small rooms, the duo can be sure that they will not invoke unwanted frequencies, even if they are not using equalizers.

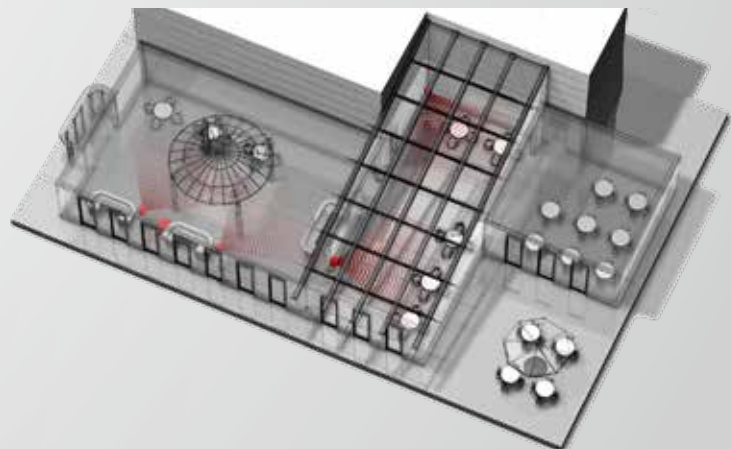
Function	Speakers	Setup	Setup Details
Front PA	2 x L3 115 FA		• Tops on tripods inclined at 3°
Monitoring	2 x L3 112 XA		• Setup angle 33°



Lobby

- For events like receptions or the openings of new hotels, the mobile DJ often needs to cover a series of rooms (rather than just one), to crowds of between 100 and 150* people.
- The DJ controls the PA in the 15 x 10 m lobby and the neighboring 7 x 16 m lounge area directly from their decks.
- Both areas are supplied with an even fullrange sound at any volume level.




Function	Speakers	Setup	Setup Details
Front PA	1 x L SUB 1800 A 2 x L3 112 FA		• 2.1 System • 2 x Tops on tripod inclined at 3°
Adjoining Room	2 x L3 112 FA		• Signal over Thru Sub Out (Mix A+B+C) • 2 x Tops on tripods inclined at 3°

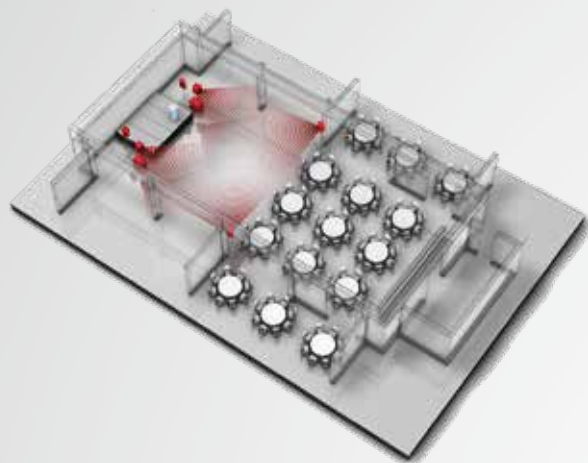


*A note on audience size: these are suggestions, rather than recommendations, meaning these numbers are more for your general orientation. The actual coverage will depend on the room's size, layout, appointments and furnishings, as well as the area you want to cover and the sound pressure levels you wish to achieve.

Gala Events


- Weddings or gala events for between 150 and 350 guests* require the PA to be split into two distinct sections: the dance floor and the dining area.
- In this example, a covers band (featuring drums, electric guitars and bass, vocals and a DJ) focuses its sound mainly on the dance floor from a 3 x 4 m stage area.
- The PA zones are divided into the following areas:
 - The dance floor is comprehensively and optimally covered with deeper frequencies and, thanks to the additional 4-point sound system, has a disco-like feel.
 - The dining area (organized in table groups) starts 7 m away from the Front PA and the background music level can be well regulated.
 - The bar area offers ample opportunity for discussion.

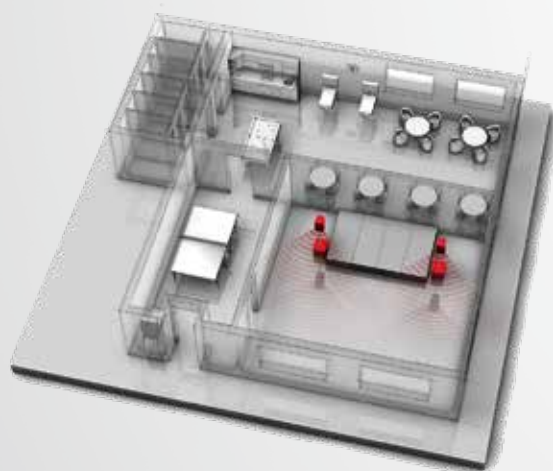
Function	Speakers	Setup	Setup Details
Front PA	2 x L SUB 1800 A 2 x L3 115 FA		<ul style="list-style-type: none"> • Half stack • Tops on poles inclined at 7°
Extension to 4-point sound system	2 x L3 112 FA		<ul style="list-style-type: none"> • On tripod inclined at 7°
Monitoring	2 x L3 112 XA		<ul style="list-style-type: none"> • On tripod inclined at 7°



Youth center

- For youth center events, the PA system must be flexible enough to adapt to a wide variety of venue sizes and conditions, and crowd sizes of 150 to 300 listeners*.
- The amateur rock band featured in this example is made up of two guitars, one bass, one drummer and one vocalist – they expect their PA to deliver a strong, assertive reproduction of their vocals and distorted guitar sounds.
- The PA, positioned at the side of the 2.5 x 4 m stage, delivers consistent sound dispersion across the entire 8 x 8 m room.

Function	Speakers	Setup	Setup Details
Front PA	2 x L SUB 1500 A 2 x L3 112 FA		<ul style="list-style-type: none"> • Half Stack • Tops on poles inclined at 3°



*A note on audience size: these are suggestions, rather than recommendations, meaning these numbers are more for your general orientation. The actual coverage will depend on the room's size, layout, appointments and furnishings, as well as the area you want to cover and the sound pressure levels you wish to achieve.



HK

Marquees

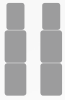

- Events in smaller marquees often offer no suspension points to optimize the sound distribution over the area that needs to be covered. In this situation, the only reasonable acoustic solution is a professionally stacked PA, as such tents typically require different volume levels in different areas for between 250 and 400 attendees*.

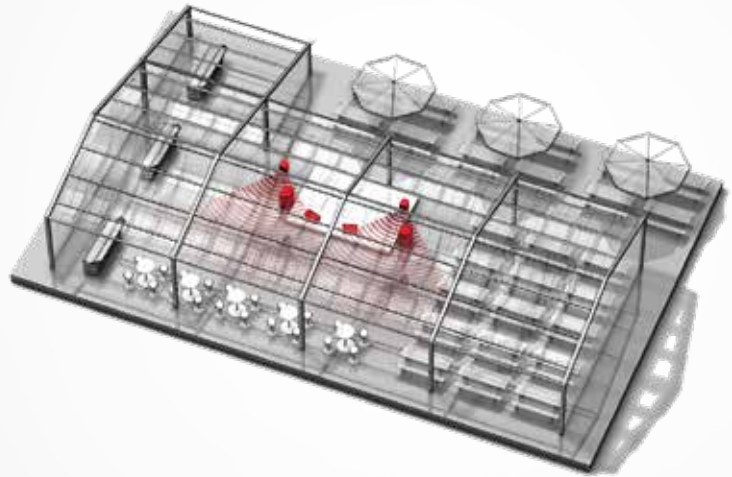
- For this example, the stage area is at ground level, 3 x 4 m in size and set up for a trio consisting of a vocalist, keyboard player and guitarist.

- The PA zones are divided into the following areas:

- The 6 x 10 m dance floor is wider than it is long, and the sound distribution covers the whole area extremely well, right up to the edge of the stage itself.

- The seating and bar areas are largely outside of the horizontal sound transmission angle, giving attendees the chance to hear the music and their own conversations without issue.

Function	Speakers	Setup	Setup Details
Front PA	4 x L SUB 1500 A 2 x L3 112 FA		<ul style="list-style-type: none"> • Full stack (or half stack with subwoofer add-on) • Tops on poles inclined at 3°
Monitoring	2 x L3 112 XA		<ul style="list-style-type: none"> • Setup angle 33°



*A note on audience size: these are suggestions, rather than recommendations, meaning these numbers are more for your general orientation. The actual coverage will depend on the room's size, layout, appointments and furnishings, as well as the area you want to cover and the sound pressure levels you wish to achieve.



Town Party

- Town parties often have crowds of around 400-500 people, and they usually take place in an open air setting. Typically, sound engineers are employed for such events, but it also regularly occurs that bands are left to fend for themselves and mix their own sound directly from the stage.





- For this example, a covers band made up of one keyboard player, one electric guitarist, one electric bassist, and one drummer – with three band members performing vocals – might find themselves playing on a 6 x 8 m round arched stage 80 cm off the ground.

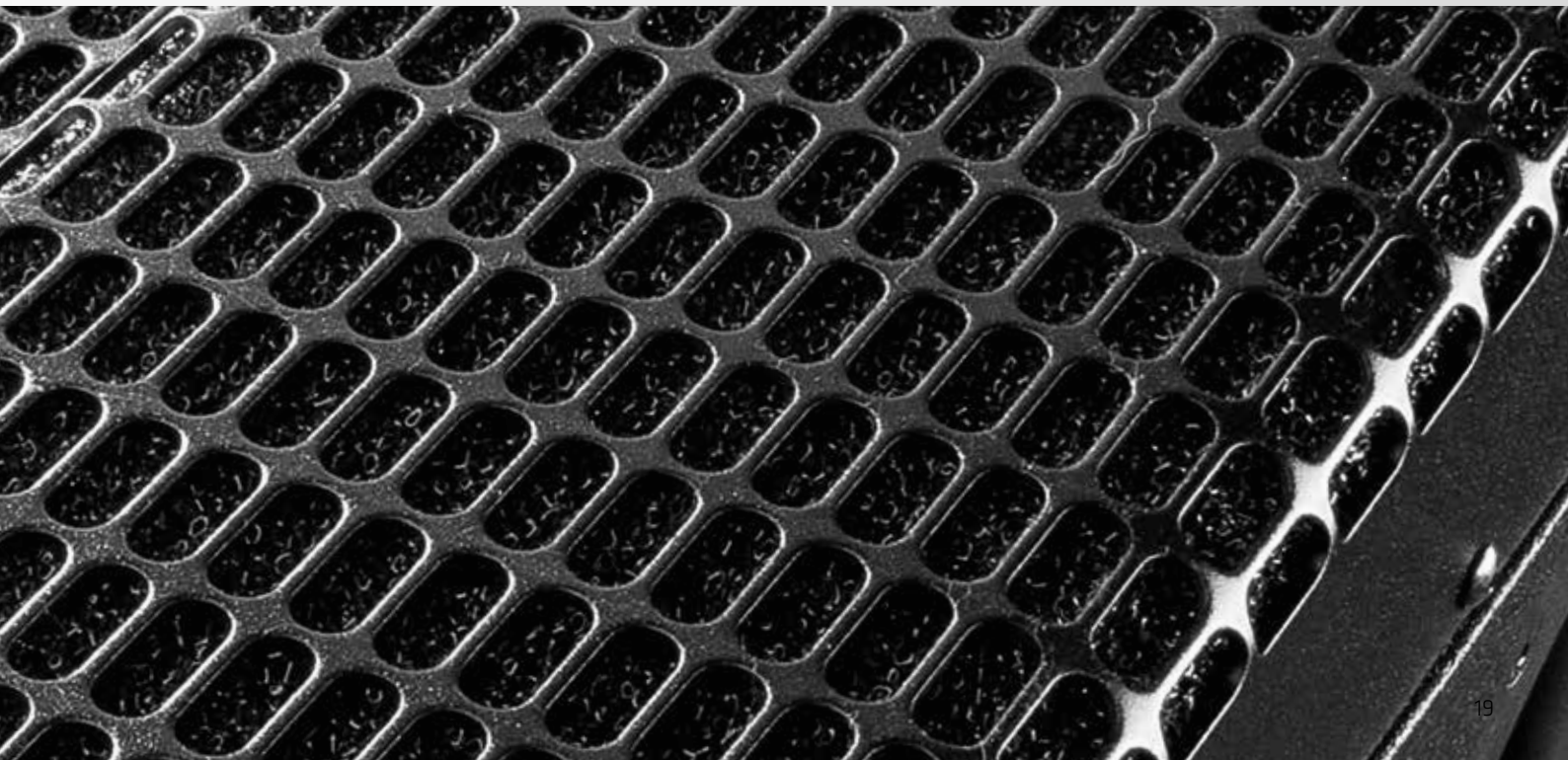
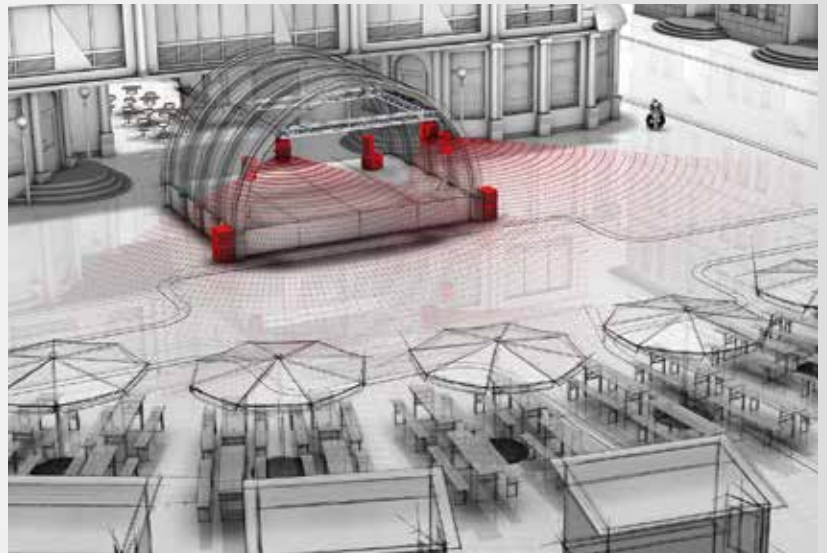
- The PA zones are divided into the following areas:

- The dance floor requires a sound pressure throw distance of 10 m and a wide horizontal dispersion of 14 m. This permits a strong bass foundation with stable mids.

- In the seating areas, the volume level is always significant, but moderate enough to allow conversations to remain understandable.

- In the standing and bar area, the sound pressure is at a comfortable level, which makes placing orders easy for everyone.

Function	Speakers	Setup	Setup Details
Front PA	4 x L SUB 1800 A 2 x L3 115 FA		<ul style="list-style-type: none"> • Subwoofers stacked • Tops flown on trussing and inclined at ca. 15°
Near Fill	2 x L3 115 FA		<ul style="list-style-type: none"> • Can be used to provide additional sound dispersion directly in front of the stage • Tops on tripods • Inclined at 7° • Angled at center stage – min. 45°
Side Fill / Monitoring	2 x L3 112 FA		<ul style="list-style-type: none"> • Tops on tripods on the stage • Inclined at 7°
Drum Fill	1 x L SUB 1500 A 1 x L3 112 XA		<ul style="list-style-type: none"> • Top secured to subwoofer via Tilt Unit
















> LINEAR 3

vs.

> LINEAR 5

Advanced DSP technology for users who are not necessarily trained PA experts and want to use pre-filtering to quickly and easily get a great sound

High-quality components, classic analog technology and high levels of eminently usable SPL and headroom for professional FOH use

Musicians, bands and DJs who use their own PA system for shows and in their practice room	 Primary users	Sound engineers, musicians, bands, and DJs in up to medium-sized FOH applications
Up to 500 (using the LINEAR 3 Full Stack 15/18: 4 x L SUB 1800 A, 2 x L3 115 FA)	 Audience size	Up to 3,000 (using the LTS Headstack Cluster: 12 x L SUB 4000 A, 8 x LTS A)
The musicians and/or DJ themselves	 Soundcheck	Sound engineer
The musicians and/or DJ themselves - basic sound alterations from the stage only	 Mix during the show	Sound engineer or dedicated FOH engineer
More suited to indoor events: produces incredible sound in enclosed spaces	 Indoors or outdoors	More suited to outdoor events: the ideal PA for high SPL and long-throw capability at open air shows
Provides many parameters for sound optimization, meaning alterations during the show itself are not strictly necessary	 Application	Outboard equipment (like EQs, limiters, effects, etc.) used for altering and optimizing sound. Offers more advanced sound-shaping options
Pleasant, homogenous sound with a wide dispersion right up to directly in front of the stage	 Sound dispersion characteristics	Fullrange models: long range and also outstanding near-field coverage L5 LTS A: long throw with focused horizontal dispersion
Powerful, smooth, pre-filtered	 Sound characteristics	Punchy, built to excel at high SPLs, linear
High-quality BEM-designed horn from HK Audio's professional Install Series	 Horn	High-quality BEM-designed horn, featuring asymmetrical dispersion, from HK Audio's professional Install Series L5 LTS A features the Multicell Transformer
Low-resonance MDF	 Cabinets	Combination of low-resonance MDF (sides) and rugged birch multiplex (top and bottom)
The PA with the "top performance to trust" guarantee. LINEAR 3's advanced technical features make it quick and easy for the user to achieve incredible sound	 Summary	The all-purpose, road-ready all-rounder in the HK Audio portfolio. LINEAR 5's extra options and appointments are especially suited to professional use

ACCESSORIES



TB-N

Tilt bracket for loudspeakers in the LINEAR 3 and LINEAR 5 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

Tilt bracket with quick release pins for loudspeakers in the LINEAR 3 and LINEAR 5 series. For attaching to trusses using appropriate half-couplers or trigger clamps (M12). Quick installation with ball lock pins. Also suitable for installation on ceilings, wall brackets or tripods. Flexible vertical and horizontal alignment.



AP-8

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



Tilt Unit

The tilt unit permits perfect satellite-to-audience alignment and tilt protection when using a full stack system.



Covers

Perfect-fitting padded transport covers are available for all LINEAR 3 models as an optional accessory.



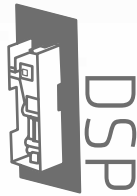
Stereo Pole Add-on M20

The add-on set consists of two height-adjustable König & Meyer M20 distance poles, two high-quality speaker cables and a carry bag.

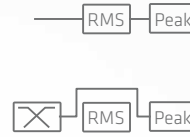
FEATURES

1200 Watts

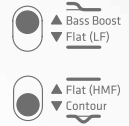
1,200 Watts
Class D bi-amping for impressive output power.



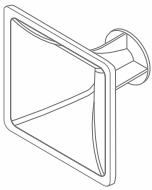
Advanced DSP Technology
The new DSP for LINEAR 3 guarantees bands and DJs a top sound performance even without a sound engineer.



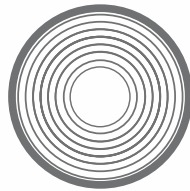
Intelligent Multiband Limiter
Professional-grade limiter technology stabilizes midrange and high frequency response, even at massive low-end spikes.



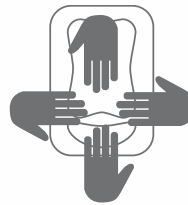
Presets suited for any application
The four EQ presets - Bass Boost, Flat (LF), Flat (MHF) and Contour - mean LINEAR 3 speakers can easily and quickly be optimized for many different audio applications.



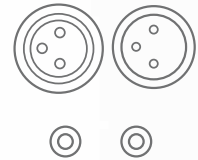
BEM-designed horns
BEM-designed substantial, computer-modeled rotatable horns deliver 90° horizontal and 55° vertical directivity.



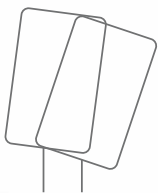
Custom made speakers
Specifically tailored for LINEAR 3 enclosures and acoustics; engineered for utmost resilience and durability.



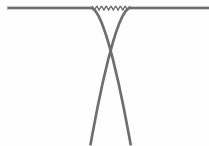
MultiGrip Handles
Carrying speakers is an exercise in comfort, convenience and safety with these professional-style handles.



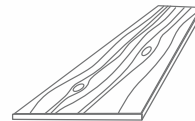
Diverse Inputs
Two XLR/Combo inputs, one stereo RCA input and adjustable input sensitivity make connecting the devices of your choice easy.



DuoTilt™ 3/7 Pole Mount
The DuoTilt 3/7 pole mount serves to aim speakers accurately so audiences enjoy sweet sound all around.



FIR X-over
FIR crossover filtering with 72 dB/octave slope; ensures, among other things, a transparent midrange.



Wood Cabinets
The low-vibration wood housing delivers greater sound pressure and a uniform sonic image from soft to loud.

Made in Germany

Made in Germany
LINEAR 3 is engineered and produced in Germany to the highest quality levels.

TECHNICAL DATA

Model	L3 112 FA	L3 112 XA	L3 115 FA	L SUB 1500 A	L SUB 1800 A
Max SPL peak (@ 10% THD)	135 dB half space	135 dB half space	135 dB half space	131 dB half space	132 dB half space
Frequency response +/- 3 dB	65 Hz - 18 kHz	t. b. a.	58 Hz - 16 kHz	49 Hz - X-Over	42 Hz - X-Over
Frequency response -10 dB	58 Hz - 18 kHz	t. b. a.	49 Hz - 18 kHz	45 Hz - X-Over	38 Hz - X-Over
Power Rating	1200 W	1200 W	1200 W	1200 W	1200 W
Amplifier	Class D - bi-amped	Class D - bi-amped	Class D - bi-amped	Class D	Class D
Active protection circuits	Under-voltage, thermal, short circuit, over-current protection, subsonic filter, look ahead temperature control, peak, RMS and multiband limiters	Under-voltage, thermal, short circuit, over-current protection, subsonic filter, look ahead temperature control, peak, RMS and multiband limiters	Under-voltage, thermal, short circuit, over-current protection, subsonic filter, look ahead temperature control, peak, RMS and multiband limiters	Under-voltage, thermal, short circuit, and over-current protection, Subsonic 24 dB/oct. peak limiter	Under-voltage, thermal, short circuit, and over-current protection, Subsonic 24 dB/oct. peak limiter
LF Speaker				1 x 15"	1 x 18"
Low/Mid Speaker	1 x 12"	1 x 12"	1 x 15"		
HF Driver	1"	1"	1"		
Horn characteristics	90° x 55° CD horn	90° x 55° CD horn	90° x 55° CD horn		
Cut-off Frequency active	2.3 kHz FIR X-Over with 72 dB/oct.	t. b. a.	2.3 kHz FIR X-Over with 72 dB/oct.	100/120 Hz variable with 24 dB/oct.	100/120 Hz variable with 24 dB/oct.
Connections	2 x XLR Combo In bal., 1 x Stereo RCA In, 2 x XLR Thru bal., 1 x XLR Mix Out	2 x XLR Combo In bal., 1 x Stereo RCA In, 2 x XLR Thru bal., 1 x XLR Mix Out	2 x XLR Combo In bal., 1 x Stereo RCA In, 2 x XLR Thru bal., 1 x XLR Mix Out	2 x XLR Combo In bal., 2 x XLR Thru bal., 2 x XLR-Mid/High Out	2 x XLR Combo In bal., 2 x XLR Thru bal., 2 x XLR-Mid/High Out
Input Sensitivity	+4 dBu @ Gain center-notched	+4 dBu @ Gain center-notched	+4 dBu @ Gain center-notched	+4 dBu @ Gain center-notched	+4 dBu @ Gain center-notched
Sensitivity switch	Line/Mic Input A	Line/Mic Input A	Line/Mic Input A		
Equalizer	2 EQ switches: Bass Boost/Flat & Flat/Contour	2 EQ switches: Bass Boost/Flat & Flat/Contour	2 EQ switches: Bass Boost/Flat & Flat/Contour		
Pole mount	HK Audio DuoTilt 3/7	HK Audio DuoTilt 3/7	HK Audio DuoTilt 3/7	1 x M20 (K&M)	1 x M20 (K&M)
Rigging points	4 x M8	t. b. a.	4 x M8		
Handles	2 x HK Audio MultiGrip	1 x HK Audio MultiGrip, 1 x recessed top handle	2 x HK Audio MultiGrip	2 x HK Audio MultiGrip	2 x HK Audio MultiGrip
Enclosure	16 mm MDF	16 mm MDF	16 mm MDF	MDF 16 mm	MDF 16 mm
Grille	2 mm metal grille backed with black acoustic foam	2 mm metal grille backed with black acoustic foam	2 mm metal grille backed with black acoustic foam	2 mm metal grille backed with black acoustic foam	2 mm metal grille backed with black acoustic foam
Finish	Acrylic enamel, black	Acrylic enamel, black	Acrylic enamel, black	Acrylic enamel, black	Acrylic enamel, black
Optional accessories	Cover, Stereo Pole Add-on M20, Tilt bracket (TB-N, TB-NQ), Attachment point (AP-8), Tilt-Unit	Cover, Stereo Pole Add-on M20, Attachment point (AP-8), Tilt-Unit	Cover, Stereo Pole Add-on M20, Tilt bracket (TB-N, TB-NQ), Attachment point (AP-8), Tilt-Unit	Protective cover, Stereo Pole Add-On M20, tilt unit, 100 mm casters	Protective cover, Stereo Pole Add-On M20, tilt unit, 100 mm casters
Dimensions (WxHxD)	36 x 66 x 36.7 cm	39,5 x 66 x 34	44 x 69 x 44.5 cm	48.5 x 48.5 x 59.5 cm	51 x 67 x 72 cm
Weight	21.5 kg / 47.4 lbs.	20.6 kg / 45.5 lbs.	27.9 kg / 61.5 lbs.	29.8 kg / 65.7 lbs.	42 kg / 92.6 lbs.



THE SOUNDMAKERS

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