



Catalog



Sophisticated sound reinforcement.

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Introduction

Sound Projects

Sophisticated sound reinforcement

Established 1983, SOUND PROJECTS has earned a reputation for innovative designs and pragmatic solutions in contemporary sound reinforcement. SOUND PROJECTS pursues perfection in system design from a user concept, carefully avoiding concessions to fashion and challenging conventions if deemed necessary. Sophisticated sound reinforcement never is a limiting factor in a vocal or musical performance but a stimulating, creative and convenient tool for sophisticated engineers. In our opinion F.O.H. engineers should be relieved of futile system design annoyances, they should feel free to focus on their core profession: mix and produce ever more complex shows for an ever more demanding audience in venues that are rarely optimal for musical performances!

Historic perspective / mission statement

SOUND PROJECTS is about sound. Sound made for and by human beings. Carefully omitting simple cosmetic dress-ups or just following the hype of the day. Since 1983 SOUND PROJECTS is a distinguished supplier of sophisticated, user-friendly sound reinforcement systems that will never be the limiting factor in a vocal or musical performance. Design philosophy It should be a pleasure to work for as well as to work with us.

SOUND PROJECTS R&D prioritizes humane working conditions and eco design as much as product related user benefits e.g. the interaction of the total audio chain. From performer to amplifier, loudspeaker and room. Equally important are improvements that meet contemporary ergonomic demands: logistics, transport, cluster design and install time. All of which are pressed into narrower time-slots. Our solutions are the products you will find in this brochure: sophisticated sound reinforcement and pragmatic speaker-systems.

Substantial size and weight reduction

Most SOUND PROJECTS products are smaller and less heavy than comparable competitors so rigging, transport and storage is easier for you.

Real plug-and-play

No worries on impedance, damping factor, amp configuration or overloading amp's or drivers. Need one more cabinet per side? Just plug-in. Need one more again? Just plug-in (and vice versa of course).



Sophisticated sound reinforcement.

The clever, electronic gain-brain

It is common practice to combine crossovers, equalisers, amplifiers and speaker cabinets of different brands. SOUND PROJECTS integrates it all: η -max[®] (eta-max). η -max[®] is a proprietary electronic circuitry that presents an optimal working environment for all components. A crucial part of the η -max[®] circuit is the Dual Audio-logic Level Control (DALC), a dual operating RMS based gain riding circuit. The DALC maintains the tonal balance of the sound as perceived by the human ear, even at very high levels and protects the drivers from overheating. The DALC, in harmony with the dedicated crossover and MICRO-AMP[®] perform as an integral network with the respective speaker or driver to further reduce acoustical distortion and maintain ultimate reliability.

Ergonomics

All SOUND PROJECTS cabinets are designed with strict legislations regarding labour in mind e.g. CE, ARBO, UL and TÜV. In addition, SOUND PROJECTS incorporate practical and smart design features in handling, use, transport and storage. Flying hardware is designed conform international safety standards and made easy accessible, convenient to handle and obvious in systematic.

Unorthodox cabinet construction

Cabinets are constructed by means of unorthodox combinations of different wood laminates, proprietary mouldings, wave-guides and aviation-type aluminium sandwich panels. Each cabinet will have it's own specific combination to ensure maximum reliability and reduced weight and size.



Proprietary wave-guide/horn designs

Horn-designs and / or wave-guides are a key aspect of most SOUND PROJECTS cabinets. Each design is optimised to retain maximum driver-loading and create a point-source or line source by manipulating both the radiation pattern and physical alignment of the carefully matched horn-driver combinations. All horns and wave-guide combinations provide a precise, constant projection and a smooth reduction of the radiated energy outside the specified opening angles. For the audience this means increased intelligibility, stable centre/stereo image and clean impulse response.

Unique sub-low systems

Good bass response is difficult. Sound Projects has a wide range of sub-low systems. From a single 15" to a double 21". For making a larger format system we have produced a double 15" low-mid cabinet, it could be used with the dreamline or a large setup with SPX4. Any performance and any subjective taste. Vertical beaming as well as cardioid radiation patterns can readily be accomplished by adaptive stacking and/or rigging, combined with digital beam steering if deemed necessary.

The efficiency in the lowest octave (25-50 Hz) depends first and foremost on the capacity of the cabinet and tuning of the port. SOUND PROJECTS Compact series employ 15-inch sub-low drivers that combine a longer linear excursion and more volume displacement with faster attack.





Dreamline

Single cabinet line arrays

Dreamline

Single cabinet line array

Sound Projects Dreamline™ encompasses the major benefits of a line array in a single elegant cabinet, complete with self-explanatory, adjustable suspension points.

One Dreamline™ contains 12 optimised, full range, line array systems that excel in articulate sound reproduction and predictable coverage with the reliable simplicity of a standard plug-and-play, self-powered loudspeaker system.

A combination of ultra-lightweight building blocks endow the Dreamline™ with superb acoustical qualities and a low weight, around 100 kg. Compliant with most standard theatre rigging points and simple hoists.

One Dreamline™ can be rigged up from, or let down in its flight-case in seconds. Hardly flexing a muscle. Sound Projects proven DALC (integrated speaker management) omits time consuming cabling and amp hook-up. Flying is playing!

The Dreamline™ delivers an unsurpassed stable audience coverage and stereo image. This is accomplished by the 12 symmetrical line source modules, based on the patented SOUND PROJECTS Wave-shape-transformer™. An immaculate power balance is delivered by the multiple SOUND PROJECTS Micro-Amp™ or cool class D modules. The finishing touch comes from the DALC speaker management that keeps the sound character stable, distortion at bay and protects the overall system.

Why a line array to begin with?

Because a long vertical sound source narrows the vertical radiation pattern! Already in 1938 The Radio Corporation America (RCA) developed a first vertical array column loudspeaker system to increase SPL plus improve control on the radiation pattern. Some 50 years later, high power, high frequency ribbon speakers and different variations on emulating such a ribbon transducer became available! An important step forward for large-scale sound reinforcement and a new opportunity to re-introduce serious quality full band column speakers. Provided that they are of significant length, these arrays can substantially reduce the vertical spill above 100 Hz.

Why should a Dreamline be more economic than multiple cabinets?

A DreamLine™ needs no system alignment, no controller adjustment, no amp racks and no expensive rigging hardware for twelve consequentially heavy cabinets. The DreamLine™ weights just around 100kg with a single point rigging and a typical installation time of 5 minutes. Since each individual DreamLine array module is carefully aimed, a stable listening image all over the audience is possible in any hall or flying position. Specific SPL needs can be met with several combinations of drivers and amplifiers which are also available as retrofit at a later stage. Hence redundancy is virtually eliminated.

Why is low frequency pattern control so important?

Because disturbing room resonances mostly occur in low frequencies. Echo's and unintentional reverb are destructive enemies of music as well as speech intelligibility. Larger public buildings with hard surface walls, ceilings and floors will exhibit several seconds of reverb. Often peaking between 100 to 500 Hz. Annoying slap echo's from the wall faced by the loudspeaker system may even run up to 2 kHz. The length of the DreamLine™, i.e. tight vertical control plus the horizontally constant directivity horns each loading a woofer pair, significantly confine these room effects.

Why only one box with one shape?

Because the curve is dictated by the desired SPL balance between far and near audience. Assuming a realistic length of 2 to 5 meter, any line array can only exhibit its optimum vertical constant directivity in one specific curve. All other, mechanically possible, curves will show an increased mismatch between the High and Low frequency lobes (beams). Different sound character for different audience positions and inferior speech intelligibility are the undesired side effects. Especially in large congress centres and multi purpose halls that often suffer from hard acoustics. This is the natural and inevitable compromise of a line array consisting of combined line sources. Low frequencies cannot be controlled by the curve but only by the length of the array and its flying angle.

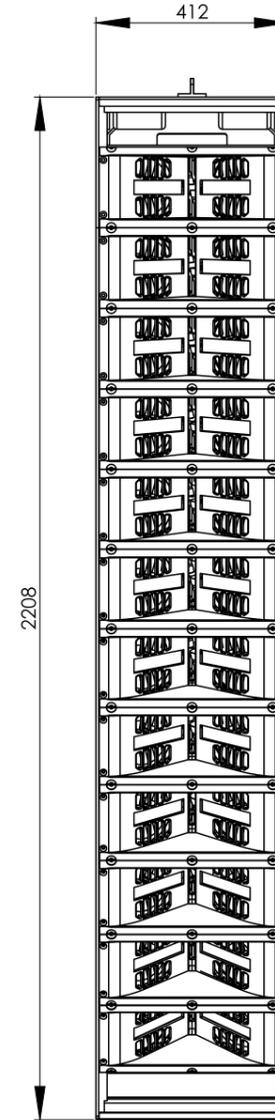
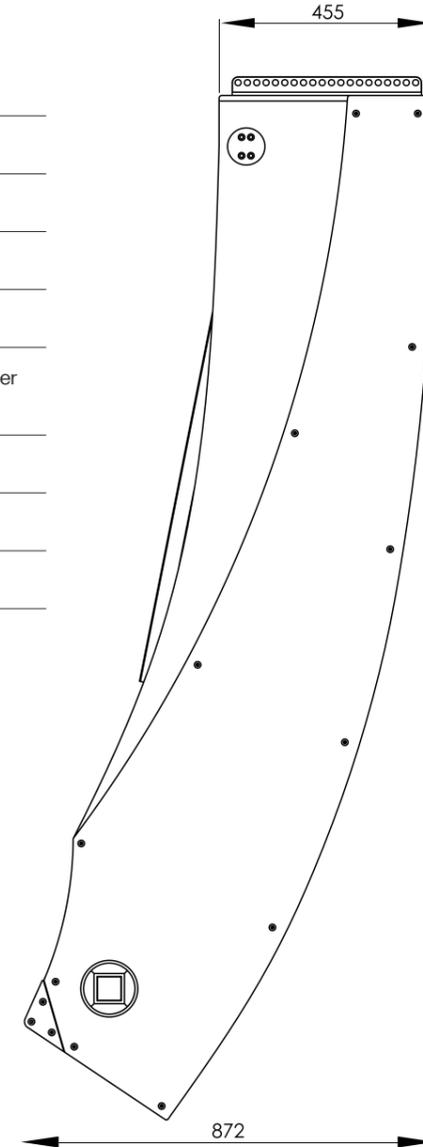
DL2210D

Acoustical specifications	
Drivers	12 x 1", 24 x 6.5" ceramic magnet
Freq. response	60Hz-20kHz
Max. peak SPL @1m ¹	140dB
Coverage angle	110H x 40V curvilinear
Electrical specifications	
Amplifier(s)	CCD™ technology
Output	2500W* sine LF / 700W* sine HF (DALC limited)
Filter hipass	60Hz, 4th order
Input impedance	20 kOhms balanced, 10 kOhms unbalanced
Output impedance	Hard-wired to input
Main voltage	230V (other on request)
Mains frequency	50 / 60 Hz
Idle	< 50VA
Full load	< 3000VA. DALC limited Ref. to continuous pink noise signal (12 dB crest factor within the specified range)
Protection	D.A.L.C. (Dual Audio Logic Control)

¹ Peak level at 1M under half space conditions using pink noise with crest factor 4 (12dB)

* Specified at 4 Ω

Additional descriptive data	
Cabinet construction	Cross grain laminated multiplex
Finish	Nano-armor™ coating
Weight	108 kg
Size WxHxD (mm)	415 x 2205 x 840
Rigging points	Integrated single liftpoint levelbar, angle adapter with trussclamp (optional)
Audio connectors	IEC XLR-3 in/out
Main connectors	Powercon in, powercon out
Max. operating temp.	-10 to 40 C ambient



DL2340D

Acoustical specifications	
Drivers	12 x 1", 24 x 6.5" ND magnets
Freq. response	60Hz-20kHz
Max. peak SPL @1m ¹	144dB
Coverage angle	110H x 40V curvilinear
Electrical specifications	
Amplifier(s)	CCD™ technology
Output	2x 2500W* sine LF / 700W *sine HF (DALC limited)
Filter hipass	60Hz, 4th order
Input impedance	20 kOhms balanced, 10 kOhms unbalanced
Output impedance	Hard-wired to input
Main voltage	230V (other on request)
Mains frequency	50 / 60 Hz
Idle	< 50VA
Full load	< 3000VA. DALC limited Ref. to continuous pink noise signal (12 dB crest factor within the specified range)
Protection	D.A.L.C. (Dual Audio Logic Control)

¹ Peak level at 1M under half space conditions using pink noise with crest factor 4 (12dB)

* Specified at 4 Ω

Additional descriptive data	
Cabinet construction	Cross grain laminated multiplex
Finish	Nano-armor™ coating
Weight	112 kg
Size WxHxD (mm)	415 x 2205 x 840
Rigging points	Integrated single liftpoint levelbar, angle adapter with trussclamp (optional)
Audio connectors	IEC XLR-3 in/out
Main connectors	Powercon in, powercon out
Max. operating temp.	-10 to 40 C ambient

DL2450D

Acoustical specifications

Drivers	12 x 1", 24 x 6.5" ND magnets high efficiency
Freq. response	90Hz-20kHz
Max. peak SPL @1m ¹	150dB
Coverage angle	110H x 40V curvilinear

Electrical specifications

Amplifier(s)	CCD™ technology
Output	2x2500W sine LF / 1x2500W sine HF (DALC limited)
Filter hipass	90Hz, 4th order
Input impedance	20 kOhms balanced, 10 kOhms unbalanced
Output impedance	Hard-wired to input
Main voltage	230V (other on request)
Mains frequency	50 / 60 Hz
Idle	< 50VA
Full load	< 6000VA. DALC limited Ref. to continuous pink noise signal (12 dB crest factor within the specified range)
Protection	D.A.L.C. (Dual Audio Logic Control)

¹Peak level at 1M under half space conditions using pink noise with crest factor 4 (12dB)

* Specified at 4Ω

Additional descriptive data

Cabinet construction	Cross grain laminated multiplex
Finish	Nano-armor™ coating
Weight	128 kg
Size WxHxD (mm)	415 x 2205 x 840
Rigging points	Integrated single liftpoint levelbar, angle adapter with trussclamp (optional)
Audio connectors	IEC XLR-3 in/out
Main connectors	Powercon in, powercon out
Max. operating temp.	-10 to 40 C ambient





Bassline

Single cabinet line array

Like the Dreamline, the Bassline is a slender 2,2 meter high line-array assembly, weighing only 110 kg including the pragmatic Angle Adapter™ rigging hardware. This conveniently allows single point suspension at almost any theatre batten lift Horizontal aiming in steps of 5 degrees allow optimal audience coverage.

The Bassline is a valuable supplement for or demanding and otherwise loud events. Flying one or two Basslines next to a Dreamline results in far better controlled low-mid beaming, with far less room reflection and a powerful "punch" often missed in other flying bass.

Acoustical specifications

Drivers	6 x 12" High power, high efficiency ND magnets
Freq. response	60Hz-250Hz
Max. peak SPL @1m ¹	144dB
Coverage angle	Omni (Horizontal) 120° - 180° curvilinear (Vertical)

Electrical specifications

Amplifier(s)	CCD™ technology
Output	3x2500W* sine LF (DALC limited)
Low pass 4th order	-250Hz ²
Filter hipass	60Hz, 4th order
Input impedance	20 kOhms balanced, 10 kOhms unbalanced
Output impedance	Hard-wired to input
Main voltage	230V (other on request)
Mains frequency	50 / 60 Hz
Idle	< 50VA
Full load	< 3000VA. DALC limited Ref. to continuous pink noise signal (12 dB crest factor within the specified range)
Protection	D.A.L.C. (Dual Audio Logic Control)

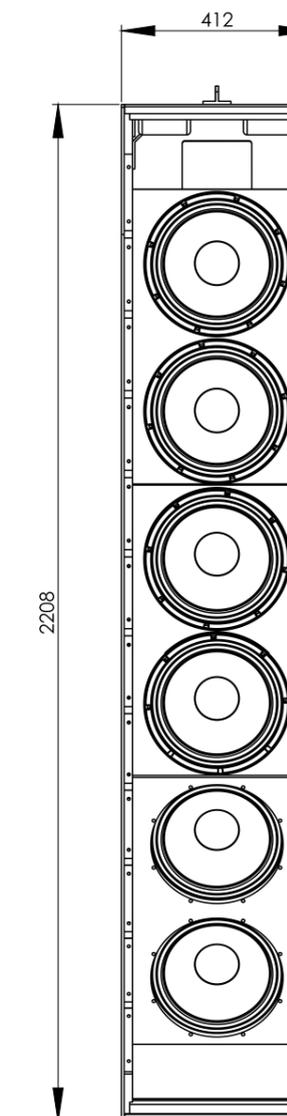
¹ Peak level at 1M under half space conditions using pink noise with crest factor 4 (12dB)

² Depending on combination of Dreamline version and venue

* Specified at 4 Ω

Additional descriptive data

Cabinet construction	Cross grain laminated multiplex
Finish	Nano-armor™ coating
Weight	110 kg
Size WxHxD (mm)	415 x 2205 x 840
Rigging points	Integrated single liftpoint levelbar, angle adapter with trussclamp (optional)
Audio connectors	IEC XLR-3 in/out
Main connectors	Powercon in, powercon out
Max. operating temp.	-10 to 40 C ambient





Sub-series

Self-powered sublow systems

SP15E

Compact self-powered sub-bass system

The SP15E is a compact self-powered high SPL subbass system. The cabinet is constructed of a rigid, multilayer birch ply reinforced with multiple bracing and finished with a sturdy coating. An impressive featherweight of 50 kg solid sub due to an inventive cabinet construction loading a light, 4 inch coil, neodymium driver and ultralight 2500 Watt CCD amp.

Cabinet dimensions are optimised for international trucksize. Eight barhandles placed in an ergonomical grippoint layout, Nano Armor polyurethane coating and additional corner protection with multiple slide bars facilitate easy transport. Locked, stable stacking of several cabinets is easy because of the protective slidebars. Polemounting can be done both standing or flat depending on available floorspace. The SP15E will endow any F.O.H. system with a rock solid foundation in the lowest audible octaves.

A recessed switch facilitates Sound Projects' standard* or free external lowpass selection. The SALC (Single Audio-logic Level Control) speaker management maintains the tonal balance of the sound as perceived by the human ear and protects the drivers from over excursion or overheating. Maximum sub efficiency for the desired cabinet dimensions is obtained by creativity as well as state-of-the-art computer aided modelling techniques and acoustic calculation programs.

*60Hz @ 24dB Butterworth



Acoustical specifications

Drivers	1 x 15" High power, low distortion, long excursion design, double impregnated spider and ventilated coil airgap for reduced power compression
Freq. response	30-60Hz/~90Hz Switchable: Sub Mode/SPX Mode
Max. peak SPL @1m ¹	136dB
Coverage angle	omni-directional

Electrical specifications

Amplifier(s)	CCD™ technology
Output	2500W* sine (SALC limited)
Low pass 4th order	60/~90Hz (switchable) ²
Filter subsonic	30Hz, 2nd order
Input impedance	20 kOhms balanced, 10 kOhms unbalanced
Output impedance	Hard-wired to input
Main voltage	230V (other on request)
Mains frequency	50 / 60 Hz
Idle	< 50VA
Full load	< 1200 VA. DALC limited Ref. to continuous pink noise signal (12 dB crest factor within the specified range)
Protection	S.A.L.C. (Single Audio Logic Control)

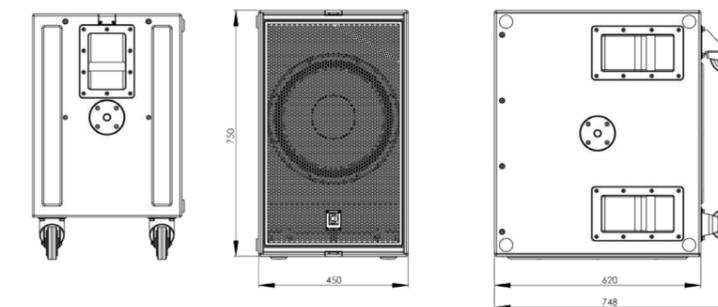
¹ Peak level at 1M under half space conditions using pink noise with crest factor 4 (12dB)

² Fullrange option on request

* Specified at 4 Ω

Additional descriptive data

Cabinet construction	Cross grain laminated multiplex with multiple bracings
Finish	Nano-armor™ coating
Weight	47KG (wheels not included) Optional wheel board available
Size WxHxD (mm)	450 x 750 x 620 (748)
Rigging points	Optional uni rigging (3x M20 bolt)
Audio connectors	IEC XLR-3 in/out
Main connectors	Powercon in and out
Max. operating temp.	-10C to 40C ambient





SP215

Slim self-powered sublow system

The SP215 is an elegant and slim self-powered sublow system. The cabinet is constructed of a rigid, multilayer, cross grain birch plywood. Additionally braced with multiple reinforcement ribs and finished with a sturdy nano-armor™ coating.

Sound Projects SALC speaker management electronics and a proprietary 2500W CoolClass-D™ amplifier section power the two longstroke 15-inch drivers. This combination boasts an impressive 142dB SPL augmenting the low-end response of the full range and high/mid systems down to 30Hz, the deep sub you can feel.

The SP215 is cosmetically interchangeable with all SPX systems and will effortlessly add a tight kick to any rock concert as well as a fat old moog groove to a dance party.

Acoustical specifications

Drivers	2 x 15" High power, low distortion, long excursion design. Double, impregnated spider and ventilated coil airgap for reduced power compression.
Freq. response	30-60Hz/FR switchable: Sub Mode/FR (ext. LP filter)
Max. peak SPL @1m ¹	142dB
Coverage angle	Omni-directional

Electrical specifications

Amplifier(s)	CCD™ technology
Output	2500W*sine (SALC limited)
Low pass 4th order	60Hz/FR (switchable) ²
Filter subsonic	30Hz, 2nd order
Input impedance	20 kOhms balanced, 10 kOhms unbalanced
Output impedance	Hard-wired to input
Main voltage	230V (other on request)
Mains frequency	50 / 60 Hz
Idle	< 50VA
Full load	< 3000 VA. DALC limited Ref. to continuous pink noise signal (12 dB c.f. within the specified range)
Protection	S.A.L.C. (Single Audio Logic Control)

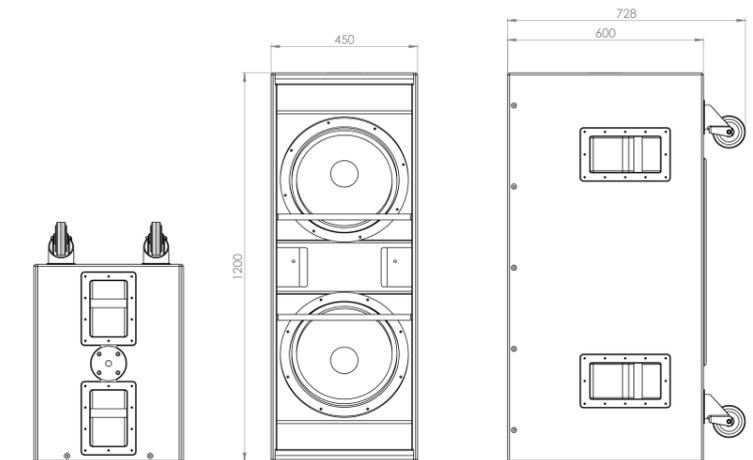
¹ Peak level at 1M under half space conditions using pink noise with crest factor 4 (12dB)

² Fixed filter on request

* Specified at 4 Ω

Additional descriptive data

Cabinet construction	Cross grain laminated multiplex
Finish	Nano-armor™ coating
Weight	72Kg (wheels not included)
Size WxHxD (mm)	450 x 1200 x 600 (730)
Rigging points	M20 Polemount
Audio connectors	IEC XLR-3 in/out
Main connectors	Powercon in, Powercon out
Max. operating temp.	-10 to 40 C ambient



SP18E

Compact high SPL sublow system



The SP18E is a compact self-powered high SPL sublow system. The cabinet is constructed of a rigid, multilayer birch ply reinforced with multiple bracing and finished with a sturdy coating. The SP18E is easy to handle particularly due to an inventive cabinet construction holding a 4 inch long coil neodymium driver and ultralight 2500 Watt CCD amp. An impressive featherweight of 58 kg solid sub.

Cabinet dimensions are optimised for international trucksize. Ergonomical grippoint layout, Nano Armor polyurethane coating and additional corner protection with multiple slide bars facilitate easy transport. Protective slidebars facilitate locked stacking of more cabinets. Polemounting can be done standing or flat. The SP18E will endow any of F.O.H. system with a rock solid foundation in the lowest audible octaves.

The SALC (Single Audio-logic Level Control) speaker management is a proprietary RMS based gain riding circuit which maintains the tonal balance of the sound as perceived by the human ear and protects the drivers from over excursion or overheating. A recessed switch facilitates Sound Projects standard* or free external lowpass selection.

To match the desired cabinet dimensions and to obtain maximum efficiency, state-of-the-art computer aided modelling techniques and acoustic calculation programs are used to precisely indicate the manifold reinforcing ribs and port tuning.

*60Hz @ 24dB Butterworth

Acoustical specifications

Drivers	1 x 18" High power, low weight, neodymium design. Double, impregnated spider and ventilated coil airgap for reduced power compression
Freq. response	30-60Hz/-90Hz switchable: Sub Mode/SPX Mode
Max. peak SPL @1m ¹	138dB
Coverage angle	Omni-directional

Electrical specifications

Amplifier(s)	CCD™ technology
Output	2500W sine (SALC limited)
Low pass 4th order	60/-90Hz (switchable) ²
Filter subsonic	30Hz, 2nd order
Input impedance	20 kOhms balanced, 10 kOhms unbalanced
Output impedance	Hard-wired to input
Main voltage	230V (other on request)
Mains frequency	50 / 60 Hz
Idle	< 50VA
Full load	< 3000 VA. DALC limited Ref. to continuous pink noise signal (12 dB c.f. within the specified range)
Protection	S.A.L.C. (Single Audio Logic Control)

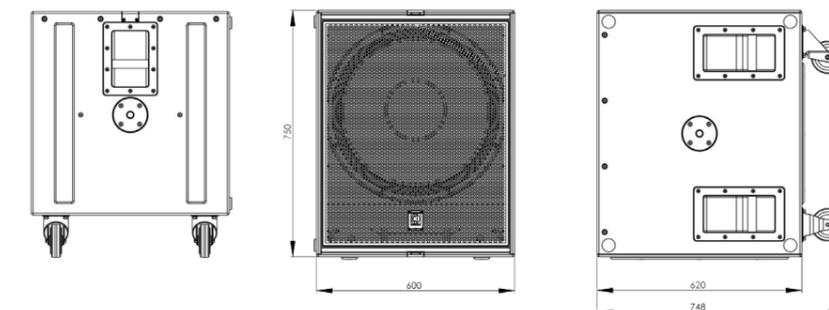
¹Peak level at 1M under half space conditions using pink noise with crest factor 4 (12dB)

²Fullrange option on request

*Specified at 4 Ω

Additional descriptive data

Cabinet construction	Cross grain laminated multiplex with multiple bracings
Finish	Nano-armor™ coating
Weight	58Kg (wheels not included) Optional wheel board available
Size WxHxD (mm)	600 x 750 x 620 (748)
Rigging points	Optional Uni Rigging (3x M20 bolt)
Audio connectors	IEC XLR-3 in/out
Main connectors	Powercon in, Powercon out
Max. operating temp.	-10 to 40 C ambient





SP218

Powerful sub-low system

The SP218 is an elegant, Class D-powered sub-low system loaded with two impressive neodymium magnet loudspeaker assemblies. The cabinet is constructed of rigid, 13 layer plywood with multiple internal bracing. Particular attention to weight and handling results in several user benefits. Including the 2500 Watt ultralight CCD amps the SP218 is an impressive featherweight of just above 100kg with no less than 12 ergonomic bar handles to carry it around.

Cabinet dimensions are optimised for international truck size. Ergonomic grip point layout, 8 castor positions, additional corner protection and multiple slide bars all facilitate easy transport. Durability is addressed by a sturdy nano-armor™ coating.

The SP218 will endow any kind of F.O.H. or distributed sound system with a rock solid foundation in the lowest audible octaves. The SALC (Single Audio-logic Level Control) speaker management is a proprietary RMS based gain riding circuit which maintains the tonal balance of the sound as perceived by the human ear. Additionally it protects the SP218 drivers from over excursion or overheating.

To match the desired cabinet dimensions and to obtain maximum efficiency, state-of-the-art computer aided modelling techniques and acoustic calculation programs are used to precisely indicate the manifold reinforcing ribs and port tuning.

Acoustical specifications

Drivers	2 x 18" Long stroke, high power, low weight neodymium design.
Freq. response	30-60Hz/-90Hz (switchable: Sub Mode/SPX Mode)
Max. peak SPL @1m ¹	144dB
Coverage angle	Omni-directional

Electrical specifications

Amplifier(s)	CCD™ technology
Output	2x 2500W* sine (SALC limited)
Low pass 4th order	60Hz / -90Hz (switchable) ²
Filter subsonic	30Hz, 2nd order
Input impedance	20 kOhms balanced, 10 kOhms unbalanced
Output impedance	Hard-wired to input
Main voltage	230V (other on request)
Mains frequency	50 / 60 Hz
Idle	< 50VA
Full load	< 3000 VA. DALC limited Ref. to continuous pink noise signal (12 dB c.f. within the specified range)
Protection	S.A.L.C. (Single Audio Logic Control)

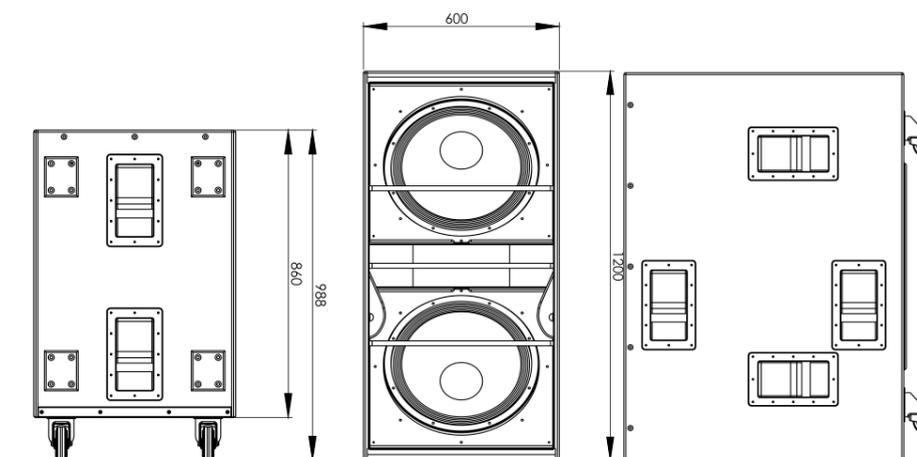
¹ Peak level at 1M under half space conditions using pink noise with crest factor 4 (12dB)

² Fullrange option on request

* Specified at 4 Ω

Additional descriptive data

Cabinet construction	Cross grain laminated multiplex
Finish	Nano-armor™ coating
Weight	96,5Kg (wheels not included)
Size WxHxD (mm)	600 x 1200 x 860 (990)
Rigging points	None
Audio connectors	IEC XLR-3 in/out
Main connectors	Powercon in, Powercon out
Max. operating temp.	-10 to 40 C ambient



SP21E

Compact self-powered sub system

The SP21E is a compact self-powered high SPL sublow system. The cabinet is constructed of a rigid, multilayer birch ply reinforced with multiple bracing and finished with a sturdy coating.

Cabinet dimensions are optimised for international trucksize. Ergonomical grippoint layout, Nano Armor polyurethane coating and additional corner protection with multiple slide bars facilitate easy transport. Protective slidebars facilitate locked stacking of more cabinets. Polemounting can be done standing or flat. The SP21E will endow any of F.O.H. system with a rock solid foundation in the lowest audible octaves.

The SALC (Single Audio-logic Level Control) speaker management is a proprietary RMS based gain riding circuit which maintains the tonal balance of the sound as perceived by the human ear and protects the drivers from over excursion or overheating.. A recessed switch facilitates Sound Projects standard* or free external lowpass selection.

To match the desired cabinet dimensions and to obtain maximum efficiency, state-of-the-art computer aided modelling techniques and acoustic calculation programs are used to precisely indicate the manifold reinforcing ribs and port tuning.

*60Hz @ 24dB Butterworth

Acoustical specifications

Drivers	1 x 21" High power, low weight, neodymium design. Double, impregnated spider and ventilated coil airgap for reduced power compression.
Freq. response	30-60Hz/FR switchable: Sub Mode/FR (ext. LP filter)
Max. peak SPL @1m ¹	140dB
Coverage angle	Omni-directional

Electrical specifications

Amplifier(s)	CCD™ technology
Output	2500W* sine (SALC limited)
Low pass 4th order	60Hz/FR (switchable) ²
Filter subsonic	30Hz, 2nd order
Input impedance	20 kOhms balanced, 10 kOhms unbalanced
Output impedance	Hard-wired to input
Main voltage	230V (other on request)
Mains frequency	50 / 60 Hz
Idle	< 50VA
Full load	< 3000 VA. DALC limited Ref. to continuous pink noise signal (12 dB c.f. within the specified range)
Protection	S.A.L.C. (Single Audio Logic Control)

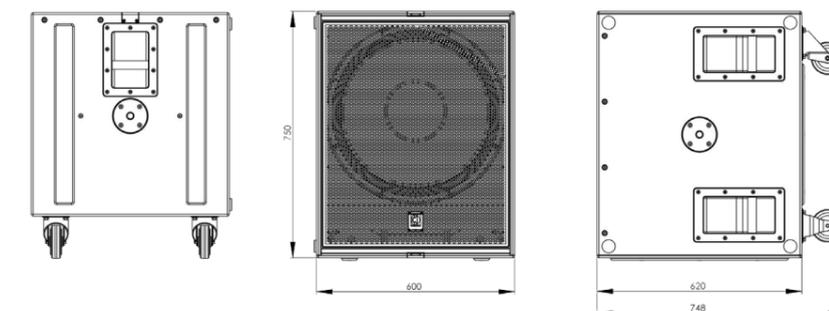
¹ Peak level at 1M under half space conditions using pink noise with crest factor 4 (12dB)

² Fixed filter on request

* Specified at 4 Ω

Additional descriptive data

Cabinet construction	Cross grain laminated multiplex with multiple bracings
Finish	Nano-armor™ coating
Weight	56Kg (wheels not included) Optional wheel board available
Size WxHxD (mm)	600 x 750 x 620 (748)
Rigging points	Optional Uni Rigging (3x M20 bolt)
Audio connectors	IEC XLR-3 in/out
Main connectors	Powercon in, Powercon out
Max. operating temp.	-10 to 40 C ambient





SP221

Powerful sub system

The SP221 is an elegant self-powered sub low system that gets the maximum out of the minimum. The SP221 proves that a super sub cabinet doesn't have to be heavy. A massive 13 layer plywood, optimally braced cabinet design loads two impressive neodymium magnet loudspeaker assemblies. Including the 2x2500 Watt ultra-light CCD amps the SP221 is an impressive featherweight of just above 100kg.

Dimensions are optimised to match international truckload size. Ergonomic, 12 point grip point layout, a combination of 8 castor positions, polyurethane coating, additional corner protection and multiple slide bars facilitate easy transport.

The SP221 will endow any kind of F.O.H. or distributed sound system with a rock solid foundation in the lowest audible octaves. The SALC (Single Audio-logic Level Control) speaker management is a proprietary RMS based gain riding circuit which maintains the tonal balance of the sound as perceived by the human ear. Especially at high levels. Additionally it protects the drivers from over excursion or overheating.

To match the desired cabinet dimensions with maximum efficiency in the lowest octave, state-of-the-art computer aided modelling techniques and acoustic calculation programs are used to precisely indicate the manifold reinforcing ribs and port tuning.

Acoustical specifications

Drivers	2 x 21" Long stroke, high power, low weight neodymium design
Freq. response	30-60Hz/FR switchable: Sub Mode/FR (ext. LP filter)
Max. peak SPL @1m ¹	148dB
Coverage angle	Omni-directional

Electrical specifications

Amplifier(s)	CCD™ technology
Output	2 x 2500W* sine (SALC limited)
Low pass 4th order	60Hz / FR (switchable) ²
Filter subsonic	30Hz, 2nd order
Input impedance	20 kOhms balanced, 10 kOhms unbalanced
Output impedance	Hard-wired to input
Main voltage	230V (other on request)
Mains frequency	50 / 60 Hz
Idle	< 50VA
Full load	< 6000 VA. DALC limited Ref. to continuous pink noise signal (12 dB c.f. within the specified range)
Protection	S.A.L.C. (Single Audio Logic Control)

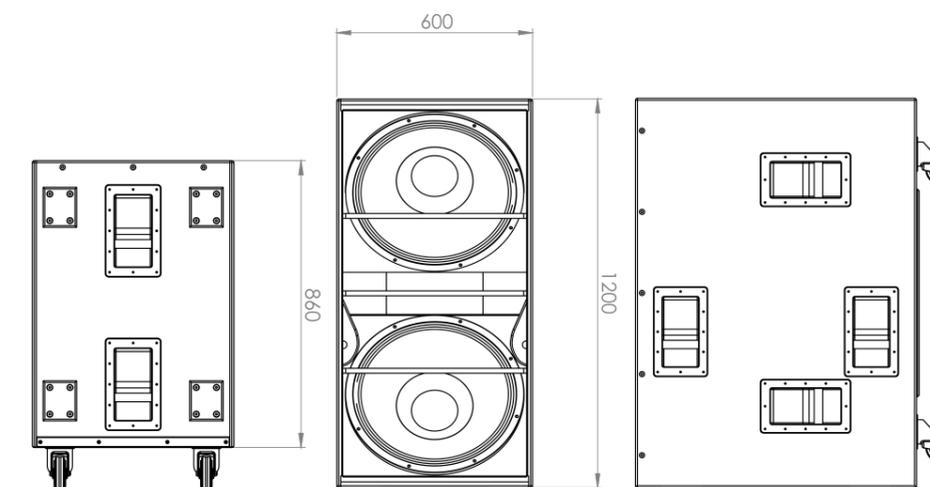
¹ Peak level at 1M under half space conditions using pink noise with crest factor 4 (12dB)

² Fixed filter on request

* Specified at 4 Ω

Additional descriptive data

Cabinet construction	Cross grain laminated multiplex
Finish	Nano-armor™ coating
Weight	112Kg (wheels not included)
Size WxHxD (mm)	600 x 1200 x 860 (990)
Rigging points	None
Audio connectors	IEC XLR-3 in/out
Main connectors	Powercon in, Powercon out
Max. operating temp.	-10 to 40 C ambient





Compact-series

Full range systems & monitors



SPX60

Compact full range system

SPX60 is a full-range, self-powered sound reinforcement system with a rotatable horn, featuring a tightly controlled vertical and horizontal dispersion pattern. This feature enables the use of the SPX60 as a stand-alone system, both vertically and horizontally.

The SPX-60 packs a carefully matched 12-inch mid/bass driver and a 1.4-inch HF driver loaded on a rotatable constant directivity horn with 60 degrees horizontal and 40 degrees vertical dispersion. The SPX-60 excels in smooth acoustic coupling, vocal transparency and SPL in small to medium sized configurations. Together with an accompanying sub low system, like an SP15E or SP18E sub cabinet, the frequency response can be extended an octave downwards. For most programme material the power balance between one SPX60 and one SP15E or SP18E sub-low will be just right.

Acoustical specifications

Drivers	1 x 2.5" HF (1.4" exit), 1 x 12" LF High power low weight neodymium design.
Freq. response	60Hz-20kHz
Max. peak SPL @1m ¹	138dB
Coverage angle	60H x 40V (rotatable)

Electrical specifications

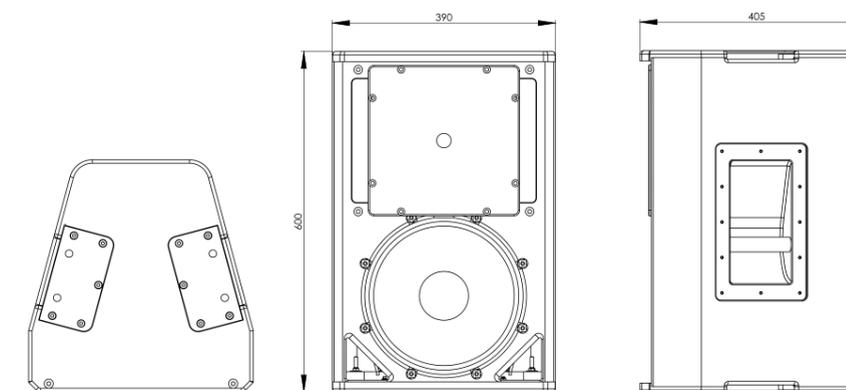
Amplifier(s)	CCD™ technology
Output	1200W* sine LF/100W sine HF (DALC limited)
Crossover	~1.2 kHz, 4th order
Filter hipass	60Hz, 4th order switchable to 90Hz 4th order
Input impedance	20 kOhms balanced, 10 kOhms unbalanced
Output impedance	Hard-wired to input
Main voltage	230V (other on request)
Mains frequency	50 / 60 Hz
Idle	< 50VA
Full load	1200 VA. DALC limited Ref. to continuous pink noise signal (12 dB crest factor within the specified range)
Protection	D.A.L.C. (Dual AudioLogic Control)

¹ Peak level at 1M under half space conditions using pink noise with crest factor 4 (12dB)

* Specified at 8 Ω

Additional descriptive data

Cabinet construction	Cross grain laminated multiplex
Finish	Nano-armor™ coating
Weight	25Kg
Size WxHxD (mm)	395 x 600 x 405 (trapezoid)
Rigging points	Integrated SPX flypoints, recessed pole mount.
Audio connectors	IEC XLR-3 in/out
Main connectors	Powercon in, Powercon out
Max. operating temp.	-10 to 40 C ambient





SPX90

Compact full range system

The SPX90 is a full-range, self-powered sound reinforcement system with a rotatable horn, featuring a tightly controlled vertical and horizontal dispersion pattern. This feature enables to use the SPX-90 as a stand-alone system, both vertically and horizontally.

The SPX90 packs a carefully matched 12-inch mid/bass driver and a 1.4-inch HF driver, which is loaded on a rotatable constant directivity horn with 90 degrees horizontal and 60 degrees vertical dispersion. The SPX90 excels in smooth acoustic coupling, vocal transparency and SPL in small to medium sized configurations. Together with an accompanying sub low system, like an SP15E or SP18E sub cabinet, the frequency response can be extended an octave downwards. For most programme material the power balance between one SPX90 and one SP15E or SP18E will be just right.

Acoustical specifications

Drivers	1 x 2.5" HF (1,4" exit), 1 x 12" LF High power low weight Neodymium design.
Freq. response	60Hz-20kHz
Max. peak SPL @1m ¹	136dB
Coverage angle	90H x 60V (rotatable)

Electrical specifications

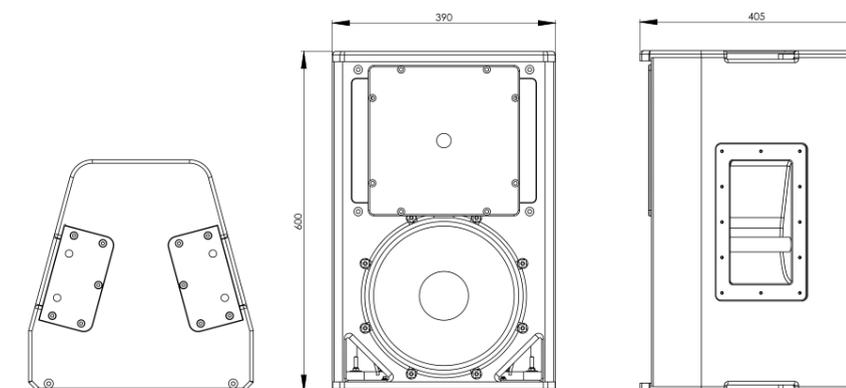
Amplifier(s)	CCD™ technology
Output	1200W* sine LF/100W sine HF (DALC limited)
Crossover	~1.2 kHz, 4th order
Filter hipass	60Hz, 4th order switchable to 90Hz 4th order
Input impedance	20 kOhms balanced, 10 kOhms unbalanced
Output impedance	hard-wired to input
Main voltage	230V (other on request)
Mains frequency	50 / 60 Hz
Idle	< 50VA
Full load	1200 VA. DALC limited Ref. to continuous pink noise signal (12 dB crest factor within the specified range)
Protection	D.A.L.C. (Dual AudioLogic Control)

¹ Peak level at 1M under half space conditions using pink noise with crest factor 4 (12dB)

* Specified at 8 Ω

Additional descriptive data

Cabinet construction	Cross grain laminated multiplex
Finish	Nano-armor™ coating
Weight	25Kg
Size WxHxD (mm)	395 x 600 x 405 (trapezoid)
Rigging points	Integrated SPX flypoints, recessed pole mount.
Audio connectors	IEC XLR-3 in/out
Main connectors	Powercon in, Powercon out
Max. operating temp.	-10 to 40 C ambient





SPX4

Powerfull full range system

The SPX4 is a self-powered sound reinforcement system with an unrivalled efficiency / weight-ratio. Capable of generating tremendous high acoustic output with ultimate fidelity. Recommended subs are SP215 or SP218. Efficient high-fidelity drivers loaded by an optimized joint waveguide combined with a unique 'balance-drive' horn design deliver perfect voice projection and a punchy bass.

The combination of ultra lightweight cabinet design, neodymium magnet loudspeakers and high efficient class-D amplifiers, results in a convenient, featherweight powerhouse of 45kg only! All you need is 1 minute or less to stack up without back-aches or power lifting and plug in the on-board connector cables. Compared to the majority of comparable systems the SPX4 is a relieve to handle, lift and stack.

Conventional stacking on an SP215 or SP218, brings the SPX4 HF horn immediately positioned at the right height (2.2m) to guarantee unhindered HF projection. EQ time to adapt to room and/or taste is fun not an obligation. Regardless of program, most reported and noticeable discovery by F.O.H. engineers is that they tend to leave the house EQ flat.

Sound Projects' Nano-armor™ coating protects your valuable system against heavy weather, dust, etc. It's easy to clean, durable, and non-reflective. Minimum power consumption and ultra efficient Class-D amplifiers further reduce transport size and transport weight to a minimum.

Acoustical specifications

Drivers	1 x 3" HF (1,4" exit), 1 x 12" LF low weight, neodymium design.
Freq. response	60Hz-20kHz
Max. peak SPL @1m ¹	144dB
Coverage angle	85H x 30V (vertical tilt +10/-20 degrees)

Electrical specifications

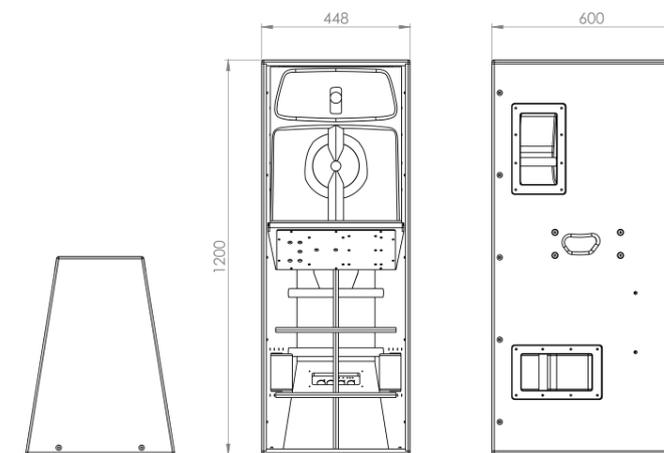
Amplifier(s)	CCD™ technology
Output	1200W* sine LF/100W sine HF (DALC limited)
Crossover	1.4 kHz, 4th order
Filter hipass	60Hz, 4th order switchable to 90Hz 4th order
Input impedance	20 kOhms balanced, 10 kOhms unbalanced
Output impedance	Hard-wired to input
Main voltage	230V (other on request)
Mains frequency	50 / 60 Hz
Idle	< 50VA
Full load	1200 VA. DALC limited Ref. to continuous pink noise signal (12 dB crest factor within the specified range)
Protection	D.A.L.C. (Dual AudioLogic Control)

¹ Peak level at 1M under half space conditions using pink noise with crest factor 4 (12dB)

* Specified at 8 Ω

Additional descriptive data

Cabinet construction	Cross grain laminated multiplex
Finish	Nano-armor™ coating
Weight	44Kg
Size WxHxD (mm)	450 x 1200 x 600 (trapezoid)
Rigging points	Integrated SPX bracket fixtures
Audio connectors	IEC XLR-3 in/out
Main connectors	Powercon in, Powercon out
Max. operating temp.	-10 to 40 C ambient



Gluon

Passive fixed install cabinet



This compact installation speaker holds a 1" silk dome HF driver loaded by a horn with uniform horizontal and vertical dispersion. The horn is optimally shaped to match a frontloaded 6,5" driver. Energy distribution is optimized by carefully matched 24 dB per octave filters build of air coils and MKP capacitors. The Gluon has a power handling of 80W RMS at 8 ohm and a maximum peak SPL of 115dB at 1m with a 45Hz-20kHz frequency range. The system has a coverage angle of 90 degrees horizontal and 60 degrees vertical with a uniform smooth roll-off.

The cabinet is constructed with a highly durable polymer strengthened by internal ribs. The total weight is 3.5 kg only. The Gluon comes with an NL-4 audio in and output connector with dual channel A/B switch selector, so it can be installed efficiently.

The system can be powered externally with up to 4 cabinets per channel, i.e. 8 cabinets on a stereo amplifier.

Acoustical specifications

Drivers	1x 1", 1x 6,5"
Freq. response	45Hz - 20kHz
Max. peak SPL @1m ¹	115dB
Coverage angle	90H, 60V deg. soft roll-off

Electrical specifications

Power handling (RMS)	80W @ 8Ω
Crossover	24 dB/oct
AMP Power (recom.)	160W @ 8Ω

¹ Peak level at 1M under half space conditions using pink noise with crest factor 4 (12dB)

Additional descriptive data

Cabinet construction	Highly durable polymer
Finish	Black coating, white version also available
Weight	3.5 kg
Size WxHxD (mm)	210 x 300 x 195
Rigging points	4 fixing points M6 Mounting bracket (included)
Audio connectors	Switchable 2 channel NL4 (in/out)
Max. operating temp.	-10 to 40 C ambient

X-act

Compact & versatile monitor cabinet

For more than 25 years the X-act is proving to be a most reliable, optimum blend of faithful audio reproduction and versatility. The X-act can immediately be recognised by its perfect voice reproduction. This is because the human ear is extremely sensitive to deviations in this vital part of the frequency spectrum.

The X-act combines a lightweight TSG moulded, ergonomical cabinet construction with aluminum reinforcing and light loudspeaker assemblies. The resulting 14,5kg make the X-act a featherweight to handle but a sufficiently stable floormonitor. The X-act always excels. As an elegant F.O.H. system, an independent distributed system or any type of in-fill. Last but not least the X-act is a near perfect floor monitor.

The SALC (Single Audio-logic Level Control) speaker management is an RMS based gain riding circuit which maintains the tonal balance of the sound as perceived by the human ear. Especially at high levels.

State-of-the-art modelling techniques and acoustic simulation programs dictate rounded cabinet shapes, manifold reinforcing ribs and no parallel surfaces. A shared wave-guide properly loads the 1" and 10" drivers. The result is minimal coloration in the "speech-band" over a wide, yet stable sweet listening spot.

An optional quick release gigbag is available if transport has to be done on the backseat or trunk of a luxury car.

Acoustical specifications

Drivers	1 x 1,7" HF (1" exit), 1 x 10" LF High Power low weight Neodymium design.
Freq. response	50Hz-20kHz
Max. peak SPL @1m ¹	130dB
Coverage angle	100H x 40V

Electrical specifications

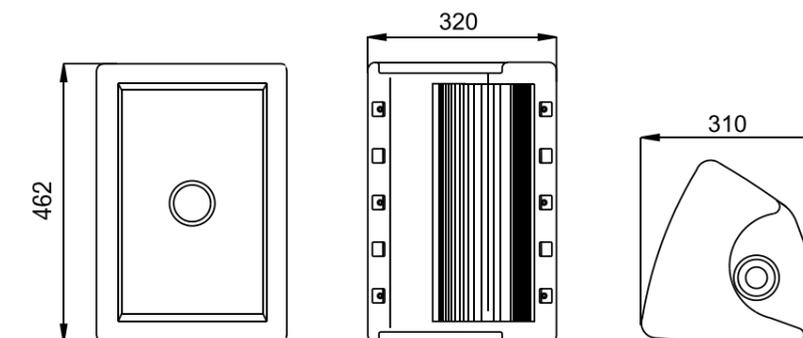
Amplifier(s)	eta-max™ technology
Output	600W* sine LF / 300W sine HF (SALC limited)
Crossover	1.6 kHz, 4th order
Filter hipass	50Hz, 2nd order
Input impedance	20 kOhms balanced, 10 kOhms unbalanced
Output impedance	Hard-wired to input
Main voltage	230V (other on request)
Mains frequency	50 / 60 Hz
Idle	< 50VA
Full load	300 VA. ALC limited Ref. to continuous pink noise signal (12 dB crest factor within the specified range)
Protection	S.A.L.C. (Single Audio Logic Control)

¹ Peak level at 1M under half space conditions using pink noise with crest factor 4 (12dB)

* Specified at 8 Ω

Additional descriptive data

Cabinet construction	Fully recyclable T.S.G. structural compound
Finish	Polyurethane coating
Weight	14.5Kg
Size WxHxD (mm)	320 x 462 x 310
Rigging points	Fixing points M8 for flying bracket (optional), recessed pole mount
Audio connectors	IEC XLR-3 in/out
Main connectors	Powercon in, Powercon out
Max. operating temp.	-10 to 40 C ambient
Comfortable single-hand carrying handle	



X-tender

Low profile monitor cabinet

The SOUND PROJECTS X-tender is an unsurpassed light weight and low profile self-powered loudspeaker system. The rounded, sleek cabinet design easily merges into any stage set up. A near perfect balance between frequency and power response allows a very high gain before feedback. A very efficient 15-inch low frequency driver effectively loads a 3-inch diaphragm compression driver. The custom coaxial transducer configuration is carefully tuned to a 80° point source to effectively dampen potentially harmful peaks.

In monitoring situations the X-tenders performs with a smooth tonal response providing exceptional immunity to feedback. The smooth off-axis roll-off presents a comfortable and predictable sweet-spot for the performer. A convenient feature for vocalists, the monitor mixer and stage crew. The X-tender can be used in two specific floor monitor working angles; relative to the floor a 30° angle for short throw and 60° angle for long throw on deeper stages.

The integrated singlehand carry handle and its low weight of 19 kg (less than 40 Lbs) make the X-tender a pleasure to move around. Even carrying two floors at a time is no problem, saving time and manpower. The bracket (optional) extends the versatile use of the X-tender. With the included polemount it easily turns the X-tender into a fullrange F.O.H system. And without the polemount the bracket facilitates to rig the X-tender underneath a truss or (balcony) ceiling.

Acoustical specifications

Drivers	1 x 3" HF (1,4" exit), 1 x 15" LF High power, low weight, neodymium design
Freq. response	50Hz-20kHz
Max. peak SPL @1m ¹	138dB
Coverage angle	80 spherical, soft roll-off

Electrical specifications

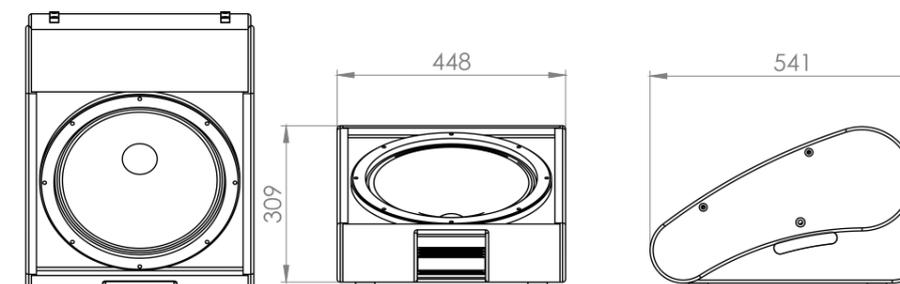
Amplifier(s)	CCD™ technology
Output	1200W* sine LF/100W sine HF (DALC limited)
Crossover	1.4 kHz, 4th order
Filter subsonic	50Hz, 4th order
Input impedance	20 kOhms balanced, 10 kOhms unbalanced
Output impedance	Hard-wired to input
Main voltage	230V (other on request)
Mains frequency	50 / 60 Hz
Idle	< 50VA
Full load	1200 VA. DALC limited Ref. to continuous pink noise signal (12 dB crest factor within the specified range)
Protection	D.A.L.C. (Dual AudioLogic Control)

¹ Peak level at 1M under half space conditions using pink noise with crest factor 4 (12dB)

* Specified at 8Ω

Additional descriptive data

Cabinet construction	Cross grain laminated multiplex
Finish	Nano-armor™ coating
Weight	19Kg
Size WxHxD (mm)	450 x 320 x 540
Rigging points	Fixing points M8 for flying bracket / pole mount (optional)
Audio connectors	IEC XLR-3 in/out
Main connectors	Powercon in, Powercon out
Max. operating temp.	-10 to 40 C ambient
Comfortable single-hand carrying handle	



Configurations

Sub +Top

Real plug-and-play set-up; no worries on impedance or overloading amps or drivers. Need one more cabinet per side? Just plug-in. Need one more again? Just plug-in. If you want more low, simply add more sub cabinets.



SP15 + SPX60 or SPX90

Medium low profile sound system



SP215 + SPX4

Elegant medium sized sound system



SP218 + SPX4

Medium sized sound system

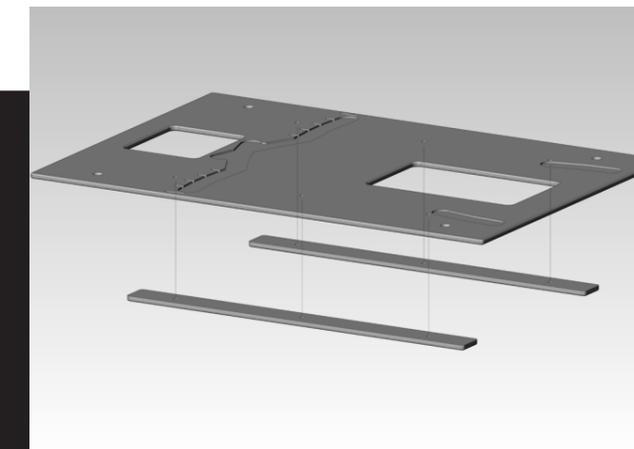
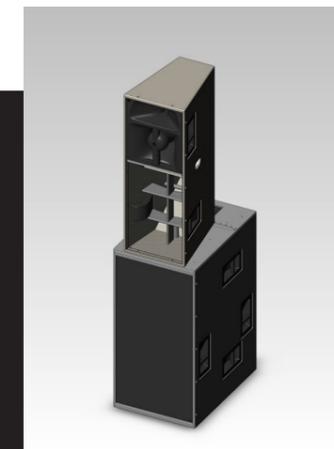
SP18 + SPX60 or SPX90

Powerful low profile sound system.

Double stack systems

If you need more power, the next step is putting more SPX4 with SP218 a side. When you have two or more SPX4 and SP218 a side the SP218 stackplate would be a helpful item to easily set the SPX4 in the correct angle.

When using more than one SPX4/SP218 per side, you can mount the SP218 stackplate on to the SP218 just temporarily or permanently. The stackplate has slots for setting the SPX4 in the correct angle.



Configurations

Dreamline

If you need more dispersion or mid high power please have a look at these configurations or send us detailed information so we can create the perfect setup for your venue.



Dreamline DL2210D + SP215

Theatre and congress

Dreamline DL2210D + Bassline

Theatre and congress

Dreamline DL2210D + Bassline + SP215

Theatre, congress and live

Dreamline DL2340D + 2x SP215

Theatre and live performance

Dreamline DL2340D + SP218

Theatre and live performance

Dreamline DL2450D + SP215MB + 2x SP218 or 2x SP221

High performance large scale sound system

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