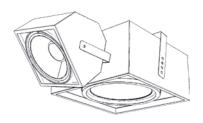
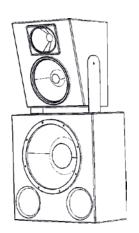
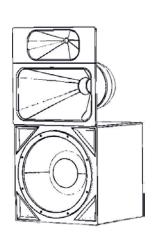
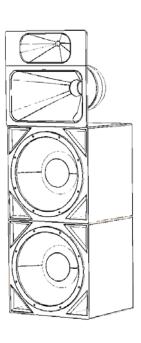


# **CINEMA SOLUTIONS 2020**











# PRESENTATION

We have supplied the professional cinema industry with high-end systems for 35 years, since the early 80's.

With a complete range of products in our portfolio for every need in todays demanding digital cinema theatre installations from small to large format, covering screen speakers, surround speakers, LFE subwoofers, amplifiers, DSP-amplifiers, processors, and foajé sound.

Our focus when designing, developing and manufacturing cinema systems are low distortion levels, high sensitivity, reliability, headroom, longevity, high max SPL, timbre matching and coherent linear phase responce.

To achieve all this we offer a complete concept including DSP processors with the latest in FIR algorithms, high-end amplifiers with PFC (Power Factor correction) universal power supplies, 5:th generationi SMPS, and we only assemble quality components in our speakers, made in the EU from leading suppliers. This in combination with decades of experience in supplying the cinema installation industry results in unsurpassed quality with truly amazing performance.

We have different series in each product category to satisfy the demand in any cinema installation, regardless of budget, without compromise in quality.

### INDEX

2) PRESENTATION

3) CS1000 SERIES CINEMA SCREEN SPEAKERS 2-WAY SMALL FORMAT

4) CS2000 SERIES CINEMA SCREEN SPEAEKERS 3-WAY SMALL TO MEDIUM FORMAT

5) CS3000 SERIES CINEMA SCREEN SPEAKERS 3-WAY LARGE FORMAT

CINEMA SCREEN SPEAKERS REFERENCE SERIES 3-WAY AND 4-WAY LARGE FORMAT 6) XD-SERIES

CINEMA LINE ARRAY MODULE 3-WAY LINE SOURCE LARGE FORMAT 7) C.L.A.M. SERIES

8) CS500 SERIES CINEMA SURROUND SPEAKERS, 2-WAY PASSIVE

9) CS700 SERIES CINEMA SURROUND SPEAKERS, 3-WAY BI-AMPLIFIED

10) CS5000 SERIES CINEMA LFE SUBWOOFERS

11) CS6000 SERIES CINEMA LFE SUBWOOFERS REFERENCE SERIES 12) P4DSP-SERIES 4 CHANNEL SYSTEM AMPLIFIERS WITH DSP 4-8 CHANNEL SYSTEM AMPLIFIERS WITHOUT DSP 13) P-SERIES

SYSTEM AMPLIFIERS WITH DSP, FIR, NETWORK, DANTE, DATABASE, WEBSERVER 14) PDSP-SERIES

15) DSP-SERIES SYSTEM DSP PROCESSORS 4/8, 8/8 16/16 CHANNELS 16) PMA SERIES FOAJÉ MIXERAMPLIFIERS AND ZONE MIXERAMPLIFIERS ZONE MATRIX MIXER FOR MULTI ZONE SIGNAL DISTRIBUTION 17) **Z8000** 

17) VPS SERIES FOAJÉ WALLMOUNT SPEAKERS FOAJÉ CEILING SPEAKERS 17) CSX-SERIES

20) SUGGESTED SYSTEMS



# CS1000 SERIES

2-way Cinema screen speakers for small format

The CS1000 series was designed for small format cinema theatres, passive design using only one amplifier channel, the speakers in the series are compact yet powerful, for full frequency responce, the HF is adjustable vertically and horizontally for precise aim. Shallow design allows for installation where there is limited space behind the screen as is often the case in small format cinema installations. The horn is designed with an assymetrical dispersion pattern, where the horizontal dispersion is wider downwards compared to on axis, resulting in more even SPL distribution in the theatre with very controled directivity. There are four models in the series to encompass all small

sized cinema theatres.

- 4 models
- 2-way passive design with deticated crossover
- Full frequency responce
- Uses only one amplifier channel
- Shallow depth for fitting behind screen
- Assymetrical horns for optimal SPL directivity
- Aimable HF horns vertically and horizontally

	CS1101	CS1121	CS1151	CS11251		
DESIGN	2-	2-way passive L,C, R screen speaker, tuned front-loaded bassreflex				
COMPONENTS	LF: 2 x 10" MF/HF: 1" hornloaded	LF: 2 x 12" MF/HF: 1" hornloaded	LF: 1 x 15" MF/HF: 1" hornloaded	LF: 2 x 15" MF/HF: 1" hornloaded		
SENSITIVITY	103dB 1W/1m.	104 dB 1W/1m.	102 dB 1W/1m.	105dB 1W/1m.		
FREQ. RANGE(-6dB)	55 Hz - 19kHz	50Hz - 19kHz	45Hz - 19kHz	40Hz - 19kHz		
NOMINAL IMPEDANCE	LF: 8 Ω, HF 8 Ω	LF: 4 Ω, HF 8 Ω	LF: 8 Ω, HF 8 Ω	LF: 4 Ω, HF 8 Ω		
NOMINAL COVERAGE	H90 x V60 assymetrical	H90 x V60 assymetrical	H90 x V60 assymetrical	H90 x V60 assymetrical		
INPUT	Speakon or polescrew	Speakon or polescrew	Speakon or polescrew	Speakon or polescrew		
POWER HANDLING RMS	500W	600W	550W	1100W		
POWER HANDLING CONT.	1000W	1200W	1100W	2200W		
MAX SPL CONT. (peak 2pi)	133dB @ 1m.	134,5@ 1m.	132dB @ 1m.	138,5dB @ 1m.		



each of the three components.

The speakers in the series are compact yet powerful, for full frequency responce, the MF/HF is adjustable vertically and horizontally for precise aim.

With deticated LF woofer the MF does not need to reproduce the lowerst frequencies, allowing for better optimization in the MF frequencies. Shallow design allows for installation where there is limited space behind the screen.

There are four models in the series to encompass all small to medium sized cinema theatres.

- 4 models
- 3-way bi-amplified design with deticated passive crossover for the MF/HF, or 3-way tri-amplified.
- Uses only two amplifier channels (bi-amplified versions)
- Shallow depth for fitting behind screen
- Special horns for optimal SPL directivity
- Adjustable MF/HF vertically and horizontally.
- Extended LF frequency responce compared to 2-way
- Timbre matching technology

	CS21511	CS23011	CS21512	CS23012		
DESIGN	3-way bi-ampl	3-way bi-amplified, passive MF/HF, L,C, R screen speaker, tuned front-loaded bassreflex				
COMPONENTS	LF: 1 x 15" MF/HF: 10"/1" horn	LF: 2 x 15" MF/HF: 10"/1" horn	LF: 1 x 15" MF/HF: 12"/1" horn	LF: 2 x 15" MF/HF: 12"/1" horn		
SENSITIVITY	103dB 1W/1m.	103 dB 1W/1m.	103 dB 1W/1m.	103dB 1W/1m.		
FREQ. RANGE(-6dB)	45 Hz - 19kHz	35Hz - 19kHz	45Hz - 19kHz	35Hz - 19kHz		
NOMINAL IMPEDANCE	LF: 8 Ω, MF/HF 8 Ω	LF: 4 Ω, MF/HF 8 Ω	LF: 8 Ω, MF/HF 8 Ω	LF: 4 $\Omega$ , MF/HF 8 $\Omega$		
NOMINAL COVERAGE	H90 x V60	H90 x V60	H90 x V60	H90 x V60		
INPUT	Speakon or polescrew	Speakon or polescrew	Speakon or polescrew	Speakon or polescrew		
POWER HANDLING RMS	LF: 550W, MF/HF: 250W	LF: 1100W, MF/HF: 250W	LF: 550W, MF/HF: 400W	LF1100W, MF/HF: 400W		
POWER HANDLING CONT.	LF: 1100W, MF/HF: 500W	LF: 2200W, MF/HF: 500W	LF: 1100W, MF/HF: 800W	LF: 2200W, MF/HF: 800W		
MAX SPL CONT. (peak 2pi)	137,5dB @ 1m.	140@ 1m.	139dB @ 1m.	141dB @ 1m.		



With hornloaded midrange and highrange design for optimal directivity, and 15" LF with front-loaded tuned bassreflex design for high power low frequency emission.

Avaliable bi-amplified with a deticated passive crossover network handling MF/HF needing only two amplifier channels, and in tri-amplified version where each component has a deticated DSP-controled amplifier channel, using three channels in total. The CS3000-series comes in four models to encompass the need in medium to large format auditorium installations. The MF/HF module is aimable for aligning the speakers depending on need.

- 4 models
- 3-way bi-amplified design with deticated passive crossover for the MF/HF
- 3-way tri-amplified versions with deticated DSPcontroled amplifier channels for each LF/MF/HF
- Bi-amplified versions uses only two amplifier channels
- Hornloaded midrange for directivity control, high sensitivity and and long-throw
- specially designed horns for optimal SPL directivity
- Adjustable MF/HF vertically and horizontally.
- Very high max SPL,
- Controled directivity
- Low distortion levels

	CS31511	CS33011	CS31512	CS33012
DESIGN	3-way bi-amplified, h	nornloaded, passive MF/HF, L,	C, R screen speaker, tuned fr	ont-loaded bassreflex
COMPONENTS	LF: 1 x 15" MF:8" hornloaded HF: 1" horn	LF: 2 x 15" MF: 8" hornloaded HF: 1" horn	LF: 2 x 15" MF: 10" hornloaded HF: 1" horn	LF: 2 x 15" MF: 10" hornloaded HF: 2" horn
SENSITIVITY	LF: 103dB 1W/1m. MF/HF: 105dB 1W/1m.	LF: 106dB 1W/1m. MF/HF: 105dB 1W/1m.	LF: 106dB 1W/1m. MF/HF: 106dB 1W/1m.	LF: 106dB 1W/1m. MF/HF: 106dB 1W/1m.
FREQ. RANGE(-6dB)	45Hz - 19kHz	40Hz - 19kHz	45Hz - 19kHz	40Hz - 19kHz
NOMINAL IMPEDANCE	LF: 8 Ω, MF/HF 8 Ω	LF: 4 Ω, MF/HF 8 Ω	LF: 4 Ω, MF/HF 8 Ω	LF: 4 Ω, MF/HF 8 Ω
NOMINAL COVERAGE	H90 x V60	H90 x V60	H90 x V60	H90 x V60
INPUT	Speakon or polescrew	Speakon or polescrew	Speakon or polescrew	Speakon or polescrew
POWER HANDLING RMS	LF: 550W, MF/HF: 250W	LF: 1100W, MF/HF: 250W	LF: 1100W, MF/HF: 400W	LF1100W, MF/HF: 400W
POWER HANDLING CONT.	LF: 1100W, MF/HF: 500W	LF: 2200W, MF/HF: 500W	LF: 220W, MF/HF: 800W	LF: 2200W, MF/HF: 800W
MAX SPL CONT. (peak 2pi)	137,5dB @ 1m.	143,5dB @ 1m.	143,5dB @ 1m.	143,5dB @ 1m.



Quad-amplified systems with assymetrical horns, very high max SPL, extremely low distortion levels and massive powerhandling. The XD system is a module system that can be installed standard behind-screen but also flewn above screen. Unpunched screens and LEDsreens are coming on strong in the industry with many advantages in visuals, but also introducing a conundrum for how to solve the audio issue. We have designed this system to be flewn above screen, solving the issue with unpunched screens and LED screens. There are integrated hardwares and flightwares for easy installation and setup.



- 3-way and 4-way hornloaded high power
- Bi- tri- and quad- amplified options
- Assymetrical horns for linear dispersion
- Can be installed behind screen vertical
- Can be installed flewn above screen horizontal
- Very high max SPL and power handling
- Designed for large format high end installations
- DSP-controled with advanced FIR coefficients
- Integrated hardware for aiming and flying
- Time coherent linear HF/VHF coaxial ring radiator design (XD111)
- LF, MF/HF and MF/HF/VHF modules can be combined into a system that suits each installation

	XD110	XD111	XD115	XD215
DESIGN	3-way bi/tri amplified module	4-way, tri/quad amplified MF/ HF/VHF module with coaxial ring radiator HF/VHF	Front-loaded tuned bas- reflex LF for optimal low frequency emissions	Front-loaded tuned bas- reflex LF for optimal low frequency emissions
COMPONENTS	MF: 1 x 10" on horn HF: 2" on horn	MF: 10" on horn HF: 4,5" driver on horn VHF: 1" driver on horn	LF: 1x 15" with 4" VC	LF: 2 x 15" with 4" VC
SENSITIVITY (1W/1m.)	MF: 106dB HF: 106,5dB	MF: 106dB HF/VHF: 111dB	103dB	106 dB
FREQ. RANGE(-6dB)	200 Hz - 19kHz	200Hz - 19kHz	35Hz - 300Hz	35Hz - 300Hz
NOMINAL IMPEDANCE	MF: 8 Ω / HF 8 Ω	MF: $8\Omega$ / HF $8\Omega$ / VHF $8\Omega$	8 Ω	4 Ω
NOMINAL COVERAGE	H90 x V60 assymetrical	H90 x V60 assymetrical	-	-
INPUT	Speakon or polescrew	Speakon or polescrew	Speakon or polescrew	Speakon or polescrew
POWER HANDLING RMS	MF: 350W, /HF: 110W	MF: 350W, HF/VHF: 200W	600W,	1200W
POWER HANDLING CONT.	LF: 700W, /HF: 220W	MF: 700W, HF/VHF: 400W	1200W	2400W
MAX SPL. (peak 2pi)	139dB @ 1m.	142dB@ 1m.	140@ 1m.	143dB @ 1m.



distance is only -3 dB for each doubling of distance, compared to standard cinema speakers such as horn and point-source, where there is a typicall loss of -6 dB for each doubling of distance. As comparison, a point-source system with 100dB sensitivity @1W, 1m. will have a SPL of 76 dB at 12 m., whilst a line source system with 100dB sensitivity @ 1W/1m. will have a SPL of 88 dB. at 12 m. and at 24 m. the difference will be 70dB compared to 85 dB, a 15dB difference, with the same output.

The C.L.A.M. line source module consists of two 10" woofer reproducing MF, and four 1" drivers mounted on waveguides and horns handling HF, with one or several high power 2x15" handling LF depending on number of C.L.A.M. modules in the array. Each module has a H110 x V15 degree dispersion, where each module handle a fixed amount of rows, and where each module is independantly adjustable to match room acoustics. Using the advanced 3D acoustic calculation software EASE for prediction and simulation before installation ensures a perfect result.

- Line source technology
- Designed for large format
- Perfect for acoustically challanging installations
- Can be stacked or flewn depending on need
- Integrated hardwares with external connection plates
- Very controled dispersion pattern
- -3dB loss for each doubling of distance compared to point-source with -6dB loss for each doubling of distance
- Module system for adaptable setup

	CLAM21041	CLAM115	CLAM215	CLAM315
DESIGN	2-way passive line source module	LF woofer, front-loaded tuned bassreflex	LF woofer, front-loaded tuned bassreflex	LF woofer, front-loaded tuned bassreflex
COMPONENTS	MF: 2 x 10" HF: 4 x 1" mounted on wave-guide and horn	LF: 1x 15" with 4" VC	LF: 2 x 15" with 4" VC	LF: 3 x 15" with 4" VC
SENSITIVITY (2pi)	103dB 1W/1m.	103dB 1W/1m.	106 dB 1W/1m.	107,5 dB 1W/1m.
FREQ. RANGE(-6dB)	90 Hz - 19kHz	35Hz - 300Hz	35Hz - 300Hz	35Hz - 300Hz
NOMINAL IMPEDANCE	4 ohm	8 ohm	4 ohm	2,6 ohm
NOMINAL COVERAGE	V110 x H15	-	-	-
INPUT	Speakon or polescrew	Speakon or polescrew	Speakon or polescrew	Speakon or polescrew
POWER HANDLING RMS	700W	600W,	1200W	1800W
POWER HANDLING CONT.	1400W	1200W	2400W	3600W
MAX SPL. (peak 2pi)	137,5dB @ 1m.	140@ 1m.	143dB @ 1m.	146dB @ 1m.



designed for fullrange frequency reproduction for an immersive experience in each cinema auditorium, from small to large format cinema theatres. Using a specially designed horn with dispersion of 80 x 60, each surround speaker has a very controled directivity. the baffel has an downwards angle of 15 degree for precise aiming. There are four models in the series, three 2-way passive speakers and one 3-way bi-amplified speaker, mainly designed for ATMOS installations and high end installations where a 3-way surround speaker is preferable.

Using timbre matching techniques enables a seemless transition between screen speakers and surround speakers. Each surround speaker in the 500-series features high sensitivity, low distortion levels, high max SPL and fullrange flat frequency responce.

- 3 models
- 2-way passive design with deticated passive crossover
- 15° baffel-angle for precise aiming
- Integrated mounting hardware in the back
- Installation bracket avaliable
- High sensitivity, low distortion, high max SPL
- discreete design
- Fully covering foam with minimum airflow resistance
- Timbre matching

	CS538	CS548	CS558
DESIGN	2-way passive cinema surround speaker	2-way passive cinema surround speaker	2-way passive cinema surround speaker
COMPONENTS	LF: 1 x 8" MF/HF: 1" horn	LF: 1 x 10" MF/HF: 1" horn	LF: 1 x 12" MF/HF: 1" horn
SENSITIVITY	96B 1W/1m.	99 dB 1W/1m.	100 dB 1W/1m.
FREQ. RANGE(-6dB)	65 Hz - 19kHz	55Hz - 19kHz	45Hz - 19kHz
NOMINAL IMPEDANCE	LF: 8 Ω, MF/HF 8 Ω	LF: 4 Ω, MF/HF 8 Ω	LF: 8 Ω, MF/HF 8 Ω
NOMINAL COVERAGE	H90 x V60	H90 x V60	H90 x V60
INPUT	Speakon or polescrew	Speakon or polescrew	Speakon or polescrew
POWER HANDLING RMS	150W	200W	300W
POWER HANDLING CONT.	300W	400W	600W
MAX SPL. (peak 2pi)	124dB	128dB	134dB



The CS700-Series 3-way high performance surround speakers was designed for high-end cinema installation where design, performance, frequency responce and max SPL are essential for an immersive experience, and where a no-compromize approach is applied for the

best performance. Manufactured with the very best components avaliable for a result beyond most surround speakers.

Furthermore, the CS768 is housed in two seperate cabinets for ceiling mounting, where the MF/HF cabinet is aimable and the LF cabinet is extra shallow, to allow for closed ceiling mounting with bracket. For space-saving and phase aligning, the HF is mounted coaxially on the MF-driver, with a 70° x 70° horn for a controlled directivity.

### **HIGHLIGHTS**

- 3 models
- 3-way high-power bi-amplified with passive crossover for MF/HF
- 15° baffel angle for precise aiming (not CS768)
- Integrated mounting hardware in the back
- 70° x 70° controlled dispersion
- High sensitivity, low distortion, high max SPL
- discreete and visually apealing design
- Fully covering foam with minimum airflow resistance
- Timbre matching
- CS768 features aimable MF/HF, for ceiling mounting in ATMOS

**CS748** 



**CS768** 

The CS768 was designed for tight ceiling-mount with aimable MF/HF, to be installed in ATMOS cinemas

DESIGN	3-way cinema surround speaker biamplified, with coaxially mounted HF	3-way cinema surround speaker biamplified, with coaxially mounted HF	3-way cinema surround speaker biamplified, with seperate aimable cabinet for MF/HF coaxially monted
COMPONENTS	LF: 10" MF: 6,5" HF: 1" on horn	LF: 12" MF: 6,5" HF: 1" on horn	LF: 12" MF: 6,5" HF: 1" on horn
SENSITIVITY	100 dB 1W/1m.	100 dB 1W/1m.	100dB 1W/1m.
FREQ. RANGE(-6dB)	50Hz - 19kHz	45Hz - 19kHz	45Hz - 19kHz
NOMINAL IMPEDANCE	LF: 8 Ω, MF/HF 8 Ω	LF: 8 Ω, MF/HF 8 Ω	LF: 8 Ω, MF/HF 8 Ω
NOMINAL COVERAGE	70° x 70°	70° x 70°	70° x 70°
INPUT	Speakon or polescrew	Speakon or polescrew	Speakon or polescrew
POWER HANDLING RMS	LF: 300W, MF/HF: 200W	LF: 400W, MF/HF: 200W	LF: 400W, MF/HF: 200W
POWER HANDLING CONT.	LF: 600W, MF/HF: 400W	LF: 800W, MF/HF: 400W	LF: 800W, MF/HF: 400W
MAX SPL. (peak 2pi)	134@ 1m.	137dB @ 1m.	137B @ 1m.

**CS758** 



and choise of components are crucial! a LFE subwoofer must be able to reproduce very high SPL with extremely low distortion levels. In todays digital era, the subwoofers must be able to reproduce a wide frequency range down to the lowest infra spectrum.

Our subwoofers are heavily braced, manufactured with 19mm. Medium Density Fibreboard, with tuned front-loaded bassreflex for accurate low frequuency emission.

We have designed the subwoofers as shallow as possible to allow for behind screen installation where there is limited space.

The woofers used is of the highest quality made in the EU, with high sensitivity, high power handling, high max SPL and low distortion levels, resulting in LFE subwoofers with truly astounding specifications and performance.

- 4 models
- Very low tuning for high power infra reproduction
- Shallow depth for tight behind-screen installations
- Front-loaded tuned bassreflex for optimum responce
- Heavily braced Medium density fibreboard cabinet
- High end woofers made in the EU
- Very high sensitivity, power handling and max SPL
- Low distortion levels
- 18" woofers features 4" voice coils
- 21" woofers features 4,5" voice coils

	CS5118	CS5218	CS5121	CS5221
DESIGN	Hea	avily braced tuned front-loade	d bassreflex, extended low fre	quency
COMPONENTS	1 x 18"	2 x 18"	1 x 21"	2 x 21"
SENSITIVITY	100dB 1W/1m.	103 dB 1W/1m.	100 dB 1W/1m.	103dB 1W/1m.
FREQ. RANGE(-6dB)	35 Hz - 120Hz	30Hz - 120kHz	25 Hz - 90kHz	25Hz - 90Hz
NOMINAL IMPEDANCE	8Ω	4Ω or 2 x 8Ω	4Ω	2 x 4Ω or 1 x 2Ω
VOICE COIL DIAMETER	4" (100mm.)	4" (100mm.)	4,5" (116 mm.)	4,5" (116 mm.)
INPUT	Speakon or polescrew	Speakon or polescrew	Speakon or polescrew	Speakon or polescrew
POWER HANDLING RMS	1200W	2400W	1700W	3400W
POWER HANDLING CONT.	2400W	4800W	3400W	6800W
MAX SPL. (peak)	140dB @ 1m.	146@ 1m.	141dB @ 1m.	147dB @ 1m.
DIMENSIONS	W520 x H700 x D350	W600 x H1200 x D500	W600 x H800 x D600	W600 x H1200 x D600



The CS6000-series is the pinnacle of LFE low frequency emission in cinema auditoriums, with the next evolution in subwoofers. With a new longer four layer, split aluminum voice coil, resulting in higher sensitivity, lower distortion, longer Xmax, higher power handling, more gap-energy. With the basket functioning as heatsinks, with ventilation in the neodymium magnet for heat dissapation.

The cones are reinforced for endless hours of high SPL performance, with massive Neodymium magnet for an extreme BL factor. Designed for premium high end cinema auditoriums where performance, SPL and LFE reproductions is essential without compromize.

- 4 models
- Very low tuning for high power infra reproduction
- Front-loaded tuned bassreflex for optimum responce
- Heavily braced Medium density fibreboard cabinet
- High-end woofers made in the EU
- Very high sensitivity, power handling and max SPL
- Low distortion levels
- 18" woofers with 4,5" voice coils
- 21" woofers with 6" voice coils

	CS6118	CS6218	CS6121	CS6221
DESIGN	Hea	avily braced tuned front-loade	d bassreflex, extended low fre	equency
COMPONENTS	1 x 18"	2 x 18"	1 x 21"	2 x 21"
SENSITIVITY	102B 1W/1m.	105dB 1W/1m.	99 dB 1W/1m.	102dB 1W/1m.
FREQ. RANGE(-6dB)	30 Hz - 120Hz	25Hz - 120kHz	22,5 Hz - 90kHz	22,5Hz - 90Hz
NOMINAL IMPEDANCE	8Ω	$4\Omega$ or $2 \times 8\Omega$	4Ω	$2 \times 4\Omega$ or $1 \times 2\Omega$
VOICE COIL DIAMETER	4,5" (100mm.)	4,5" (100mm.)	6" (150 mm.)	6" (150 mm.)
INPUT	Speakon or polescrew	Speakon or polescrew	Speakon or polescrew	Speakon or polescrew
POWER HANDLING RMS	1700W	3400W	2000W	4000W
POWER HANDLING CONT.	3400W	6800W	4000W	8000W
MAX SPL. (peak)	142dB @ 1m.	148@ 1m.	141dB @ 1m.	147dB @ 1m.
DIMENSIONS	W600 x H600 x D550	W600 x H1200 x D550	W600 x H800 x D600	W600 x H1200 x D600



DSP controled 4-channel system amplifiers, three models from 4x350W to 4 x 2600W.

With high-end DSP processors. Networked with GUI software. Each input features 6 EQ points, delay, gain, each output features 7 EQ points, HP-filter and Lo-pass filter 12-48dB/oct. Limiter, Delay, phase. all prophon cinema speakers avaliable for download. Compact size of 1RU 19" allows for tight rackmounting. Avaliable with XLR and Speakon, or Phoenix connectors. Front panel with display and programming buttons for access, load, store and programming without computer and GUI software.

- 3 models 4 four channels
- 4x350W to 4x2600W
- Built in DSP with delay, EQ, HP/LP-filter
- Presets for all speakers
- Onlyl 1 RU in height allows for tight rackmounting
- Light weight SMPS PDU
- 100-240VAC wide mains input
- AES input option
- Networked GUI software
- Display with buttons for acces on frontpanel



	P426DSP	P418DSP	P4260DSP	
DESIGN		4 channel System amplifier w	ith DSP, AES	
Power 8 ohm	4 x 350W	4 x 800W	4 x 1300W	
Power 4 ohm	4 x 500W	4 x 1500W	4 x 2400W	
Power 2 ohm	4 x 600W	4 x 1800W	4 x 2600W	
FREQUENCY RESPONCE   CROSS TALK		20Hz - 20kHz   >75	dB	
S/N (20Hz - 20kHz A-Weighted @ 8 ohm	Typical < -105 dB			
DAMPING FACTOR   SLEW RATE	> 800 @ 20Hz - 20kHz   50V/us			
THD+N 1/2 Power	0,3% (typical < 0,1%) 0,1% (typical < 0,05%)			
MAINS POWER	Power	Con 16A / regulated SMPS, 10	0-240VAC, 50-60Hz	
CONNECTORS	4 x XLR analogue / 2 x AES female input, 4 x Speakon output, 1 x RJ485 ethernet connectors, (avaliable with phoenix connectors)			
DSP	4 input, 4 output analogue, 2 AES pairs input. 96kHz / 32 bit, 6 EQ on each input channels, 8 EQ on each output channel incl High-shelf and low-shelf Crossover on each output 12-48dB, Linkwitz-Riley, Butterworth, Bessel. Compressor 3, 6, 12 dB			
SCREEN / CONTROLS	LCD / 4 digital rotary encoders, 5 push select butons			
DIMENSIONS	483 x 390 x 45	483 x 445 x 45	483 x 445 x 45	
WEIGHT	8 kg. net / 10 kg. shipp	oing 10 kg. net / 12 kg. ship	oping 11 kg. net / 13kg. shipping	



## **HIGHLIGHTS**

- 3 models
- 4 channels, 6 channels, 8 channels
- 4x700W, 2x1350W to 6x450W & 8x250W
- Onlyl 1 RU in height allows for tight rackmounting
- Light weight SMPS PDU
- 220-240VAC mains input
- Designed fo cinema installations

# P SERIES

SYSTEM AMPLIFIERS WITHOUT DSP

The P-series is a series of amplifiers without DSP for installation in cinema enviroment, all models housed in a 1RU 19" chassie for space-saving rackmounting. With 4, 6 and 8 channel versions designed for surround speakers, screen speakers and subwoofers, with 4x350W, 4x700W, 2x1350W, 6x450W to 8x250W.

Phoenix connectors in the back allows for quick and easy assembly and connections. The P-series offers proven and reliable technology, Each amplifier can be bridged for more power allocated to fewer channels for subwoofers etc.





	P4700	P6450	P8250
Power 8 / 4 / 2 ohm	4 x 350W / 500W / 700W	6 x 250W / 450W / NA	8 x 150W / 250W / NA
Power BTL 8 ohm	2 x 900W	3 x 800W	4 x 500W
Power BTL 4 ohm	2 x 1350W	3 x 1350W	-
FREQUENCY RESPONCE   CROSS TALK		20Hz - 20kHz   >75dB	
S/N (20Hz - 20kHz A-Weighted @ 8 ohm	Typical >-80dB		
DAMPING FACTOR   SLEW RATE	> 500 @ 20Hz - 20kHz   50V/us		
THD+N 1/2 Power	0,3% (typical < 0,1%) 0,1% (typical < 0,05%)		
MAINS POWER	PowerCon 16A / SMPS, 230VAC, 50-60Hz		
CONNECTORS	Phoenix connectors 3-pin balanced input and 2 pin speaker output / each channel		
DIMENSIONS WxDxH (cm.)	483 x 355 x 45	483 x 355 x 45	483 x 355 x 45
WEIGHT	5,5 kg. net / 7,5 kg. shipping	5,5 kg. net / 7,5 kg. shipping	5,5 kg. net / 7,5kg. shipping



# PDSP SERIES

SYSTEM AMPLIFIERS WITH DSP, FIR, DANTE

The PDSP-series are the pinnacle of system amplifiers, four channel DSP amplifiers with advanced FIR-filter for linear phase and amplitude coefficients, AES input, DANTE, networking, WiFi, web-server. With built-in control system for using tablets and I-pads as control panels where presets, mute, gain and EQ can be set up in a user friendly GUI where the integrator/installer easily can design the GUI with drag and drop functions for creating a menu-system custom with the functions needed. There are an abundance of possibilities for controling, monitoring and connect to external control systems.



#### **HIGHLIGHTS**

- FIR filters for perfect linear and phase coherency
- 4 models with 4x300W to 4x2400W
- Built in DSP with delay, EQ, HP/LP-filter
- DANTE
- Only 1 RU in height allows for tight rackmounting
- Light weight SMPS PDU
- 90-264VAC wide mains input
- AES input option
- Networked GUI software
- All prophon cinema speakers in the database
- WiFi and Ethernet for monitoring and controlling
- Built in control system for external GUI menu in tablets, I-pads etc.
- Magnetic front panels for easy service.

	P4300DSP	P4800DSP	P41200DSP	P42400DSP	
DESIGN	High power system	amplifiers with FIR, AES, DA	ANTE, DSP, network, WiFi, v	webserver, control system	
Power 8 ohm	4 x 300W	4 x 600W	4 x 1200W	4 x 1600W	
Power 4 ohm	4 x 400W	4 x 600W	4 x 1200W	4 x 2400W	
Power 2 ohm	4 x 400W	4 x 800W	4 x 150W	4 x 1800W	
Power bridge BTL 8/4 ohm	2 x 600W / 800W	2 x 1200W/1600W	2 x 2400W/3000W	2 x 4800W/3600W	
CONNECTORS	Phoenix connecors in/out, RJ485 DANTE, Ethernet				
DSP	lo-pass, linear phase RMS voltage, RMS cu ment, 2.5 ms fixed lat Range - 0.005 % THD	m FIR, parametric IIR: peaki (FIR), Butterworth,Linkwitz-f urrent, Peak limiter, Active D ency architecture, AD conve 0+N, DA converters 24 Bit Ta te converter 24 Bit @ 44.1 k	Riley, Bessel: 6 dB/oct to 48 ampingControl™ and LiveIn orters 24 Bit Tandem™ @ 48 andem™ @ 48 kHz 117 dB-	dB/oct (IIR), TruePower™, npedance™ measure- 8 kHz 125 dB-A Dynamic A Dynamic Range - 0.003	

THD+N, Internal precision 32 bit floating point

**DIMENSIONS WxDxH** 

483 x 358 x 44,5



# DSP SERIES

SYSTEM DSP PROCESSORS

The DSP series features three models of DSP processors for handling signal flow, matrix, EQ, delay, HP-filter, LP-filter, Limiter from 4 in / 8 out, to 16 in / 16 out, depending on what system is installed, where external sources can be added into the system and distributet freely to output channels.

- 3 models 4/8, 8/8, 16/16
- 31 band EQ + 7 EQ points on each channel
- DANTE optional
- Phoenix connectors
- 96kHz / 32bit DSP
- High-end AD/DA converters
- GUI, Networked





GUI - Graphic Utility Interface software

	<b>U</b> 5P48U	บอนดุดก	DSP1616		
DESIGN		DSP SYSTEM PROCESSORS			
INPUT CHANNELS	4	8	16		
OUTOUT CHANNELS	8	8	16		
INPUT EQ	7 EG	7 EQ POINTS ON EACH INPUT CHANNEL			
OUTPUT EQ	7 EQ POINTS O	7 EQ POINTS ON EACH OUTPUT + 31 BAND EQ ON EACH OUT- PUT			
SAMPLIG RATE		96kHz			
BITRATE		32 bit			
DELAY		2S on each input and output			
CROSSOVER TYPES	'	Linkqitz-Riley, Bessel, Butterworth			
CROSSOVER SLOPES	,	6-48dB/oct			
LIMITER	,	Attack, Threshold, decay, hold			
GUI		Yes, PC software			
DANTE		Optional			



# FOAJÉ SOUND

COMPLETE SOLUTIONS FOR PUBLIC ADRESS

A cinema does not only need sound in each auditorium, in the foajé there is need for background music, cinema trailers, announcements, etc. We offer a complete range of products for foajé sound, with zonemixer amplifiers, architectural compact installation speakers for wallmount, discrete in-ceiling speakers, zone controls, anouncements microphones, Hi-Z and Lo-Z solutions for small to large foajé and public area installations, with the possibility for zones with individual control of source, volume and sound.





# PMA350 - MIXER AMPLIFIER 350W

The PMA350 is a mixer amplifier with 350W. distribution via 70V/100V Hi-Z or 4-16ohm Lo-Z. With 3 x balanced mono line/mick in and 2 x unbalanced stereo in for up to 5 sources, with seperate volume controls for each source and bas treble for master out With built-in media-player MP3-player via USB or SD, and bluetooth, the PMA350 is a simple to use mixer amplifier with many features and functions, if used in 100V, 35 speakers set to 10W/100V can be used, or 70 speakers set to 5W/100V, or 17 speakers with 20W/100V, depending on SPL and distribution needed.



# PMA4240 - ZONE MIXER AMPLIFIER 4x240W

The PMA4240 is a zone mixer amplifier with 4 x 240W amplifiers for powering up to 4 individual zones, with built-in media player with MP3-player via USB and SD, and bluetooth, PMA4240 also features 5 source input, where each source can be routed freely to any or all output zones, with seperate gain and bas/treble controls, each zone out also features a line out for connecting additional amplifiers or to connect to other products for distribution of signals. The amplifier can power Hi-Z 100V/70V and Lo-Z 4-16 ohm, The PMA4240 is usually enough top power all common areas a large format multiplex cinema, there are external wall panels for zone control, and an announcement mick for adressing zones 1-4 and all call.



# PZM8000 - 8x8 ZONE MATRIX

Designed for larger cinema complex with up to 8 sources distributed to 8 zones (can be combined into a 8 in / 32 out zone matrix) where each output zone can use any source with total freedom in signal routing, Furthermore thera are three diffferent external wall panels connected via RJ485 where source and volume can be adjusted and selected, and two of the panels also host local inputs, with stereo RCA input and XLR mick input, or two pcs. XLR input, each with deticated gain control for each local input. The zone anouncement microphon is a gooseneck microphone with table top design, where each zone can be adressed seperately or together with other zones by choise.





# **VPS-SERIES** - WALLMOUNT SPEAKERS

The VPS-series was designed for hig-end architectural installations in public adress, The design is two-way passive wall-mount speakers with a switch for selecting 8 ohm or 100V with different power taps, for both Lo-Z and Hi-Z operation.

There are three different sizes avaliable in black and white, **VPS502** with 5"/0,75" dome tweeter,

VPS602 with 6,5"/1" dome tweeter,

VPS802 with 8"/1,5" dome tweeter.

They are easy to install with the included brackets, several different optional wall-mount hardwares are avaliable.

# **CSX-SERIES** - CEILING SPEAKERS

For discrete installation in ceilings or walls, the CSX-series is a two way speaker series avaliable in three sizes, the grille is frameless with magnets for easy and fast installations, the CSX series comes with white grilles, but black grilles are avaliable and easy to change.

The speakers features both 8 ohm Lo-Z mode, and have a switch for selecting 100V Hi-Z mode with several different power-taps depending on needed power.

CSX502 features a 5" woofer and a 0,75" dome tweeter, CSX602 features a 6,5" woofer with a 1" dome tweeter,

CSX802 features a 8" woofer with a 1,5" dome tweeter.



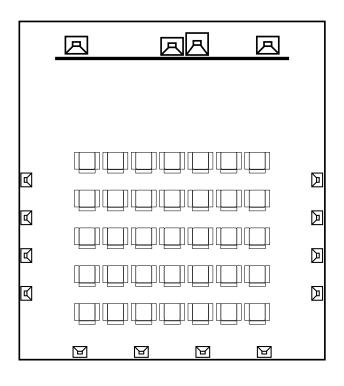


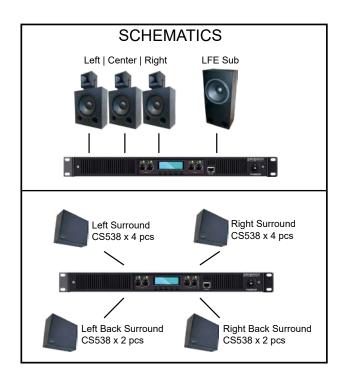
# **SETUP EXAMPLES**

Each cinema auditorium installation is unique, but there are often similar setups in speakers, we have put together some general suggested setups with speakers and amplifiers for a couple of different sizes, in a comprehensive and easy-to-use guideline for fast planing and projecting of a cinema auditorium.

### SETUP 1 - SMALL FORMAT UP TO 30 SEATS, 2-WAY PASSIVE SCREEN SPEAKERS

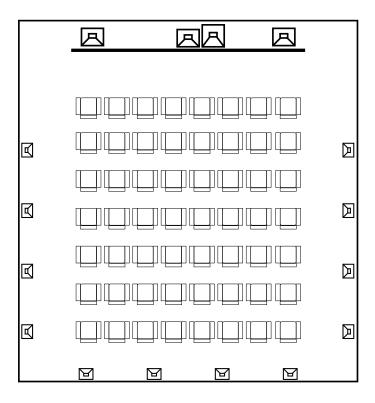


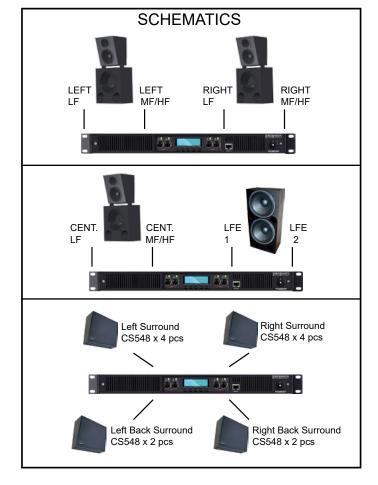




#### SETUP 2 - SMALL FORMAT UP TO 70 SEATS, 3-WAY BI-AMPLIFIED SCREEN SPEAKERS

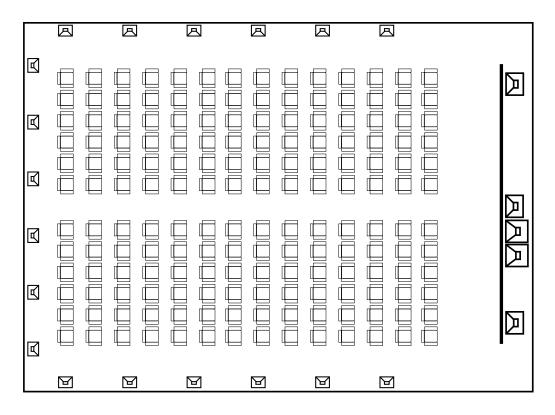
10"/1" CS548 x 12 pcs Surround speakers Screen speakers 15"/10"/1" CS21511 x 3 pcs. LFE Subwoofers 2x18" CS5218 x 1 pc. **Amplifier Surround** P426DSP x 1 Amplifier screen speakers and subwoofer P426DSP x 2

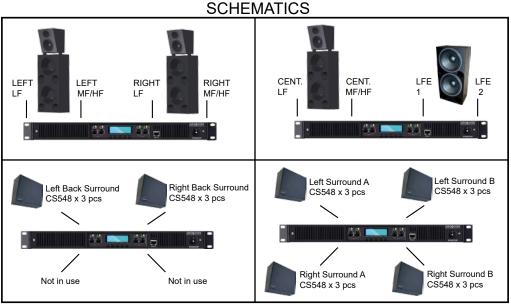




### SETUP 3 - MEDIUM FORMAT UP TO 250 SEATS, 3-WAY BI-AMPLIFIED SCREEN SPEAKERS

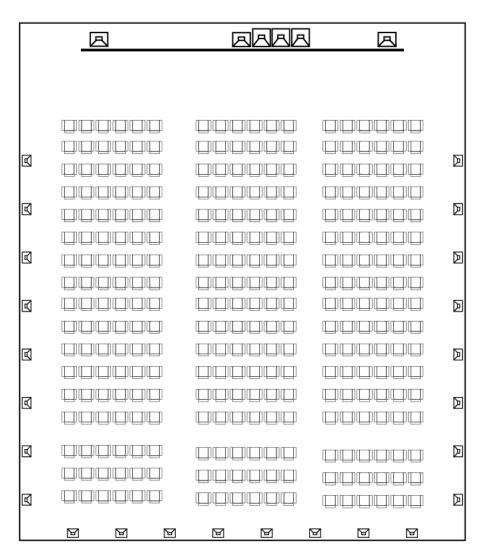
10"/1" CS548 x 18 pcs Surround speakers Screen speakers 2x15"/10"/1" CS23011 x 3 pcs. CS5218 x 2 pc. LFE Subwoofers 2x18" **Amplifier Surround** P426DSP x 2 Amplifier screen speakers and subwoofer P418DSP x 2

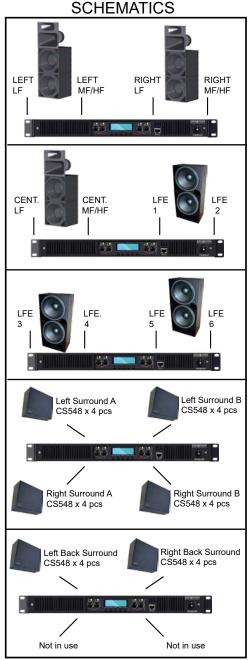




### SETUP 4 - LARGE FORMAT UP TO 350 SEATS, 3-WAY BI-AMPLIFIED HORN-LOADED SCREEN SPEAKERS





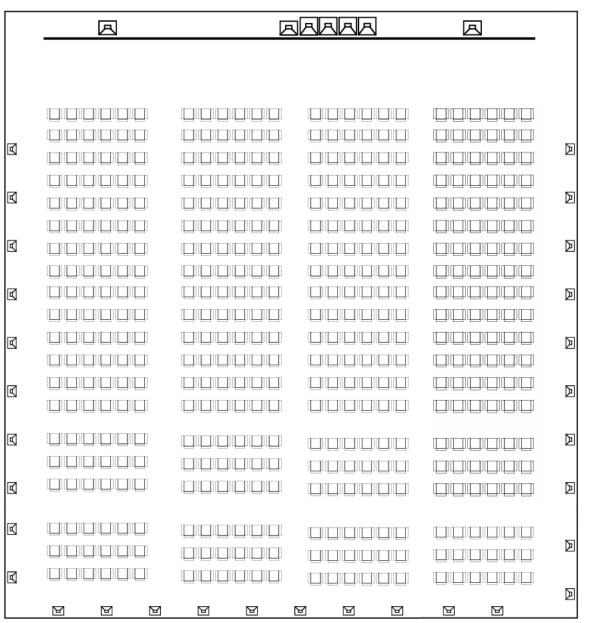


# SETUP 5 - LARGE FORMAT UP TO 700 SEATS, 4-WAY TRI-AMPLIFIED HORN-LOADED SCREEN SPEAKERS

Surround speakers, 3-way bi-amplified 12"/6",5/1" CS758 x 30 pcs XD215/XD111 x 3 pcs. Screen speakers. 4-way, tri-amped 2x15"/10"/4,5"/1" LFE Subwoofers 2x21" CS6221x 4 pc. P41200DSP x 3 Amplifier Surround, 4 x 1500W Amplifier screen speakers, 4 x 1500W P41200DSP x 3 Amplifier subwoofer, 4x2400W P42400DSP x 2

		E	Ø	
☒				Þ
₫				Þ
₫				Þ
				Þ
				Þ
				Þ
				Þ
₫				
				Þ
	<b>B B B</b>	y y		Þ

CS758 x 30 pcs Surround speakers, 3-way bi-amplified 12"/6",5/1" Screen speakers. line array MF/HF module CLAM21041 x 3 pcs. CLAM315 x 3 pcs Screen speakers LF 3x15" LFE Subwoofers 2x21" CS6221x 4 pc. Amplifier Surround, 4 x 800W P4800DSP x 4 Amplifier screen speakers, 4 x 1500W P41200DSP x 3 Amplifier subwoofer, 4x2400W P42400DSP x 2



# DOLBY ATMOS TYPICAL SETUP

Surround / ceiling speakers, 3-way bi-amplified 12"/6",5/1" with aimable MF/HF

Screen speakers. 4-way, tri-amped 2x15"/10"/4,5"/1"

LFE Subwoofers 2x21"

LFE subwoofers side 1x15"

Amplifier Surround, 4 x 400W

Amplifier screen speakers, 4 x 1500W

Amplifier LFE side subwoofers 4x1500W

Amplifier LFE subwoofer, 4x2400W

CS768 x 42 pcs





CS6221x 4 pc.

XD115 x 4



P4300DSP x 21

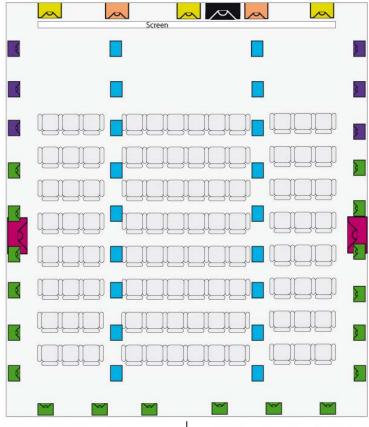


P41200DSP x 5 P41200DSP x 1



P42400DSP x 2





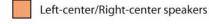
Exisiting 5.1/7.1 speakers:

Left/Center/Right Speakers

Surround/Rear speakers

LFE (subwoofer)

Additional speakers for Dolby Atmos:



Additional side speakers

Ceiling Speakers

Side LFE (subwoofers)

NOTES:		



**CINEMA SOLUTIONS 2020**