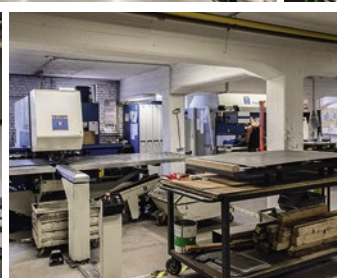




**COSMO**

*THE INTEGRATIVE LINE ARRAY*

**MADE IN ST. WENDEL, GERMANY**





## Join the Family!

There's no doubt about it—I have the world's most enjoyable job! Every day I get to explore two of my greatest interests. For one, there's that fascination with sound and the goal of treating people to the perfect audio experience. That takes a lot of perseverance, and progress only comes in small steps.

Then there's the teamwork I learned to appreciate in the early 1980s as the owner of a PA rental company and later as a maker of PA systems. It's deeply satisfying when sophisticated tools and complex workflows come together in a collaborative effort to create a highly efficient whole.

Two years ago we started working on three new line arrays. The smaller system we tuned for short to medium ranges and very natural-sounding speech and vocals. The medium-sized system covers the middle ground best, striking the right balance for universal deployment. And for the large system, we focused on sound pressure and range. But before we started developing any of this, we sat down at our first team meetings to talk about directivity, coverage, minimized distortion, and smart,

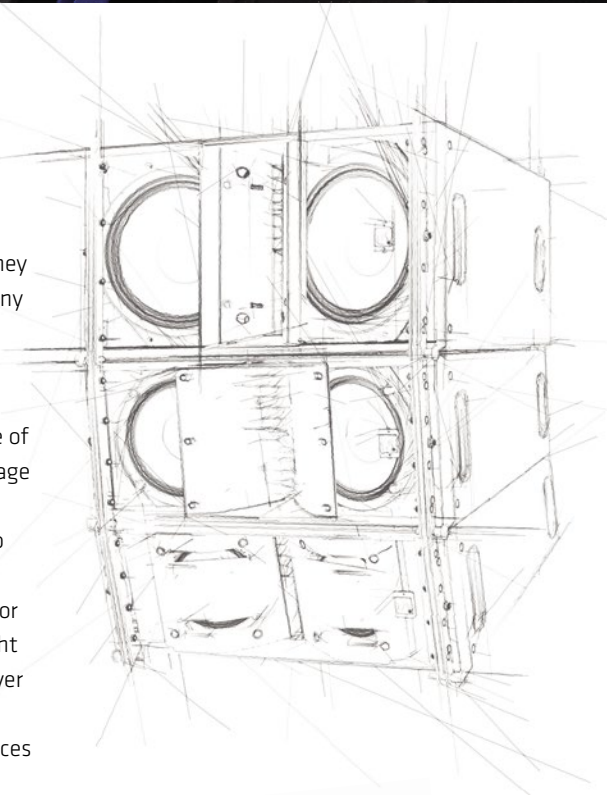
time-saving rigging hardware. But then a new idea took shape, and I believe it's groundbreaking:

Why not design these three systems so they can be freely mixed and matched to suit any application?

The mechanical parts would all have to be fully compatible, to spare users the hassle of fussing with hardware adapters. Its coverage patterns would have to complement one another. And all accessories would have to fit all COSMO systems. We thought this through and set down the specifications for a new type of 'integrative' array. We sought to minimize the component count, yet cover practically all FOH system needs for most rental jobs, from corporate press conferences to open-air rock concerts.

It would have to be a family of systems that grows as you go, adapting step by step to bigger gigs to provide an unprecedented level of investment protection.

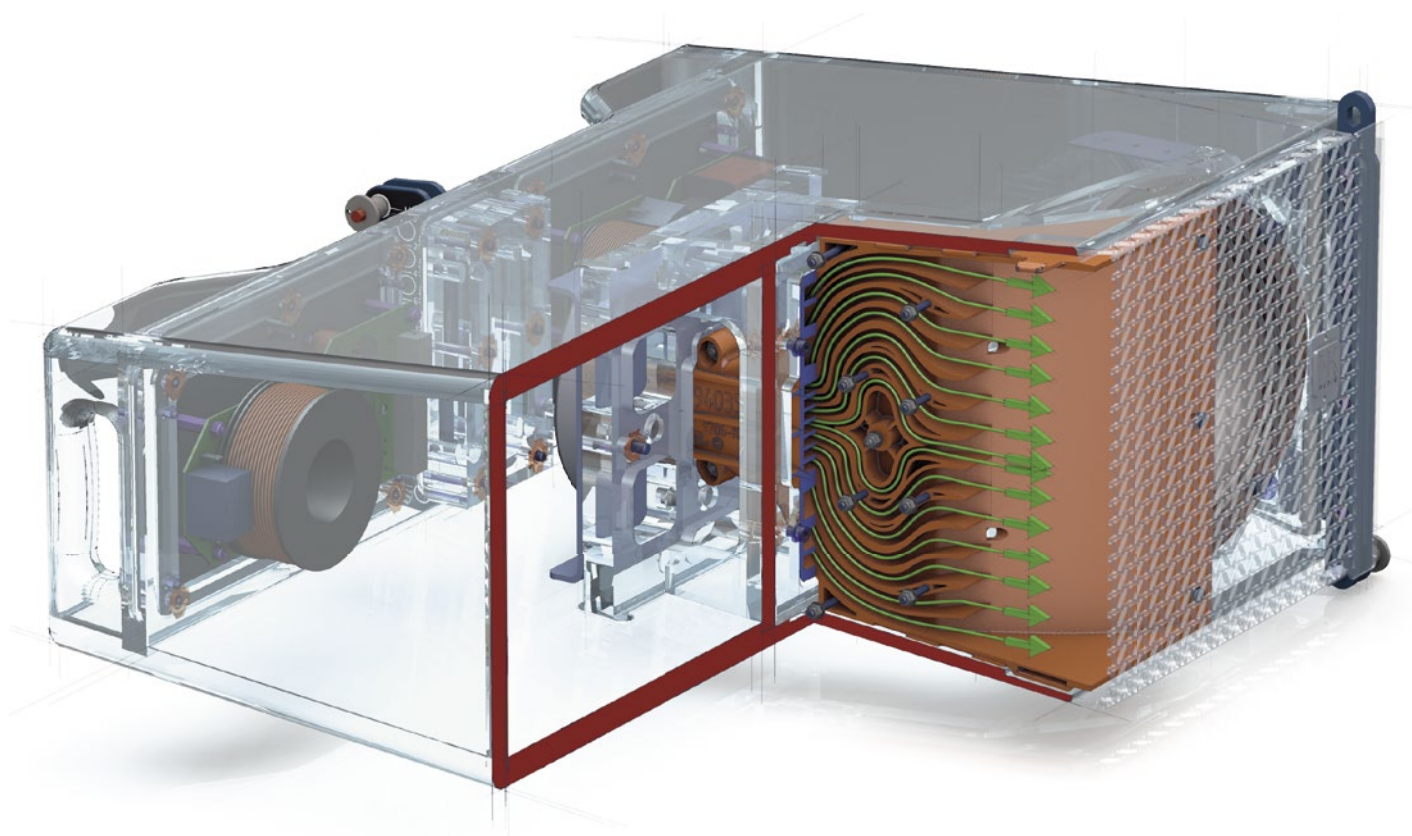
Back in the 80s when I had my own hire company, this is exactly the system I would have wanted!



*L. Stamer*

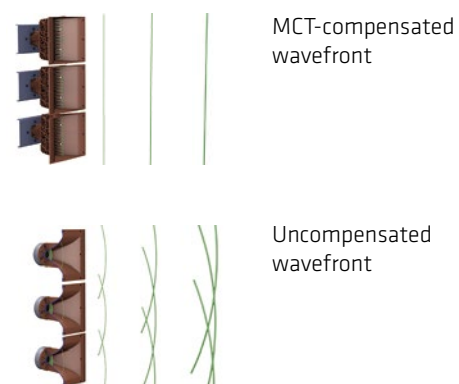
Dipl.-Ing. Lothar Stamer

# MCT - MULTICELL TRANSFORMER



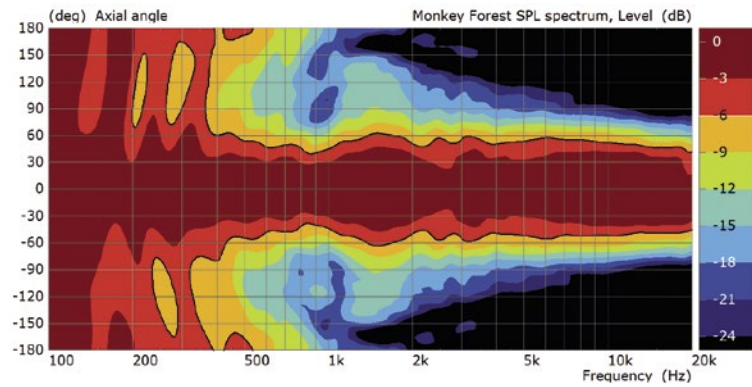
All COSMO mid/high units' high-frequency signal paths are equipped with the HK Audio Multicell Transformer, a technology designed to put two principles into action. For one, it divides the wavefront along vertical lines into many separate horn channels of different lengths calculated precisely to generate different delay times. This goes to straighten the wavefront's vertical curvature and directs the sound so as to create a tight vertical pattern.

For the other, these narrow channels shift undesirable resonances to a frequency range that is beyond the range of human hearing. The difference between this technology and its predecessor, the COHEDRA AcousticLens from 2002, is that it generates far less nonlinear distortion to treat listeners to a richly rewarding audio experience that doesn't result in listening fatigue - even during long performances at high SPLs.



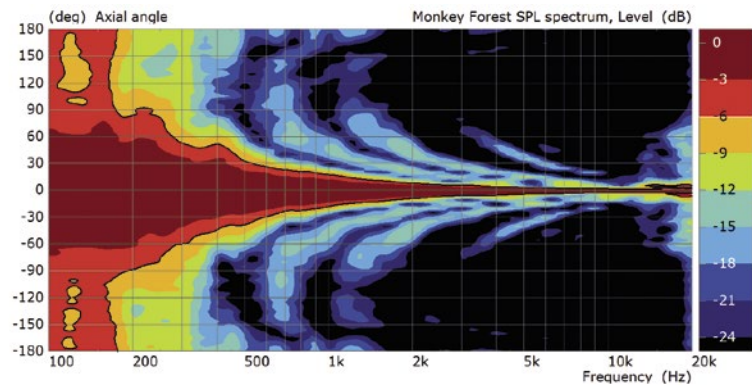
# C 6 - DIRECTIVITY

## C 6 - horizontal



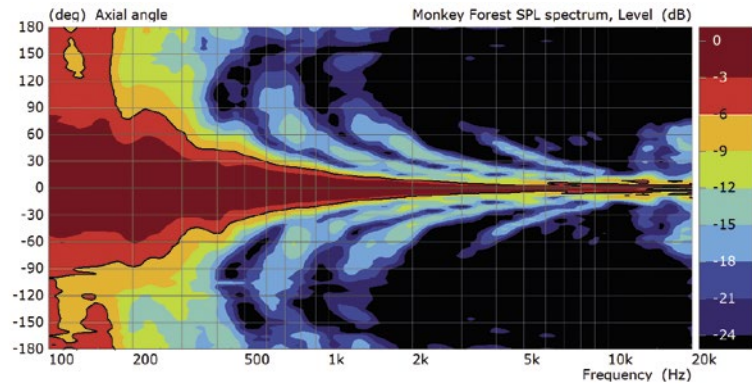
## C 6 - vertical

(3 x C 6 with 0° splay)



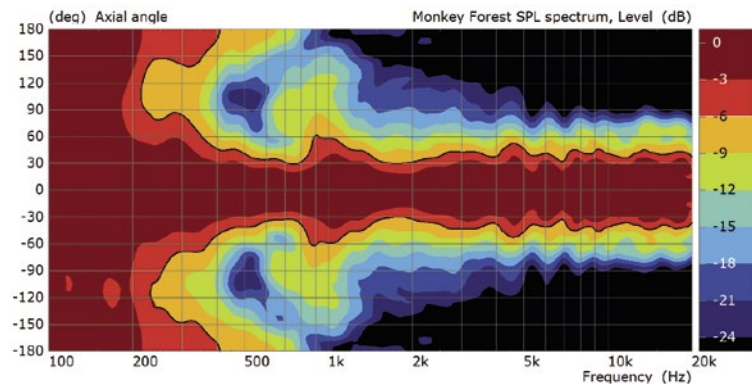
## C 6 - vertical

(3 x C 6 with 3° splay)



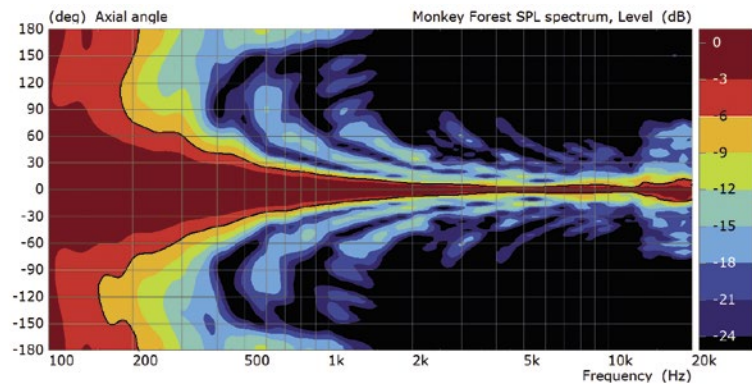
# C 8 – DIRECTIVITY

## C 8 – horizontal



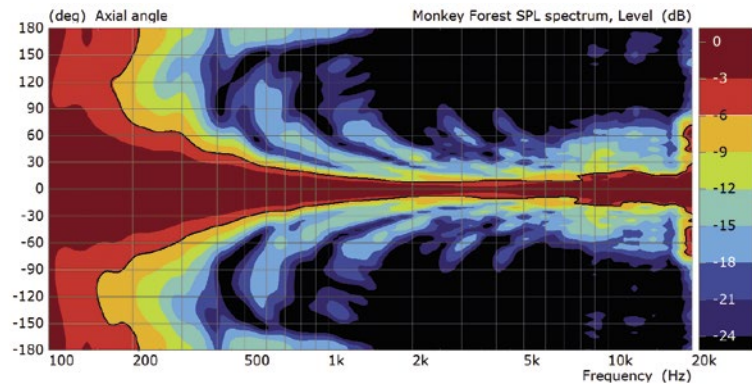
## C 8 – vertical

(3 x C 8 with 0° splay)



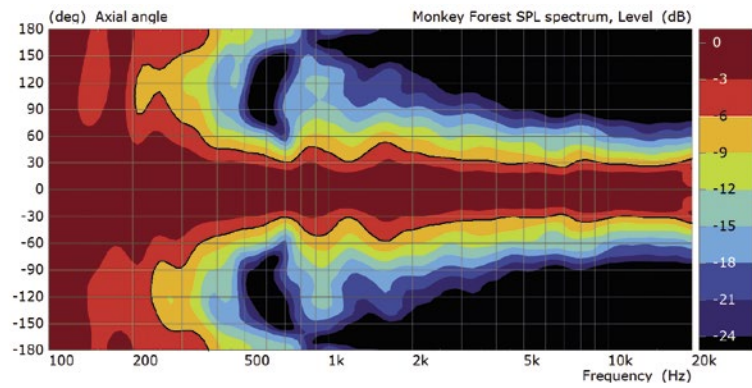
## C 8 – vertical

(3 x C 8 with 3° splay)

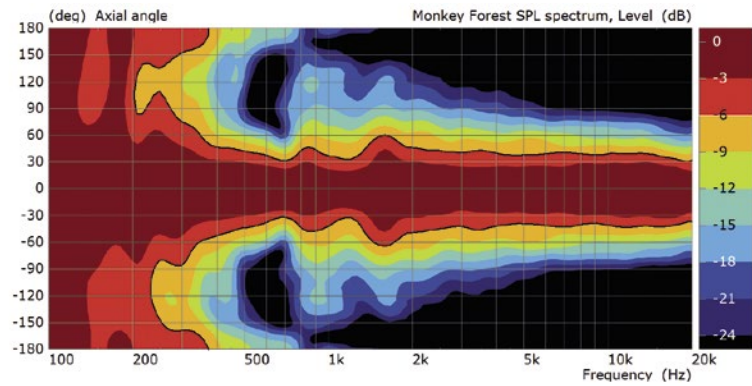


# C 10 – DIRECTIVITY

## C 10 – 60° horizontal

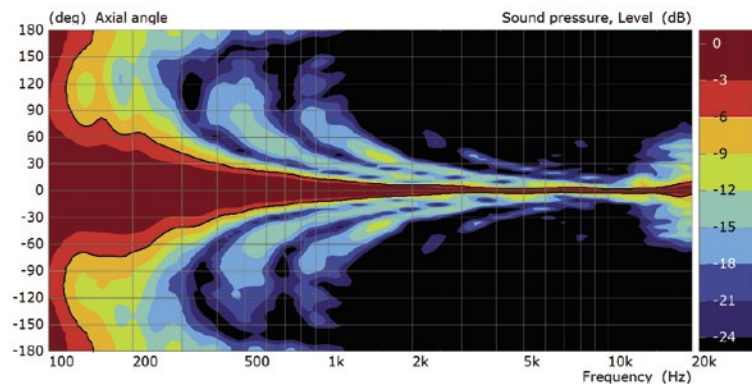


## C 10 – 80° horizontal



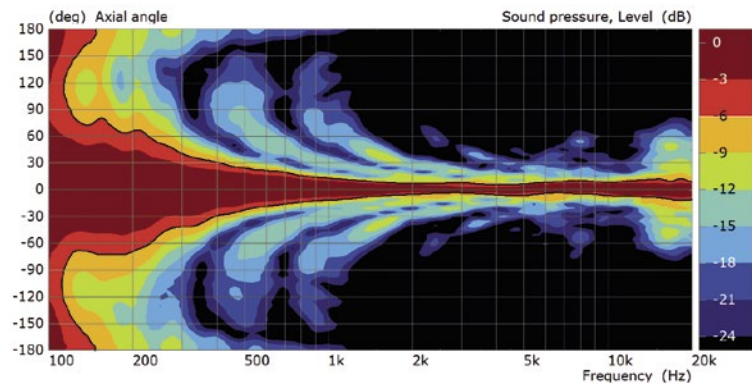
## C 10 – vertical

(3 x C 10 with 0° splay)



## C 10 – vertical

(3 x C 10 with 3° splay)

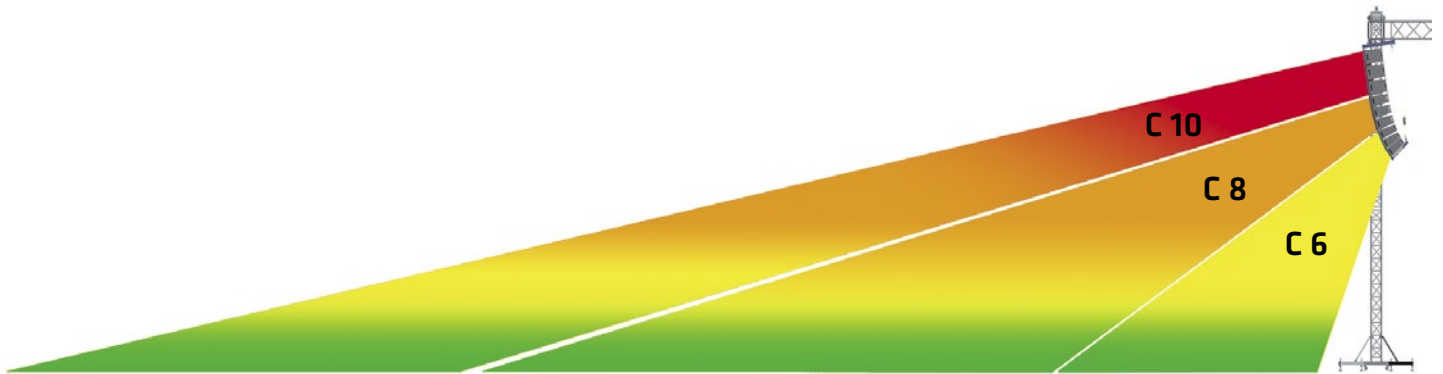


# COVERAGE

One of the great advantages of flown line arrays compared to conventional point-source systems is that they throw sound much further as the sound pressure level drops far less with increasing distance. You can adjust variables such as the array's length, curvature, and the distribution of

power among its components to control a flown array's vertical directivity and, by extension, its range. But conventional line arrays offer little or no control over the throw pattern's horizontal directivity. Out in the real world, this lack of control leaves you at the mercy of chance.

Undesirable reflections may bounce off side walls. Throw patterns fan out more than you would like and may become far too wide at greater distances, spilling over into areas you do not want to cover.

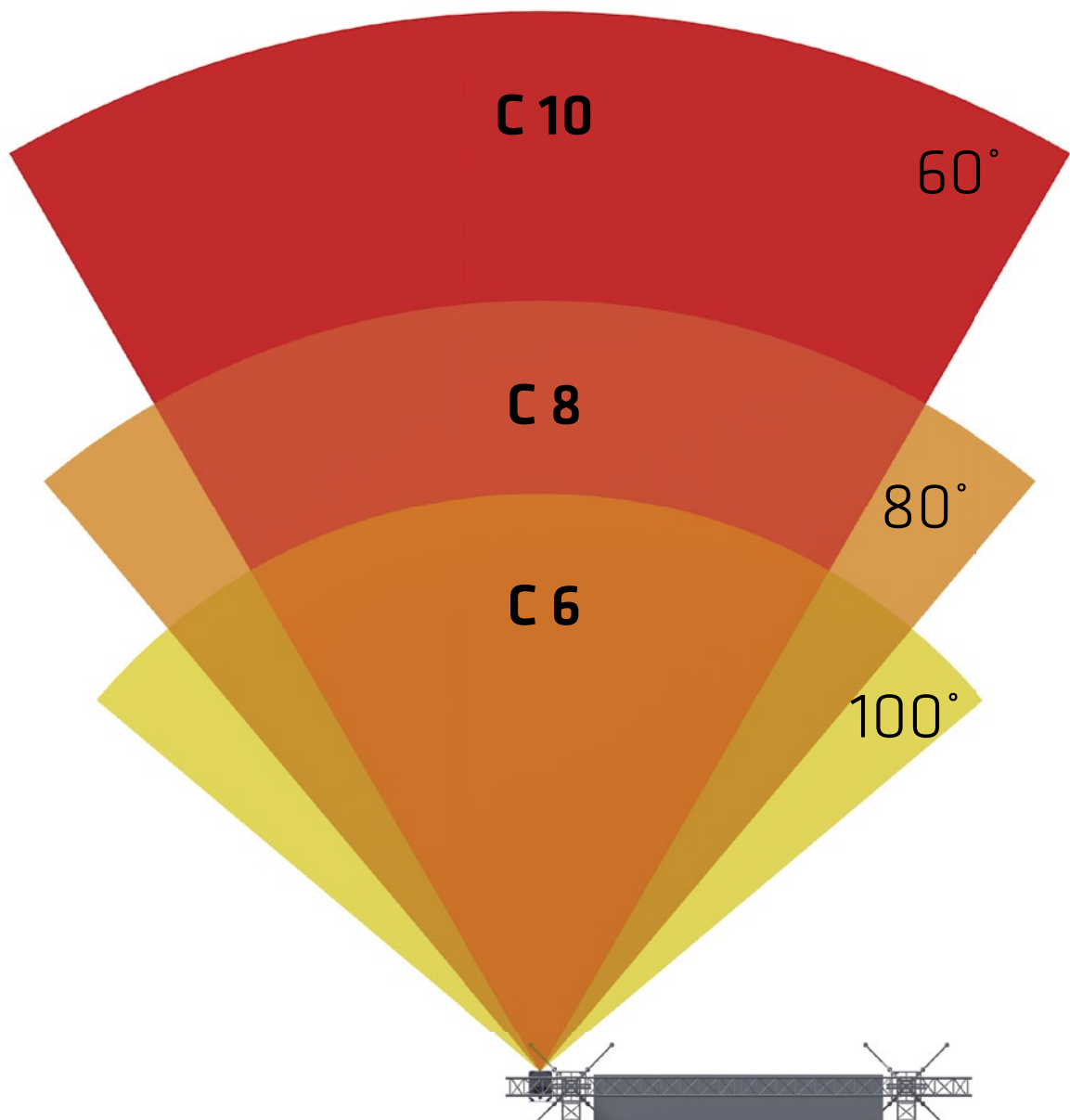


## Long-throw performance

The COSMO family projects sonic energy at a tighter angle to deliver a narrower pattern of throw. As a result, the sound is more directed, travelling a greater distance yet

remaining uniform throughout the coverage area. Longer range, better response – that is very much a desirable outcome.





## Horizontally asymmetrical coverage

It really would make sense for line arrays' throw patterns to be asymmetrical along the horizontal plane. The components at the top of the array should have a narrower pattern because they have to throw sound across greater distances. The pattern should get progressively wider towards the bottom in order to provide plenty of coverage even in

front of the stage. Conventional line array systems' horizontal directivity is constant—typically somewhere around 90° or 100°—to ensure the throw pattern is wide enough over the first few meters. The problem is that the pattern gets very wide at medium distances, so a lot of the sonic energy bounces off walls. At outdoor gigs, much of

it goes to waste when it is directed beyond the flanks of the audience area. COSMO is a whole different story: You can combine its three modular mid/high units to easily configure systems with horizontally asymmetrical coverage patterns. That solves those typical sound reinforcement problems in the best way we've seen yet.

# COSMO ADVANCED RIGGING CONCEPT



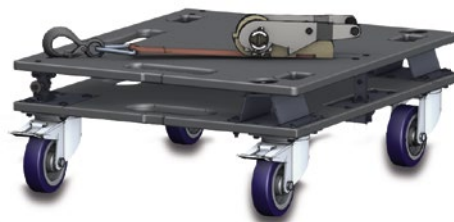
## **COSMO's three-point compressed mode offers a lot very practical benefits:**

### **Easy rigging in tight spaces**

COSMO arrays can be rigged in very confined spaces. All the mid-high units are daisy-chained and hang straight down during assembly. The line is not curved until you compress the entire array.

### **Fewer people, less elbow grease**

The mid/high units stay in a straightforward stack when you're pre-assembling the array. There is no force or tension applied until the final step when you compress the system. What's more, the system is connected at just three points, so you can easily rig it all by yourself.



### Easy-to-adjust curvature

Serving merely to limit travel, COSMO's angle adjustment hardware carries no weight, so you can adjust a flown system's curvature easily and quickly on the fly. Simply loosen the tensioning strap, reposition the ball locking pins to set the desired angle, and recompress the array.

### Fast, effortless disassembly

With the benefit of these convenient features, tearing down is fast and easy. Simply relax the tension, lower package after package onto dolly boards, and roll the rig away.



Transport setting



Compressed mode setting



Fixed mode setting

# COSMO ADVANCED LOGISTICS CONCEPT

Storage and transport are big selling-points when it comes to assessing the cost-effectiveness of sound reinforcement systems. A business-minded buyer is going to consider the two big questions: Does this rig make the most effective use of available space? Does it minimize handling time and effort?

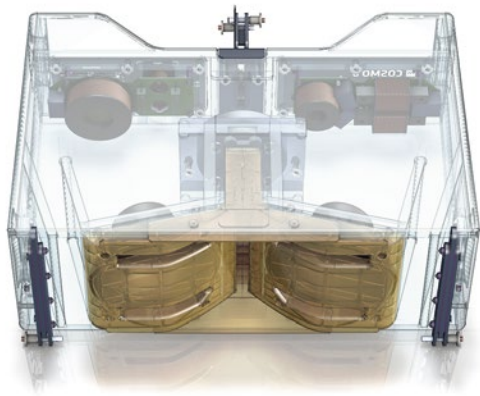
The logistics side of COSMO is not an afterthought; it's a concept based on one forethought—keep it as simple yet smart.

This is why COSMO is a family of extraordinarily few components that are always a perfect fit for the Euro pallet's grid dimensions. This simplifies handling and storage, speeds up loading, and makes the most of truck space.





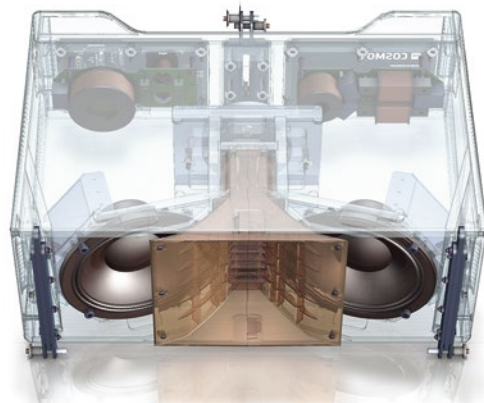
# COSMO COMPONENTS



## C 6 mid/high-unit

Article No. 1007695

- Recommended for ranges up to 30 m
- The wide angle of sound dispersion and low height make the C 6 a versatile main system, or the ideal downfill in a mixed array
- Good fullrange performance, so it is very well suited for public address applications and venues that cannot accommodate separate subwoofers
- No adapters needed, so no gaps when combined with C 10 and C 8 units
- The perfect option for the bottom section of a mixed array

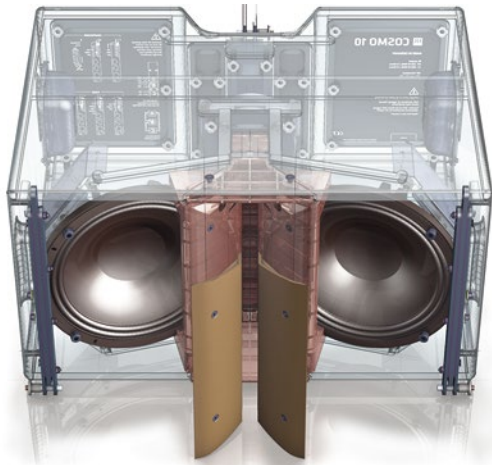


## C 8 mid/high-unit

Article No. 1007662

- Recommended for medium-sized events with ranges beyond 30 m
- With its medium-wide throw pattern, the C 8 is suitable for a broad range of applications
- Asymmetrical pattern can be extended in a modular way by adding C 10 and C 6 units
- Very good fullrange performance
- No adapters needed, so no gaps when combined with C 10 and C 6 units
- The perfect option for the middle section of a large mixed array





## C 10 mid/high-unit

Article No. 1007696

- Recommended for events where extremely high sound pressure levels and/or long throw applications are required
- The horizontal sound dispersion angle is convertible from 60° to 80° (Directivity Converter included)
- Suitable for forming arrays with vertically asymmetric dispersion in conjunction with C 6 and C 8 units
- No adapter frame required for combination with C 6 and C 8 units
- Excellent fullrange properties



## CF 118 subwoofer

Article No. 1007697

- Compact, direct-radiating, high-performance single 18" subwoofer in 60 cm COSMO format
- Flyable version of the CS 118
- Low-resonance design with high electrical load-handling capacity
- Perfect addition to all COSMO Mid/High Units, to setup a fullrange array
- May also be stacked on the ground with COSMO and CONTOUR X components



# COSMO SETUPS

The COSMO family can be configured in the usual flown arrays and stacked in many ways on the ground.



**In a rigging frame to cover stands**



**On a CF-DO base to cover stands**



**As a ground stack for FOH sound reinforcement with CF 118**



**As a ground stack for FOH sound reinforcement with CS 118**



**Satellite system**



**Side-fill or to cover stands**





### C 6 array

With its wide 100° horizontal directivity and low overall height, this array is a great choice when you need to fly the system at lower altitudes. Delivering remarkably low-ranging frequency response for a system of this size and class, it can be deployed for public address applications even without added subwoofers. Its small 6.5" transducers do not have a great deal of mass to move, so it renders even very fine musical nuances with remarkable detail.

Short Throw

C 10

C 8

C 6



### C 8 array

With its medium-wide 80° directivity, high maximum SPL, and a pair of 8" neodymium transducers, this system is suitable for a wide range of applications. When deployed in an array of sufficient length with added subwoofers, it comes highly recommended even for large events with medium-range coverage needs.

Medium Throw

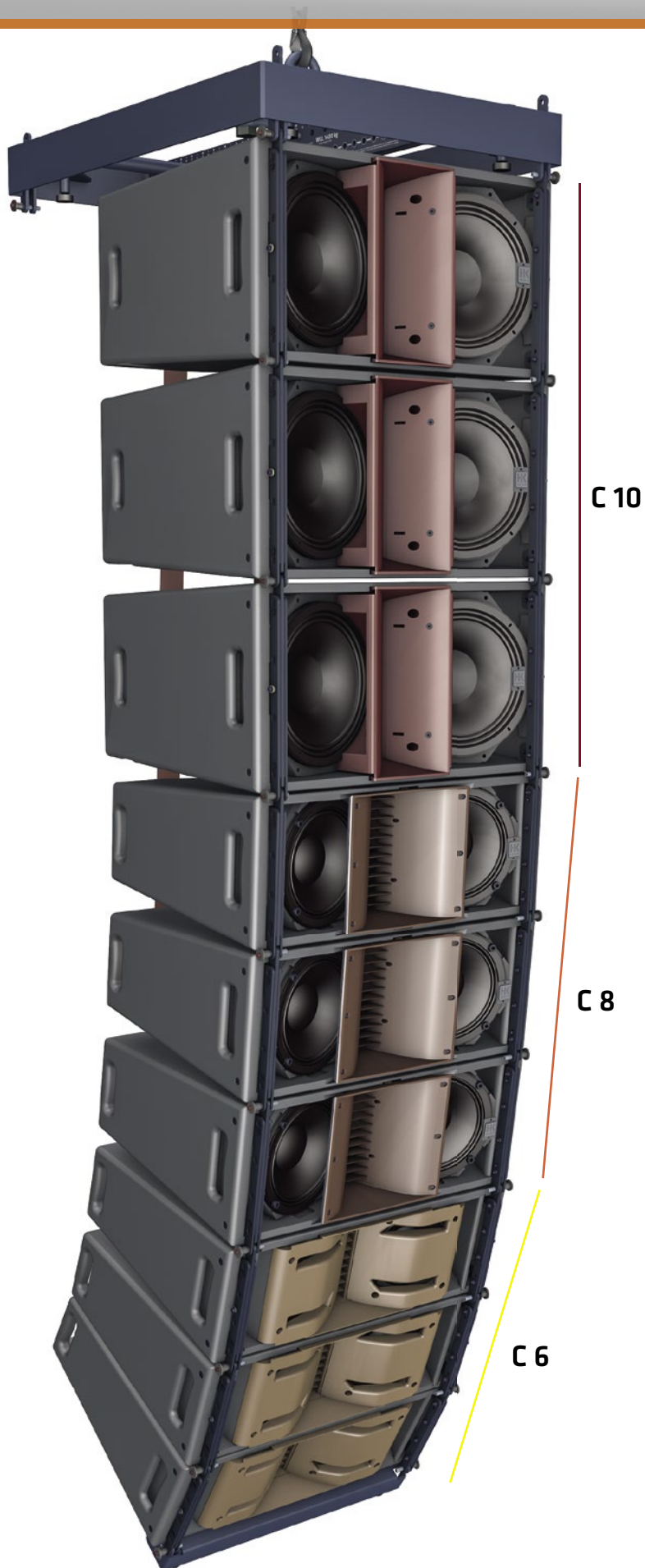


### C 10 array

With its tightly focused 60° horizontal directivity and very high maximum SPL, this mid/high unit can be flown at high altitudes and cover long throw distances. Its two 1.4" compression drivers deliver high-frequency signals even across great distances.

Long Throw

# COSMO SETUPS



## COSMO mixed array

The integrative COSMO family has another unique selling point designed to add tremendous practical value: It lets you configure mixed arrays. These setups consist of two or three types of COSMO mid/high units combined to create a throw pattern that is asymmetrical along the vertical plane. It is very wide in front of the stage, narrows somewhat for medium distances, and is more focused for long distances.

C 6, C 8 and C 10 units are designed to fit together perfectly—no adapter frames needed. Without extra hardware to get in the way of the line sources' signal at any point, this setup emits a uniformly coherent wavefront.



# COSMO SETUPS



# C SUB

Remarkably efficient and able to handle a great deal of power, C SUB series subwoofers deliver impressive sub-bass performance. Their premium-quality components are crafted to the highest standards of workmanship and fine-tuned to deliver the best performance with CONTOUR X point-source speakers and COSMO line arrays.

C SUB series subwoofers feature four Speakon NL4 ports, two in back and two more up front, to make it so much easier to connect cardioid and end-fire setups. The signal from a four-wire line is easily assigned to the C SUB via the Pin Assignment switch.



## CF 118

Article No. 1007697

A compact, flyable version of the CS 118 model, the CF 118 is a direct-beam high-performance 1x 18" subwoofer with large bass reflex ports. The CF 118 is highly efficient with an extremely high load capacity, ensuring that it delivers dynamic headroom down to the lowest frequency ranges. The passive forced cooling of the magnet system in the 18" high-power converter guarantees the best possible cooling of the voice coil and thus ensures reliable continuous operation, even over many hours.

The CS 218 and CS 118 subwoofers' frequency response, phase response and housing dimensions are matched so they can be readily combined to configure subwoofer clusters that deliver excellent audio performance.

The birch multiplex housings are coated with a PU finish; the solid steel front grilles have been treated with an anticorrosive. Caps keep dirt and moisture out of the Speakon inputs. All C SUB series subs are built to stand up to the heavy wear and tear of professional use. They come with everything it takes to keep these speakers running smoothly and their value intact for a very long time to come. We recommend

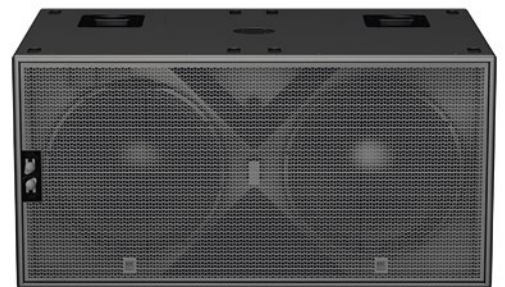


## CS 118

Article No. 1007644

Loaded with one 18" direct-radiating, high-performance transducer, this compact enclosure comes with large bass reflex ports. Tuned for maximum efficiency and exceedingly high power handling, its unusually expansive dynamic headroom extends down to the lowest frequencies. The 18" high-performance transducer's passive forced magnet cooling system keeps the voice coil cool even after hours of continuous operation.

that you use Lab.Gruppen PLM+ and Powersoft X series high-performance power amps to drive these potent subwoofers. Special filter sets are also available for these controller-driven amps if you wish to configure cardioid or end-fire setups.



## CS 218

Article No. 1007645

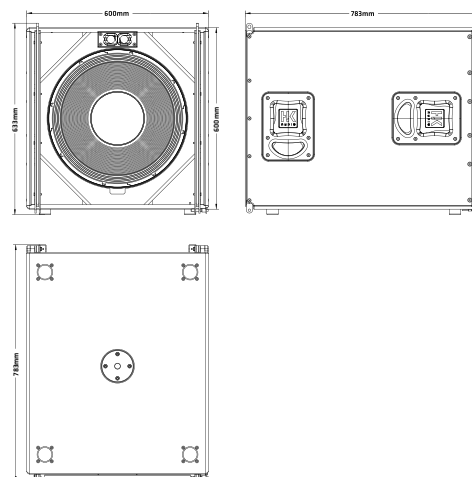
This enclosure is loaded with two 18" direct-radiating, high-performance transducers. Like the smaller CS 118, the CS 218's dimensions are tailored for a perfect fit on standard pallets and truck beds. Designed for convenient handling, this enclosure weighs just 88 kg. It is 7 kg lighter than two CS 118.

# C SUB - TECHNICAL DATA

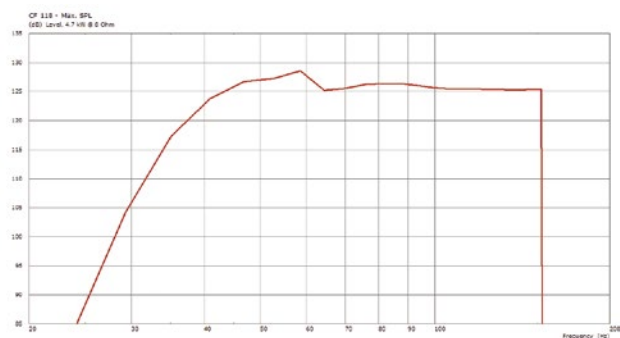


## CF 118

Power-handling nominal (RMS)	1600 W
Power-handling, program	3200 W
Frequency response +/-3 dB	35 Hz - 120 Hz
Frequency response -10 dB	32 Hz - 120 Hz
Sensitivity 1 W @ 1 m	93 dB (40 Hz - 120 Hz), full space
Max. SPL @ 10 % THD (EN 60268-21:2019)	129 dB
Electrical impedance	8 ohms
LF Speaker	1x 18", 4" voice coil
Connections	4x Speakon NL4 (with sealing cap), 2 each front and rear, pin assignment switch
Integrated pole mount	1x M20
Rigging points	4-point rigging hardware with black KTL coating
Carrying handles	4x MultiGrip
Housing	Birch multiplex
Finish	PU coating, black
Front grille	Steel front grill with anticorrosive coating, acoustic foam
Dimensions (WxHxD)	60 x 63.5 x 78.5 cm 23-5/8 x 25 x 30-29/32"
Weight	54.8 kg / 120.8 lbs

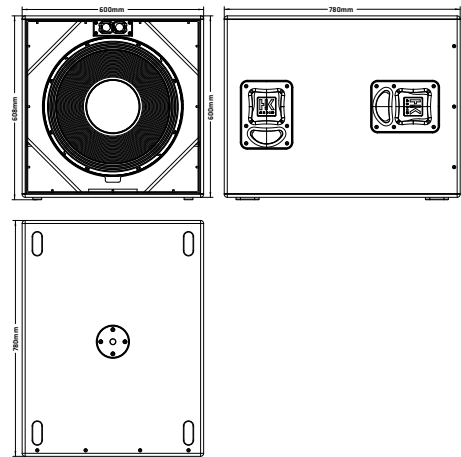
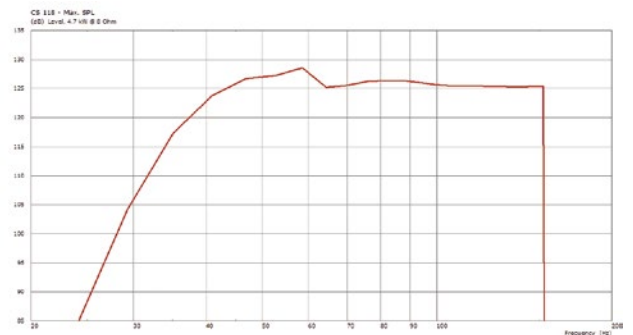


## Max. SPL @ 4,7 kW

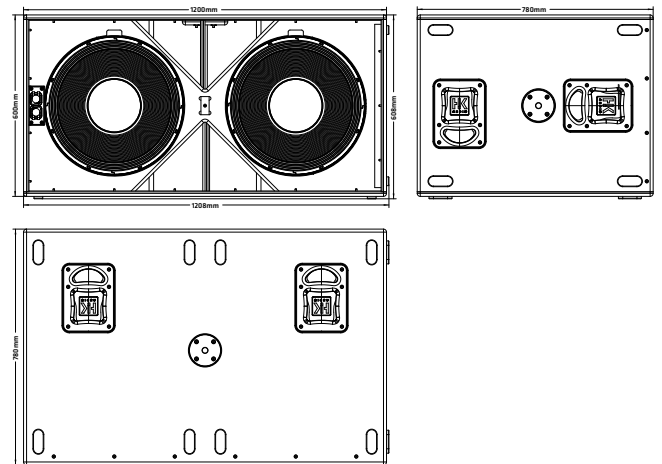
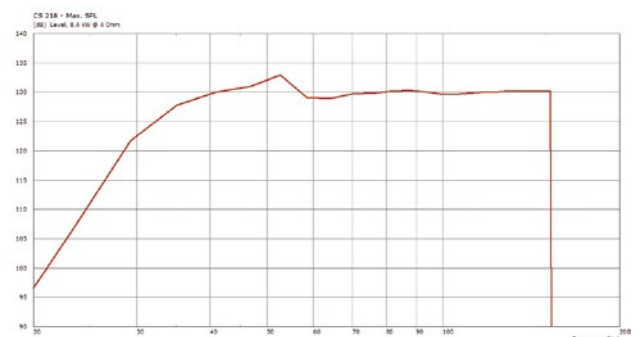


**CS 118**

Power-handling nominal (RMS)	1600 W
Power-handling, program	3200 W
Frequency response +/-3 dB	35 Hz - 120 Hz
Frequency response -10 dB	31 Hz - 120 Hz
Sensitivity 1 W @ 1 m	93 dB (40 Hz - 120 Hz), full space
Max. SPL @ 10 % THD (EN 60268-21:2019)	129 dB
Electrical impedance	8 ohms
LF Speaker	1x 18", 4" voice coil
Connections	4x Speakon NL4 (with sealing cap), 2 each front and rear, pin assignment switch
Integrated pole mount	1x M20
Carrying handles	4x MultiGrip
Housing	Birch multiplex
Finish	PU coating, black
Front grille	Steel front grill with anticorrosive coating, acoustic foam
Dimensions (WxHxD)	60 x 61 x 78 cm 23-5/8 x 24-5/32 x 30-23/32"
Weight	47.5 kg / 105.0 lbs

**Max. SPL @ 4,7 kW****CS 218**

Power-handling nominal (RMS)	3200 W
Power-handling, program	6400 W
Frequency response +/-3 dB	27 Hz - 100 Hz
Frequency response -10 dB	23 Hz - 100 Hz
Sensitivity 1 W @ 1 m	94 dB (30 Hz - 100 Hz), full space
Max. SPL @ 10 % THD (EN 60268-21:2019)	133 dB
Electrical impedance	4 ohms
LF Speaker	2x 18", 4" voice coil
Connections	4x Speakon NL4 (with sealing cap), 2 each front and rear, pin assignment switch
Integrated pole mount	2x M20
Carrying handles	8x MultiGrip
Housing	Birch multiplex
Finish	PU coating, black
Front grille	Steel front grill with anticorrosive coating, acoustic foam
Dimensions (WxHxD)	121 x 61 x 78 cm 47-41/64 x 24-5/32 x 30-23/32"
Weight	88.0 kg / 194.0 lbs

**Max. SPL @ 8,4 kW**

# COSMO RIGGING ACCESSORIES



## CRF-80

Article No. 1007678

The CRF-80 serves as the rigging and adapter frame for all COSMO series mid/high units. It can also accommodate the CF 118 subwoofer. Rated for 700 kg maximum working load (MWL), this rigging frame is used in large COSMO setups with flown subwoofers. When paired with the optional M20 Adapter, this frame connects subwoofers and mid/high units in ground stacks.



## CRF-60

Article No. 1007677

The compact CRF-60 serves as the rigging and adapter frame for all COSMO series mid/high units. With the benefit of its lean dimensions and 350 kg MWL, it is a great add-on for smaller COSMO setups. When paired with the optional M20 Adapter, this frame connects subwoofers and mid/high units in ground stacks.



## CRF-PB

Article No. 1007679

The CRF-PB pullback frame enables compressed mode rigging with the included lashing strap and, with a suitable pole mount adapter, lets you place COSMO mid/high units on speaker stands.



## C-WB

Article No. 1007698

The compact COSMO wheel board is a space-saving alternative for transporting C 6, C 8 or C 10 mid/high units. The fitted cover protects the speaker in transit.



## CF-DO

Article No. 1007769

The CF-DO dolly is used for the safe transport of CF 118 flyable subwoofers. Also available is an optional CF-DO Extension, which allows the base of the dolly to be used for ground stack applications.



## CF-DO Extension

Article No. 1007770

Optional extension for the CF-DO transport dolly. Enables CF 118 subwoofers to be easily added to a ground stack made up of C 6, C 8 and/or C 10 mid/high units.

## C-GSA

Article No. 1007682

The C-GSA ground stack adapter connects rigging frames and mid/high units for use in ground stacks and lets you aim the array by adjusting the tilt angle.







## C-DRIVE 4 PS

Article No. 1990157



## C-DRIVE 4 LG

Article No. 1990116



## C-DRIVE 8 PS

Article No. 1990158



## C-DRIVE 8 LG

Article No. 1990117

## C-DRIVE 4 LG/PS or C-DRIVE 8 LG/PS

C-DRIVE power racks are well-equipped for the rigors for professional use with shock-mount suspension, double sliding doors, 100 mm blue wheels, and a heavy-duty design.

These power amps and the PB 8 Patchbay fit right in with the COSMO concept, which is all about flexibility and versatility for a wide range of applications.

The Lab.Gruppen PLM+ series (C-DRIVE 4/8 LG) and Powersoft X series (C-DRIVE 4/8 PS) are the supported amplifier platforms.

Model	Lab.Gruppen PLM+ 12K44
Product category	4-channel controller amp
Sensitivity	+26 dBu
Total power output (1 kHz burst at a 12-dB crest factor)	4 x 3000 W @ 2 ohms with all channels operative
Inputs	4 x XLR, 4 x AES/EBU, 2 x RJ45, 8 x Dante In/Out
Outputs	2 x Speakon NL4, 1 x Speakon NL8
Processor	Lake
Network	Dante
Gain	22 - 44 dB
Mains voltage/frequency	100 - 240 V 50 - 60 Hz
Dimensions (W x H x D)	48.5 x 8.8 x 42.5 cm 19.09 x 3.46 x 16.73"
Weight	16.5 kg / 36.4 lbs

Model	Powersoft X4
Product category	4-channel controller amp
Sensitivity	+27 dBu
Total power output (calculated, see Powersoft)	4 x 5200 W @ 2 ohms with all channels operative
Inputs	4 x XLR, 4 x AES/EBU, 2 x RJ45, 8 x Dante In/Out
Outputs	2 x Speakon NL4
Processor	Armonia
Network	Dante
Gain	32 dB
Mains voltage/frequency	100 - 240 V 50 - 60 Hz
Dimensions (W x H x D)	48.3 x 4.5 x 49.5 cm 19.02 x 1.77 x 19.49"
Weight	15 kg / 33 lbs

For more technical data and further info, visit the given manufacturer's website.  
[www.labgruppen.com](http://www.labgruppen.com)  
[www.powersoft.it](http://www.powersoft.it)

# ECONOMY 2.0

There have always been several factors to consider when weighing up a sound system's economic efficiency—or bang for buck, if you will. But now the integrative COSMO family of line arrays has factored a few more considerations into that equation.

Yes, this new line of HK Audio systems delivers state-of-the-art audio performance. And it is true that the smart design is as user-friendly as possible. But what makes COSMO so fundamentally different from any other option out there?

Most line array vendors offer several systems in different sizes. The typical enclosure is a two-way system loaded with a pair of 6.5", 8" or 10" speakers chosen to suit the size of the venue and the type of audio signals to be rendered.

Midsize and large rental companies usually invest in two and sometimes three systems of different sizes to meet the varying requirements of different jobs. They often have to combine these systems with one another or with the next larger 2 x 12" or 2 x 15" systems, and that requires special adapter frames.

This is a cumbersome way of setting up an acoustically inferior system that inevitably leaves coverage gaps. That's just the way it is: Companies have to use what they have on hand to get a decent return on their investments.

When we set out to design the new HK Audio COSMO series of line arrays, we were in a unique position that allowed us to factor all the above considerations into the equation from the outset. So, instead of developing one line array system, we came up with an entire family of three systems that can be coupled acoustically and mechanically in a way that achieves the best results – performance-wise and bang-for-buck wise.



**Its economic advantages over conventional solutions are many:**

- Far fewer components to cover a wide range of applications
- Easier handling, faster to set up and tear down with fewer people
- Far lower cost of ownership, far higher return on investment
- More mileage and gigging time out of each component
- A lot less training—once is enough rather than three times for three systems
- Better long-term investment—one system builds on the next and may be extended in small steps
- Simplified storage and logistics
- Much smaller footprint in the warehouse



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**The bottom line:**

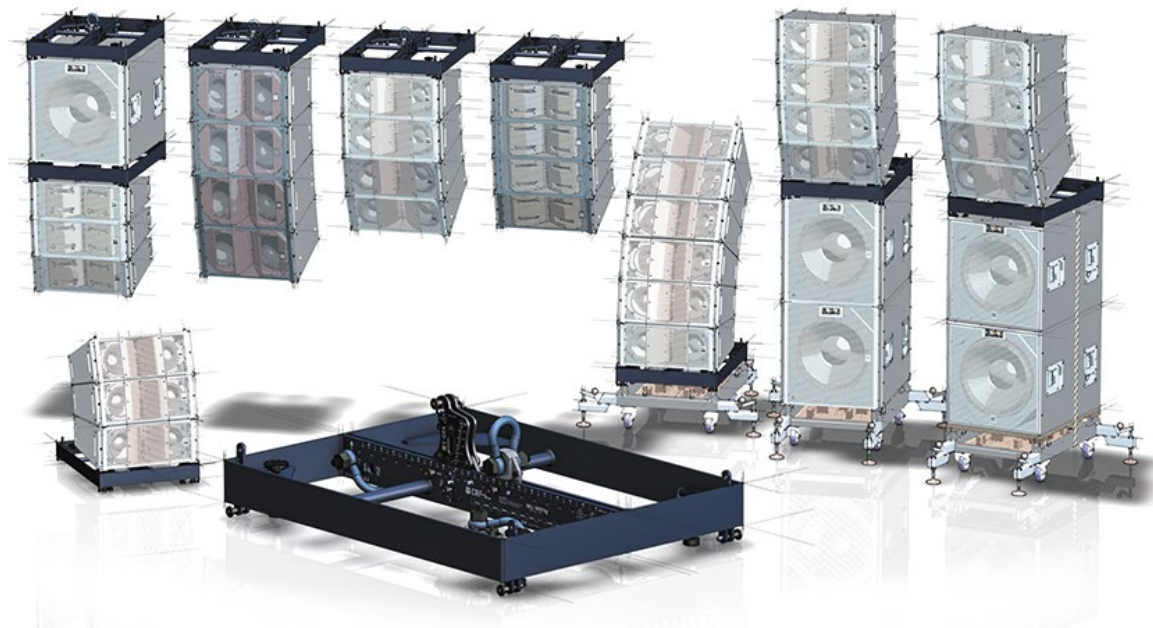
**COSMO is an unprecedented multi-system. Far more economical, user-friendly, and designed to deliver sound to satisfy even the most discriminating demands, it's the real deal, all wrapped up in an all-in-one package.**

# ECONOMY 2.0

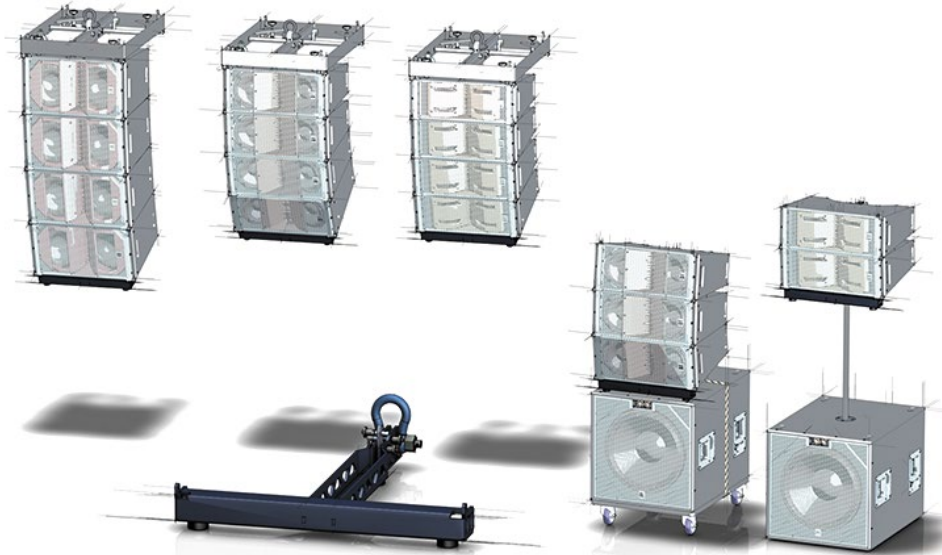
The compact COSMO wheel board is a space-saving alternative for transporting COSMO C 6, C 8 or C 10 mid/high units.



Two frames, the CRF-60 and the CRF-80, cover every rigging application for the COSMO series. They may also be used for various types of ground stacks.



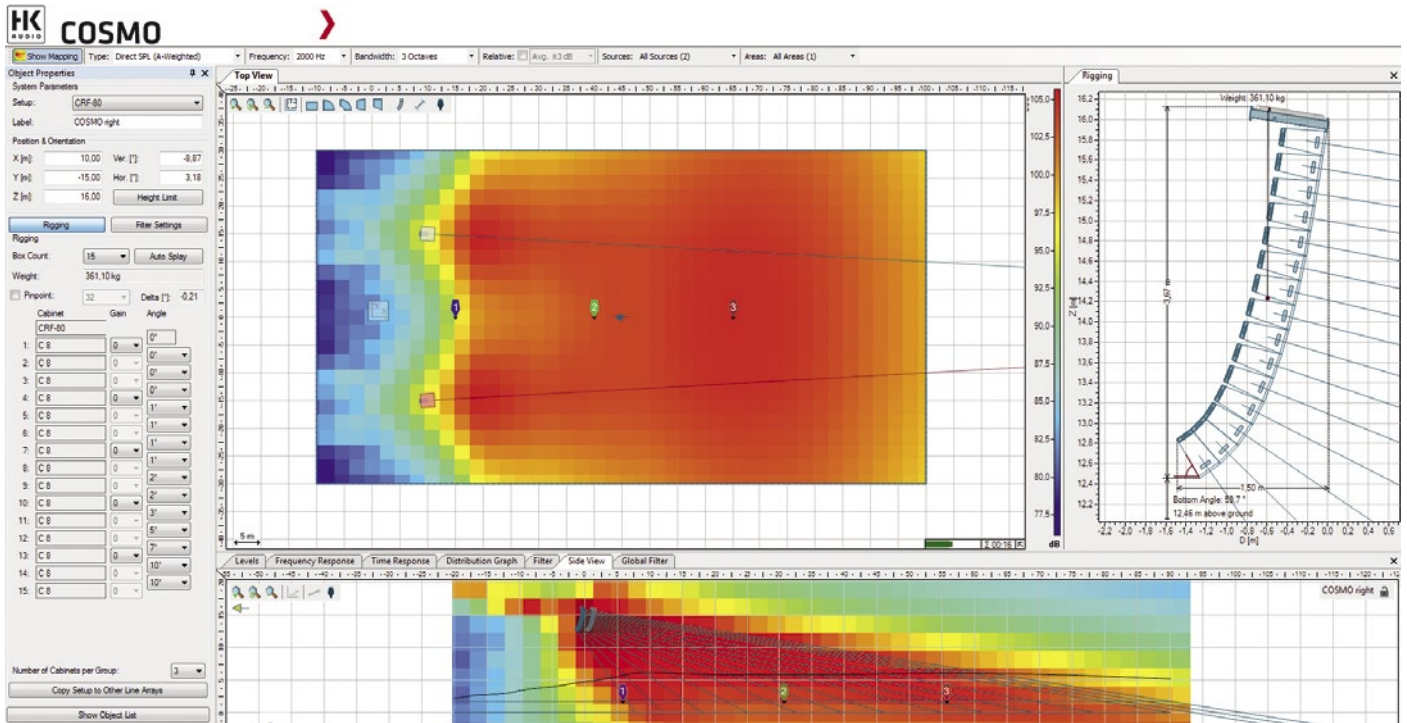
The CRF-PB enables compressed mode operation for all flown COSMO arrays.  
It also serves as the base for satellite system and ground stacks.



The CF-DO professional-grade features facilitate transport and warehousing for the COSMO mid/high units.  
It also adds value as a professional-grade base for bigger ground stacks.



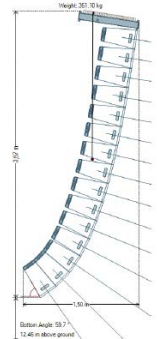
# SOFTWARE



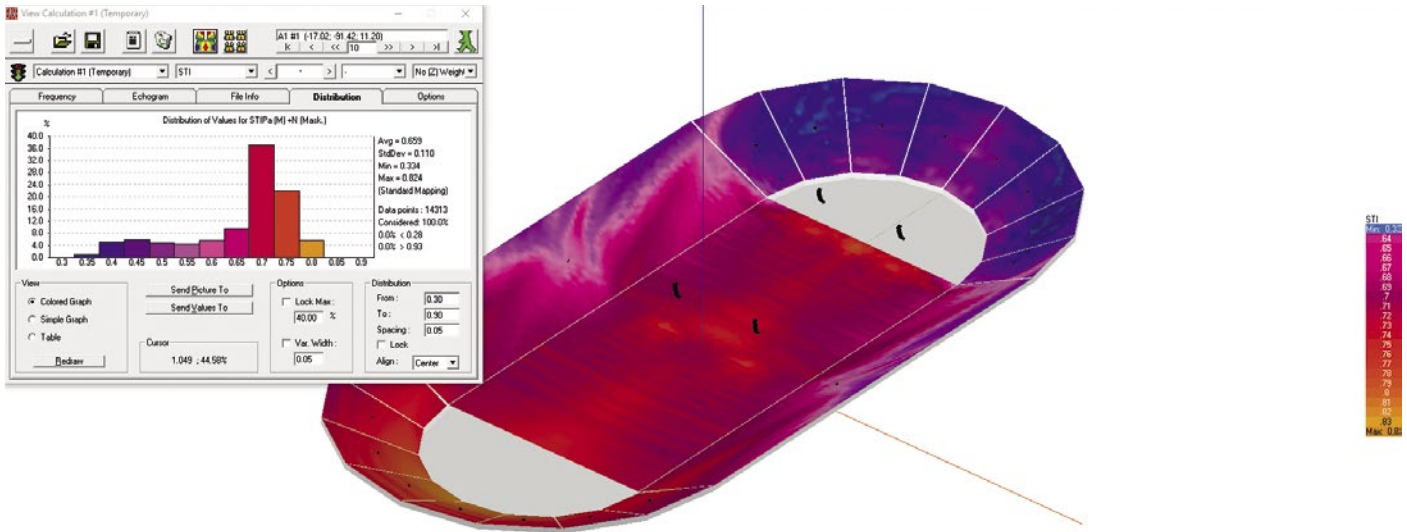
EASE Focus - Version 3.1.5

## 5 Sound Source - COSMO left

System: COSMO  
 Company: HK Audio  
 Label: COSMO left  
 Position: X=10,00 m  
 Y=15,00 m  
 Z=16,00 m  
 Hor=-3,2°  
 Ver=-8,9°  
 Weight: 361,10 kg  
 Setup: CRF-80  
 Box Count: 15  
 Pinpoint Mode: Best Pinpoint  
 Pinpoint Number: 32  
 Remaining Vertical Angle: -0,2°  
 Bottom Angle: 59,7°  
 Above Ground: 12,46 m



Box	Box Type (Frame)	Gain	Rigging Angle	Aiming Angle
Box 1	C 8	0,0 dB	0°	-8,9°
Box 2	C 8	0,0 dB	0°	-9,1°
Box 3	C 8	0,0 dB	0°	-9,3°
Box 4	C 8	0,0 dB	0°	-9,5°
Box 5	C 8	0,0 dB	1°	-10,7°
Box 6	C 8	0,0 dB	1°	-11,9°
Box 7	C 8	0,0 dB	1°	-13,1°
Box 8	C 8	0,0 dB	1°	-14,3°
Box 9	C 8	0,0 dB	2°	-16,5°
Box 10	C 8	0,0 dB	2°	-18,7°
Box 11	C 8	0,0 dB	3°	-21,9°
Box 12	C 8	0,0 dB	5°	-27,1°
Box 13	C 8	0,0 dB	7°	-34,3°
Box 14	C 8	0,0 dB	10°	-44,5°
Box 15	C 8	0,0 dB	10°	-54,7°



## Software

Lake Controller software provides an interface that lets you control Lab.gruppen PLM+ series power amps, and monitor their status and the connected speaker loads. Features lots of customizing and control options, this software runs best on wireless tablet PCs.

With the Armonia Plus Audio Suite, Powersoft also offers a professional platform for controlling its DSP technology. These tools provide everything you need to plan, monitor and fine-tune PAs.

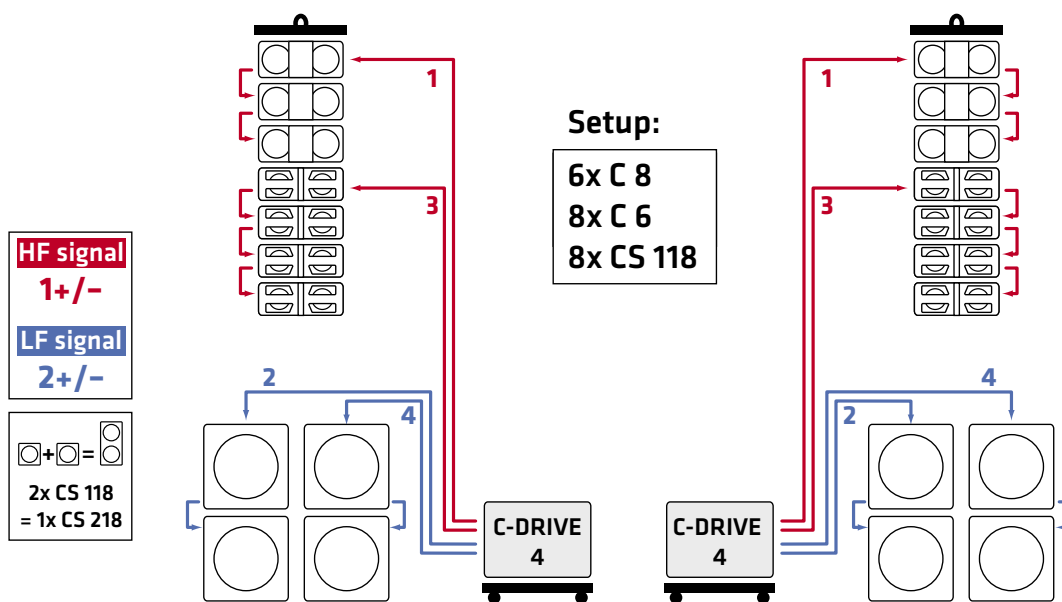
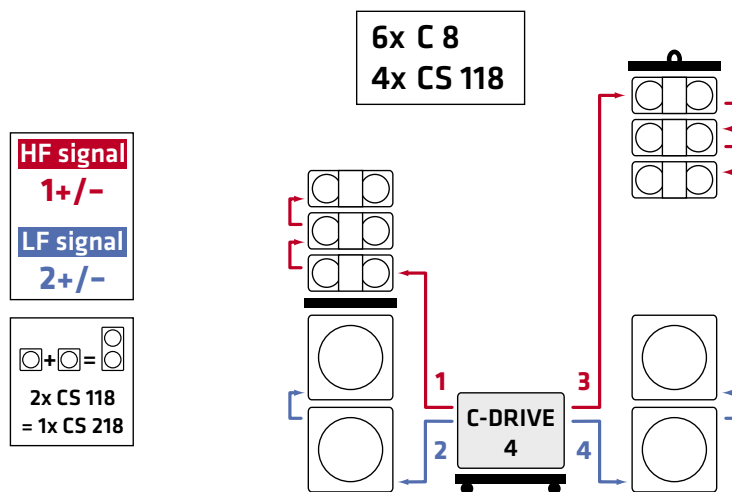
Simulation data sets are available in GLL format for all COSMO and CONTOUR X series loudspeakers. And with EASE Focus 3, you can map out the direct sound for defined coverage areas. Free and easy to understand, it is an indispensable tool for planning line arrays.

You can also use these GLL data sets with the industry standard EASE 4.4 software to simulate other factors beyond the room's acoustics to take into account variables such

as the noise floor and frequency masking at various levels. This lets you do things like make realistic predictions as to the speech intelligibility in any given room.

Another possibility is auralization, where you can model a sound system's performance while taking the room's acoustics into account. This is a great way of giving a less knowledgeable customer an idea of what kind of an audio image can actually be achieved in that venue.

# SUGGESTED CONFIGURATIONS



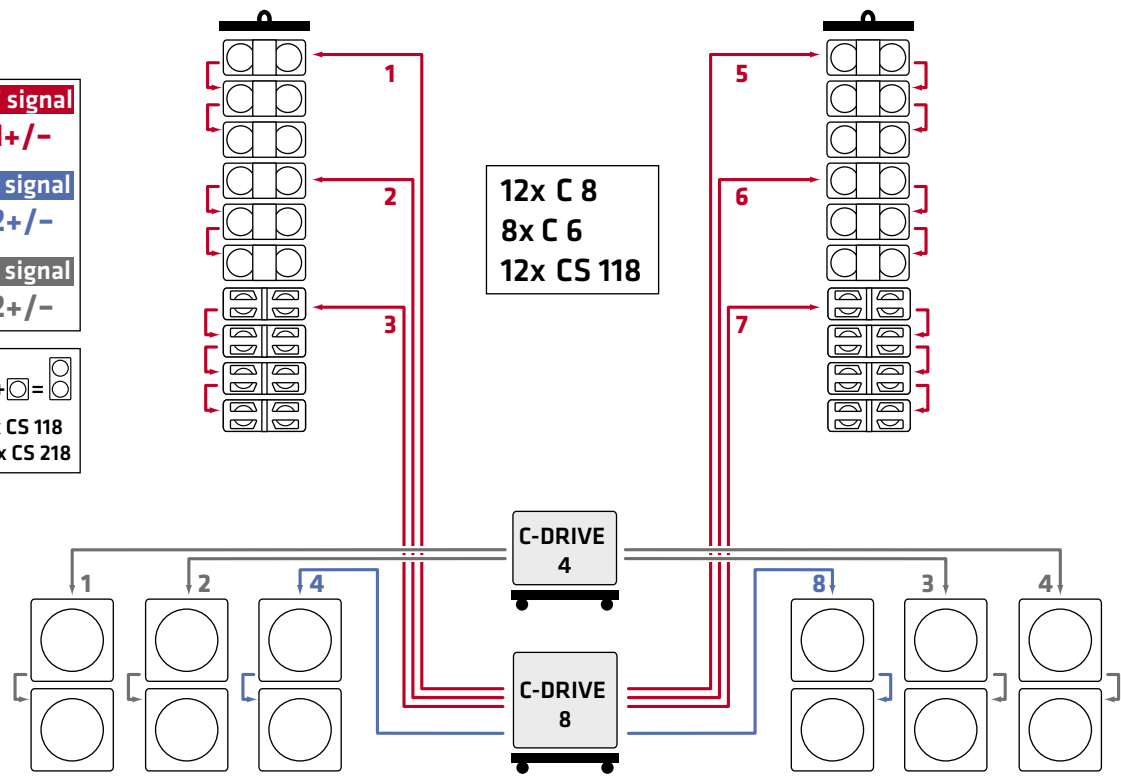


**HF signal**  
1+/-

**LF signal**  
2+/-

**LF signal**  
2+/-

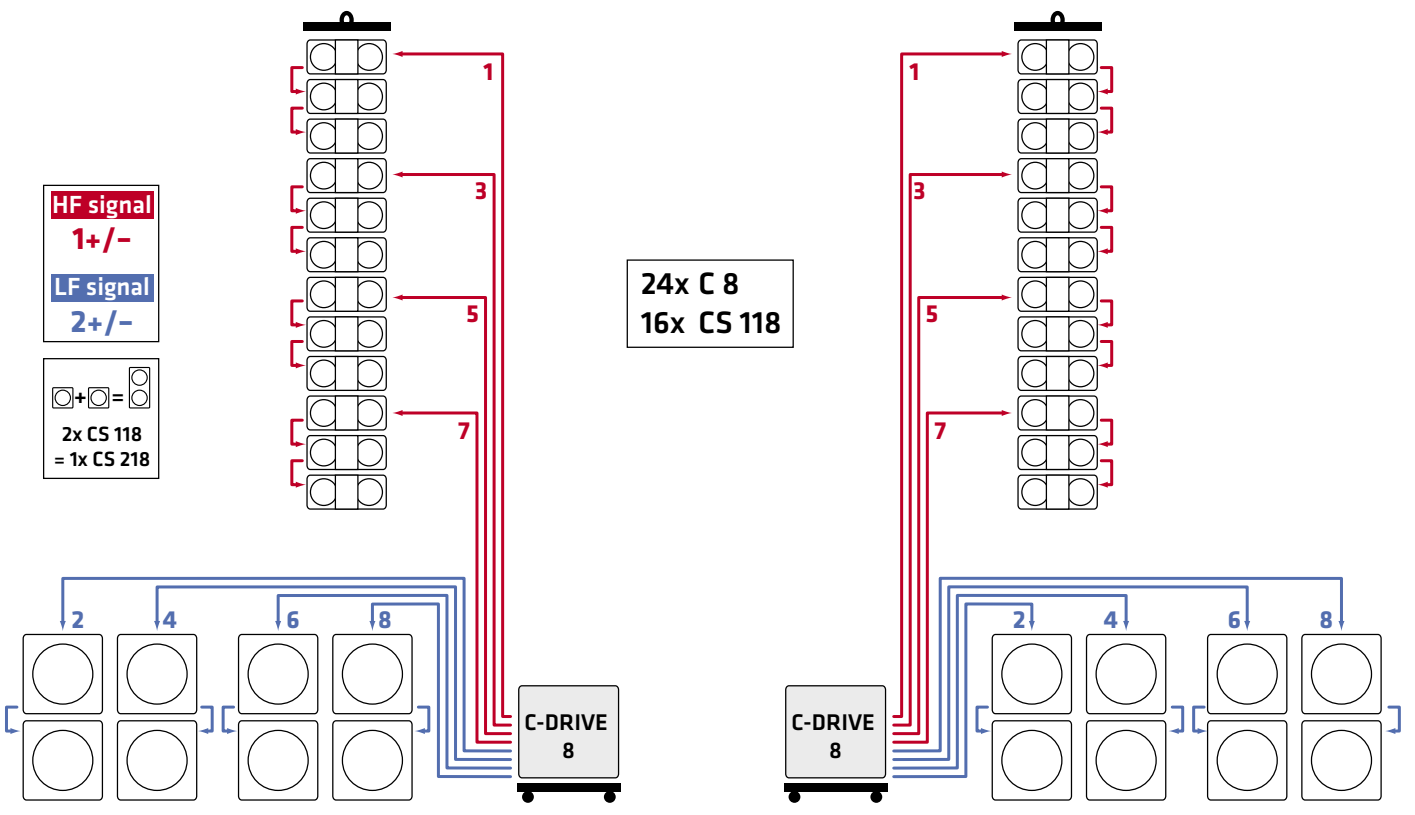
□+□=□  
2x CS 118  
= 1x CS 218



**HF signal**  
1+/-

**LF signal**  
2+/-

□+□=□  
2x CS 118  
= 1x CS 218



# COSMO – TECHNICAL DATA

	<b>C 6</b> Article No. 1007695	<b>C 8</b> Article No. 1007662	<b>C 10</b> Article No. 1007696	<b>CF 118</b> Article No. 1007697
Power-handling nominal (RMS)	400 W	600 W	800 W	1600 W
Power-handling, program	800 W	1200 W	1600 W	3200 W
Frequency response +/-3 dB	75 Hz - 18 kHz	63 Hz - 18 kHz	58 Hz - 18 kHz	35 Hz - 120 Hz
Frequency response -10 dB	70 Hz - 19 kHz	57 Hz - 19 kHz	53 Hz - 19 kHz	32 Hz - 120 Hz
Sensitivity 1 W @ 1 m	102 dB (100 Hz - 10 kHz), full space	103 dB (100 Hz - 10 kHz), full space	108 dB (100 Hz - 10 kHz), full space	93 dB (40 Hz - 120 Hz), full space
Max. SPL @ 10% THD (EN 60268-21:2019)	141 dB (3 units C 6)	136 dB (3 units C 8)	147 dB (3 units C 10)	129 dB
Electrical impedance	16 ohms	8 ohms	8 ohms	8 ohms
Low/mid speaker	2x 6,5", 2" voice coil	2x 8", 2,5" voice coil	2x 10", 2,5" voice coil	1x 18", 4" voice coil
HF Driver	1,4", 3" voice coil	1,4", 3" voice coil	2x 1,4", 3" voice coil	-
Directivity	100° horizontal	80° horizontal	60° horizontal (80° optional)	-
Crossover frequency	1 kHz, 12 dB/oct.	800 Hz, 18 dB/oct.	850 Hz, 12 dB/oct.	-
Connections	2x Speakon NL4 (with sealing cap)	2x Speakon NL4 (with sealing cap)	2x Speakon NL4 (with sealing cap)	4x Speakon NL4 (with sealing cap), 2 each front and rear, pin assignment switch
Rigging points	3-point rigging hardware with black KTL coating	3-point rigging hardware with black KTL coating	3-point rigging hardware with black KTL coating	4-point rigging hardware with black KTL coating
Carrying handles	4x recessed grip	4x recessed grip	4x recessed grip	4x MultiGrip
Housing	Birch multiplex	Birch multiplex	Birch multiplex	Birch multiplex
Finish	PU coating black	PU coating black	PU coating black	PU coating, black
Front grille	Steel front grill with anticorrosive coating, acoustic foam	Steel front grill with anticorrosive coating, acoustic foam	Steel front grill with anticorrosive coating, acoustic foam	Steel front grill with anticorrosive coating, acoustic foam
Dimensions (WxHxD)	60 x 22 x 45 cm 23-5/8 x 8-21/32 x 17-23/32"	60 x 27 x 45 cm 23-5/8 x 10-5/8 x 17-23/32"	60 x 32 x 47.5 cm 23-5/8 x 12-43/64 x 18-45/64"	60 x 63.5 x 78.5 cm 23-5/8 x 25 x 30-29/32"
Weight	20.2 kg / 44.5 lbs	22.8 kg / 50.2 lbs	32.1 kg / 70.8 lbs, 32.4 kg / 71.4 lbs with 80° brackets mounted	54.8 kg / 120.8 lbs





## CONTOUR X

EXCELLENCE THROUGH EFFICIENCY



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PLEASE ALSO NOTE OUR BROCHURE CONTOUR X.

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