



KS

SINCE 1979
THE ART
OF SOUND.

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KS

45 YEARS

The Art of Sound

FOUNDER, CEO

Dieter Klein

When developing loudspeaker systems, our primary objective has always been to transfer the sonic impression of sound events as accurately as possible. With regard to the particular application, this has led to a variety of product designs that are both top class and unique in their own way.

MILESTONES IN OUR COMPANY HISTORY

1979

KS Beschallungstechnik GmbH was founded by Dieter Klein and Wolfgang Steck

1983

KS AUDIO participates for the first time at the Frankfurt Musik Messe and ever since.

1984

KS AUDIO presents the World's First Satellite PA system – selfpowered which became the SAT 3

1985

KS AUDIO presents its first complete line of unpowered pa systems

1989

KS AUDIO presents the World's First 4 channel power amplifier

1992

KS AUDIO was honored to be the choice by the German Government to install the sound system in the newly built German Reichstag (Congress) in Berlin

1993

KS AUDIO presents the World's First wire compensation, an invention which compensates for different lengths of speaker cable runs – called WICOM

1993

KS AUDIO and Heil (later L Acoustics), both companies introduce for the first time at the Frankfurt Musik Messe a design of a Line Array system, as it is known and popular today

1995

KS AUDIO presents the World's First FIR controller technology application in audio

2001

KS AUDIO presents the World's First digital controller, interchangeable in KS power amplifiers

2004

KS AUDIO presents the World's First selfpowered digitally controlled pa with DSP & FIR filters

2008

KS AUDIO presents the World's First HDSP High Definition Sound Projection system

2011

KS AUDIO presents the World's First Line Array with a real time motorized curving adjustment combined with equalization adjustment

2013

KS AUDIO presents the World's highest standard in digital control for power amplifiers – the F MOD.

KS AUDIO presents the World's smallest selfpowered digitally controlled top box-the CPD 04

2014

KS AUDIO presents the World's most compact selfpowered digitally controlled fullrange box – the CPD 14

2015

KS AUDIO presents the most compact, easiest to fly large Line Array system – the U Line

2019

KS AUDIO presents the CPD 18 with VALTEC, a world revolution in controlling the vertical dispersion of high-range frequencies by beamsteering using a Variabel Acoustic Lens

2020

KS AUDIO presents the VC LINE, worlds first Line Array with vertical adjustable High-frequency range dispersion, VALTEC

2024

KS AUDIO presents the C 40, an ultra powerful, high definition, point source with vertical beamsteering.

WORKED WITH KS

Stevie Wonder
Frank Zappa
Miles Davis
KISS
Amy McDonald

THEATERS

Jiangsu Opera House
CHINA
Kammerspiele
MUNICH, GERMANY
Semper Oper
DRESDEN, GERMANY
Opera Saransk
SARANSK, RUSSIA

SPORTS ARENAS

Olympic Stadium
MOSCOW, RUSSIA
Mercedes-Benz Arena
STUTTGART, GERMANY
Fraport Arena
FRANKFURT, GERMANY

GOVERNMENT

Reichstag
BERLIN, GERMANY
City Parliament
FRANKFURT, GERMANY
State Parliament
ERFURT, GERMANY

MISCELLANEOUS

University Seoul
SEOUL, SOUTH KOREA
Anyang Church
KOREA
Bayan Lepas Airport
PENANG, MALAYSIA
Buddha Temple
WUXI, CHINA
EKU Center
RICHMOND, USA

KS

UNIQUE SOLUTIONS

Traditionally innovative



SOME IMPORTANT KS DEVELOPMENTS



An asymmetric waveguide which allows sound projection to a well-defined listening area.



Bi-Amp-products have always to be driven from two channels in Bi-Amp-Mode.



The time alignment as well as phase and level correction, individually measured for every produced speaker system, results in a high and constant sound-quality.



Digital audio signals with this standard are automatically detected by KS CPD system controllers.



Integrated network switches allow daisy-chaining the amplifiers in an Ethernet.



DANTE™ is a standard for ethernet based audio distribution.



A Variabel Acoustic Lens enables perfect Vertical Beam-Steering for the high frequency-range. Both the vertical dispersion as well the overall angle can be adjusted

SELF EQUALIZING ARRAY SYSTEM

The necessary pre-corrections for line arrays of various length and curvature are calculated in real time in the controller and integrated in the signal processing of the DSP.

AUTOLOCK

The curving of a line array must not be done before it is lifted up. By pulling the aligning rope, the curving preset is automatically locked.

COAXIAL ON SEPARATING PLATE

The coaxially mounted tweeter is isolated acoustically from the low-frequency diaphragm by a plate with slots. This avoids notches in the frequency spectrum, generated by reflected sound energy.

UNIPOL/DIPOL

A subwoofer design that allows to use the speaker in cardioid mode as well as omnidirectional.

8 x 10" SUBWOOFER

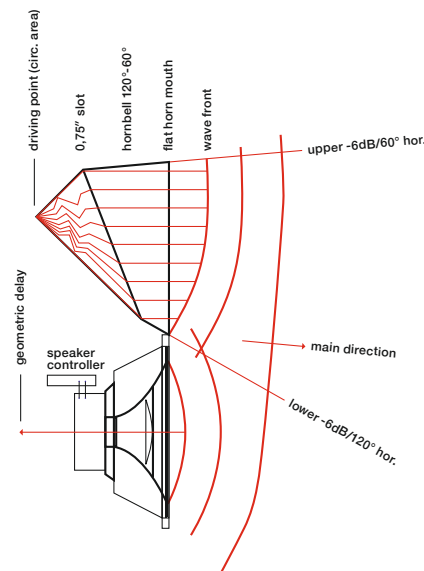
The only subwoofer with eight stiff and fast small diaphragms – for clearest deep and powerful sound

GEARDRIVE

Curving an installed line array via the integrated gear, driven by a standard battery screwdriver.

THE ORIGINAL SATELLITE SYSTEM

Using only one floor-standing mono subwoofer is the most effective way to produce the bass energy for a smaller sound reinforcement system, while mid and high frequencies are reproduced in stereo by small speakers – the satellites. This principle – with built-in electronics in the subwoofer cabinet – was developed by the founder of KS 40 years ago!



HDSP™

High Definition Sound Projection

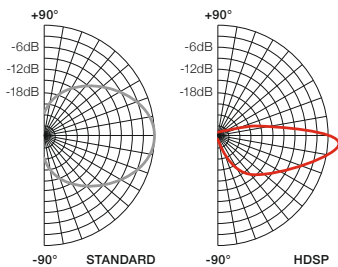
RADIATION CHARACTERISTICS OF THE HDSP

Public address loudspeakers distinguish themselves through a more or less directed radiation of a broadest possible frequency range. The purpose is to ensure that even in rooms with heavy reverberations, a sufficiently high proportion of direct sound reaches the audience, thereby enhancing audibility. Conversely, this means that such loudspeakers must be aligned very precisely in the direction of the audience in order to avoid a negative effect. Due to the innovative HDSP principle of the CPD 1, CPD10, CPD12 and CPD 22, an almost rectangular space segment can be evenly covered with sound energy, provided that the speakers are correctly aligned. In particularly critical spaces, the audience should be positioned exclusively in this area.

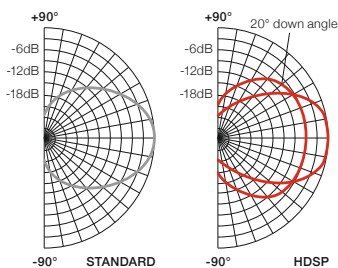
There are two significant differences in comparison to common loudspeakers: firstly, the horizontal radiation angle varies depending on the vertical angle, and secondly, the major part of the sound energy is radiated downward in a curved wavefront towards the audience, and not towards the walls or the ceiling. Several acoustic principles were combined in order to achieve this. The energy of the high-frequency driver is formed in a waveguide with varying path lengths to a vertically curved line, which is then radiated by the pre-positioned horn with a width of 120° in the lower part and 60° in the upper part. In the transition to the low-mid frequency membrane, the sound signal is electronically delayed and phase corrected in such a way that the main inclined radiation axis is sustained over a wide frequency range. Likewise, the crossover frequency is selected in a way that the bundling resulting from the diameter of the membrane is equivalent to that of the mid-high frequency horn.

As a result, the CPD 1, CPD10, CPD12 and CPD 22 impress with an even and well-balanced sound pressure distribution both in the width and depth of space. Audibility is increased in a surprising way due to the small proportion of diffuse ambience. In most cases, there is no necessity to use different speakers in the short and long range, whereby a problematic transition range does not occur. This allows to reduce costs and the required installation volume in the installation area.

VERTICAL POLAR PATTERNS



HORIZONTAL POLAR PATTERNS



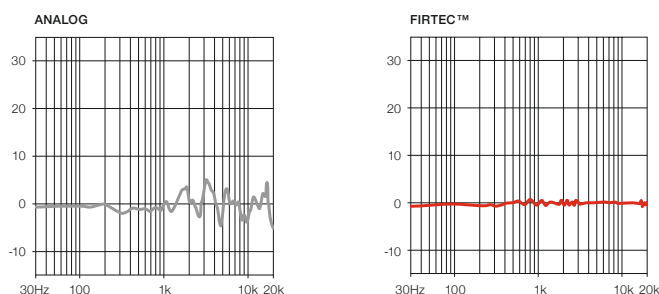
FIRTEC™

Finite Impulse Reponse Technology

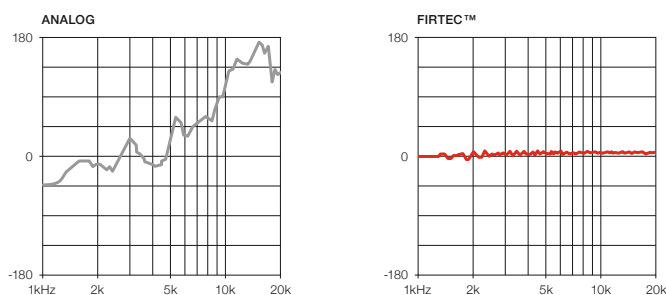
To ensure the best possible equalization of the whole system, the FIR filter works on both tweeter and bass (complete filter) – including therefore, the transition band between both. The measurements required to adjust the FIRTEC coefficients, take place on the complete speaker system, including crossover set-up of the drivers, so that the corrections include the complete geometry of the system.

This procedure allows an individual calibration of the system after local installation. This means that any peculiarities of the monitoring room can be adjusted for in the configuration of the FIRTEC equalizer. The factory default settings of the FIRTEC filter result from measurements in an acoustically inert room where-by each individual (!) driver is calibrated. In this way, all manufacturing tolerances have already been compensated for in the calibration. Of course, the perfect impulse reproduction is supported by all utilized drivers.

FREQUENCY RESPONSE



PHASE RESPONSE



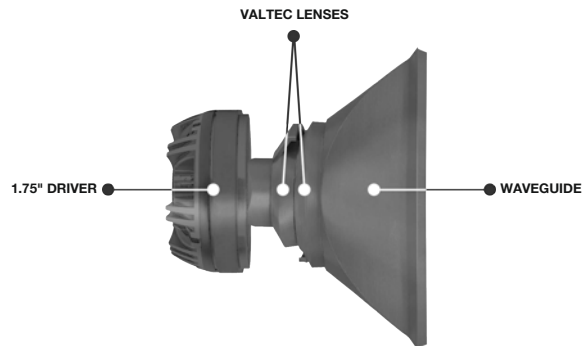
VALTEC™

Variable Acoustic Lens Technology

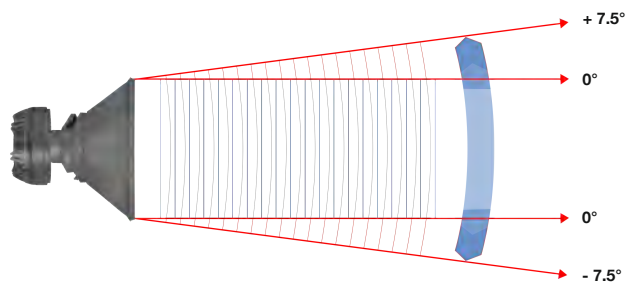


With VALTEC™, KS Audio introduces a new technique that uses two variable acoustic lenses and a waveguide to create a cylindrical wavefront that is more or less curved depending on the lens setting.

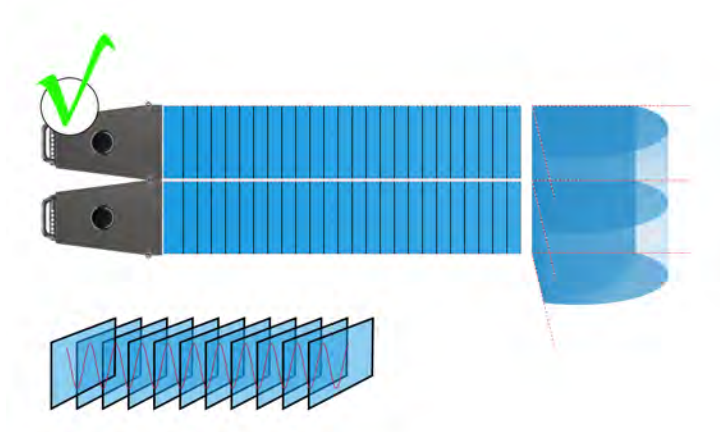
VALTEC™ HF LINE DRIVER UNIT



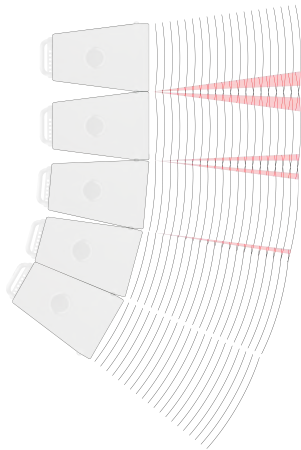
KS Audio uses the VALTEC™ technique in the VC LINE Array to adjust the vertical spread of each individual element to the mechanical curving. This is done in 1.5° increments from 15° to 0°. The picture below shows how the wavefront changes from a curved wavefront at 15° to a plane wavefront at 0°.



The result of a plane wavefront is a truly cylindrical radiation as sought by line arrays.

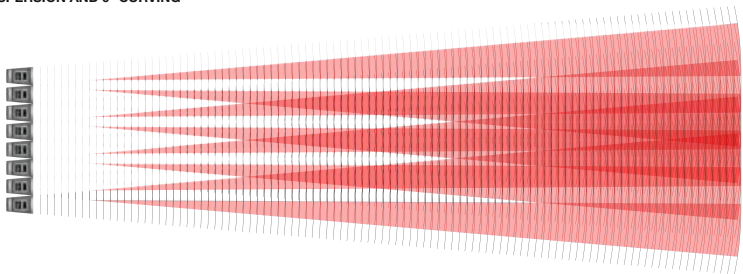


A necessity of a typical line array is a vertical dispersion of each element so that there is no gap in the wavefront at maximum curving. The problem here, however, is that with any mechanical curving of elements smaller than the maximum curving, the nominal curving creates an overlap between the wavefronts of the different elements.

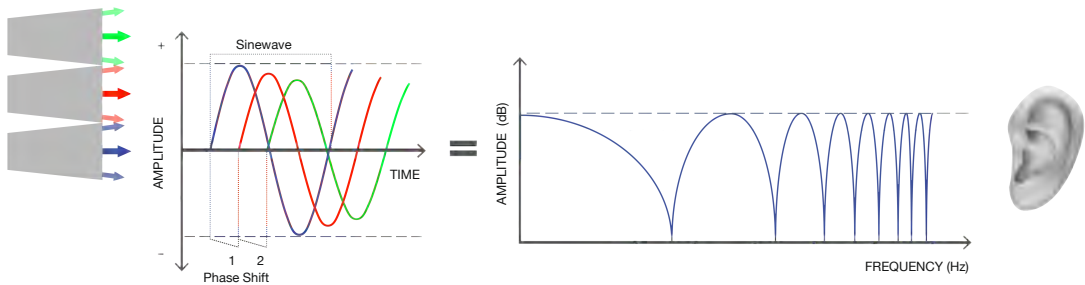


This overlap causes disturbing interferences especially in the HF range due to the short waves. The further the distance to the array becomes, the bigger the problems become. There is an area where the audience is both in the range of the upper element but also in that of much lower elements.

TYPICAL LINE ARRAY RADIATION PATTERN WITH A 10° VERTICAL DISPERSION AND 0° CURVING

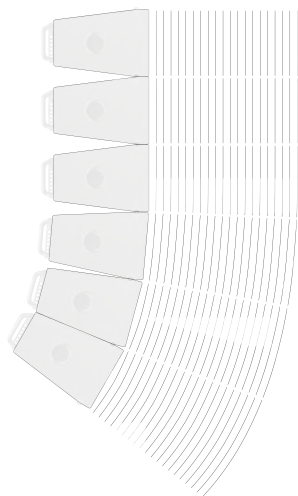


In the HF range where the distance between amplitudes is already small. This incorrect phase alignment causes a diffuse sound image and it creates a comb filter effect. This means that different frequencies are extinguished depending on the distance of the listener to the source. This has a very detrimental effect on the correct experience of music and speech.



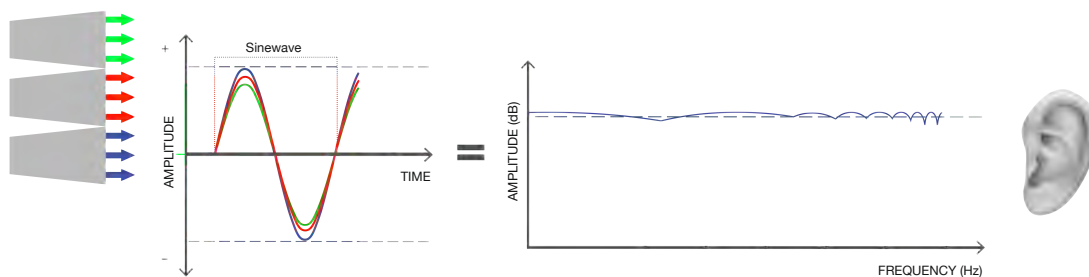
With VALTEC™ these problems are a thing of the past. Because now the curve of the wavefront and the "spread" (vertical dispersion) of each element is adapted to its physical angle to neighboring elements. There is no overlap and the wavefront curve matches that of the neighbouring element. This creates a coherent wavefront over the whole line array and the line source array behaves like a point source array.

The VC LINE with VALTEC™ shows a coherent wavefront from 0° to 15° curving.



Another important result of the VALTEC™ technique is the minimization of the comb-filter effect. Because there is no overlap at the different wavefronts there are no phase shifts in the HF-range.

VALTEC LINE ARRAY



However, using VALTEC™ and the exact vertical radiation associated with the angle of the LINE ARRAY element, the wavefront as a total remains coherent which leads to a much more accurate sound reproduction.

VC LINE

The first Line Array in which VALTEC™ is applied is the VC LINE.

In case of the VC LINE, VALTEC™ is used to set the vertical radiation of the HF range per element stepless between 0° and 15°.

The VC LINE consists of two 8" cone speakers that operate in the range between 60Hz and 1Khz. The HF unit operates from 1Khz and consists of a 1.75" compression driver coupled to the acoustic lenses of the VALTEC™ system that radiates in a very accurate waveguide. The horizontal spread is wide, 120°.

On the back of the VC LINE there is a rotary knob with which the vertical beam angle can easily be adjusted. The only thing the user has to do is to set the VALTEC setting equal to the physical angle of the element. This is done in the middle of the element on the curving rail.



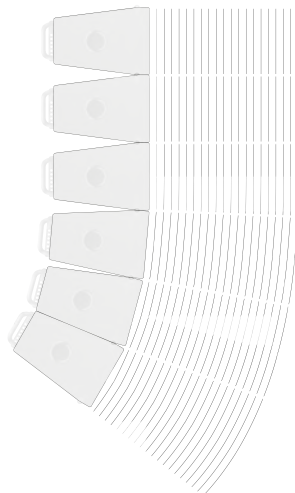
Back of the VC LINE



VC LINE unmatched sound quality and extremely easy to use

It is possible to rig 16 elements of the VC LINE underneath each other. Possibly in combination with C WH subwoofers flown along in cardioid arrangement, an extremely powerful PA system is created with unparalleled quality sound characteristics.

Measurements and listening sessions have proven that VALTEC™ results in a huge improvement in line array performance.



The VC LINE with VALTEC™ shows a coherent wavefront from 0° to 15° curving.

VALTEC™ USED AS BEAM STEERING

When it comes to controlling vertical dispersion, VALTEC™ gives the user virtually unlimited possibilities.

Another way to use VALTEC™ is not only to make the vertical HF dispersion/wavefront wider or narrower, but also to aim this beam up- or downwards. The big advantage for the user is that you can radiate into the audience exactly without having to tilt the entire enclosure.

This technique also allows two speakers directly on top of each other to radiate vertically into other areas. For example, the lower loudspeaker can radiate into the venue on the floor with a wider spread (nearfield) and the upper loudspeaker into the venue at the balcony using a narrow beam for more SPL (farfield).

VALTEC™ USED IN THE CPD 18

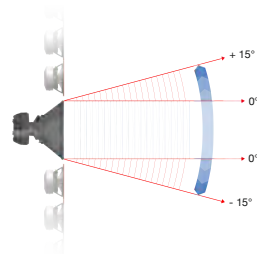
With the CPD 18, a loudspeaker system has been developed that has no peers. The main goal was to achieve the most exact reproduction of music without sacrificing efficiency and power. The CPD 18 plays with ease against any audiophile home system but overclasses it by being extremely powerful.

In the CPD 18, VALTEC™ is used to radiate the 120°H x 30°V cylindrical radiation at different vertical angles. This can be to 15° upwards and 15° downwards. In addition, it is also possible to set the vertical beam spread between 0° and 30°.

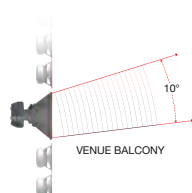
It is therefore possible to set both the vertical angle of distribution and the direction of the beam simultaneously.

The CPD 18 contains no less than four 10" bass loudspeakers that operate up to 150Hz after which eight 5" speakers take over up to 1800Hz the rest of the audio spectrum is reproduced by the same HF unit as the VC LINE; a 1.75" compression driver coupled to the acoustic lenses of the VALTEC™ system that radiates in a very accurate waveguide.

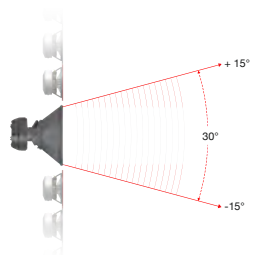
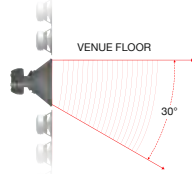
In the CPD 18, the lenses of the VALTEC™ system are controlled by motors that can be easily set via the menu of the integrated DSP/amplifier. By changing the beam of the VALTEC™ HF unit, the beam steering of the LF and MF loudspeakers is also adjusted by means of delays.



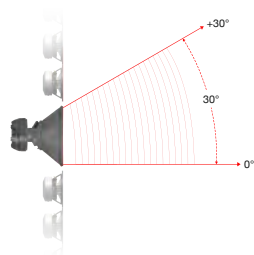
VALTEC™ CPD 18 variable vertical spread



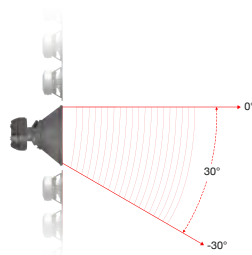
Maximum control of vertical dispersion VALTEC™



VALTEC™ CPD 18 at 0° tilt



VALTEC™ CPD 18 at its maximum upwards beam



VALTEC™ CPD 18 at its maximum downwards beam



EXTREMELY SLIM
CPD 18 with VALTEC™



KS

FULL RANGE

Where all need to hear everything



DRESDEN, GERMANY

Semperoper

Transferring accurately what is happening onstage across 5 audience levels and generating high sound pressures for modern performances requires a true full-range loudspeaker of high-end quality: CPD14 (10x).



C 04 / CPD 04

Full Range 4.5" + 1"



Specifications	C04 unpowered	CPD 04 powered
Frequency range	100Hz -19000Hz ±3dB	100Hz -19000Hz ±3dB
Power capacity	90Wrms /200Wpeak at 8 ohms	60Wrms + 30Wrms/200Wpeak
Sound pressure level	120dBpeak	118dBpeak
Dispersion	120° x 120° axisymmetric	120° x 120° axisymmetric
Crossover frequency	2000Hz Passiv-Bessel	2000Hz Aktiv FIR integrated
Drivers	4,5"-ND cone / 1"-dome tweeter	4,5"-ND cone / 1"-dome tweeter
Ampli ier	KS CA4D	Class D Bi-amp
Controller	Full-range DSP, FIR filtering	2-way DSP, FIR-Filter correction
Size (h/w/d)	150/150/150mm	150/150/160mm
Weight	1,5kg	1,5kg
Features	3/8", 2 × M6	3/8", 2 × M6



TINY SOUND SENSATION

The C 04 wide-range but ultra-low distortion miniature coaxial loudspeaker is suitable for demanding speech and music applications with limited space availability and visibility concerns especially required for theatres, houses of worship, restaurants, galleries, exhibit audio for museums and as ultracompact portable corporate AV boardroom sound reinforcement solution, as well as multifunctional background music system e.g. for clubs, with an amazing SPL/size ratio in general.

The powerful 4,5 inch low-mid transducer equipped with torsionally stiff yet light carbonfibre cone plus coaxially mounted 1 inch neodymium soft dome represents the perfect nearfield pointsource as known from studio monitor technology.

The C 04 enclosure is constructed from birch multiplex and coated with Polyurethane. It is available in all RAL-colors and is also equipped with additional perforated steel front grille plus foam for heavy-duty protection of built-in transducers. All aluminum parts are anodized.

Full-Range Application with CA4D/TA4D amplification and DMOD/FMOD processing is highly recommended as well as mid-high configuration of C 04 combined with additional CW 210 sub-low extensions. Further features of this outstanding product are one 3/8 inch thread on bottom for tripod use and two metrical M6 inserts aside for mounting an optional U-bracket. NL 4 in/out connection plate at backside of the unit as a standard.

POWERED VERSION

The 2-way DSP controlled amplifier installed in the rear panel works highly efficiently and requires no additional cooling.

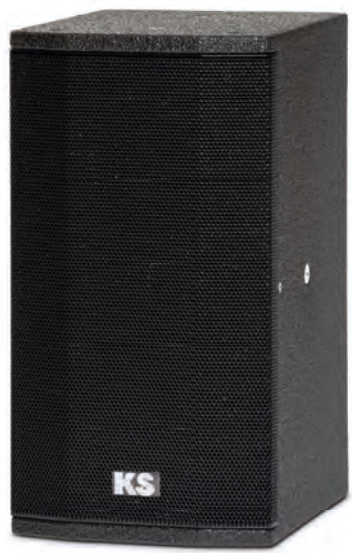
The power supply unit is capable of handling all AC voltages between 110 and 240V. Connection is provided via PowerCon F+M connectors which allow daisy-chaining, e.g. to the next CPD 04.

The electronically symmetrical input has XLR female and male connectors.

A multi-color LED indicates the operating status.

APPLICATIONS

Theatrical application
Conference
100 V wall and ceiling Speaker
Personal monitor
Multi media
Houses of worship
Ultra compact PA
Under balcony
Delay system
Source speaker
Surround Sound
Trade shows
Front fills
Point source
Multi Zone



CL 106 / CPD 06

Full Range 6" + 1"



Specifications	CL 106 unpowered	CPD 06 powered
Frequency range	80Hz-20000Hz ±3dB	80Hz - 20000Hz ±3dB
Power capacity	360Wrms/720Wpeak at 8 ohms	360Wrms/720Wpeak
Sound pressure level	123dBpeak	123dB peak
Dispersion (h/v)	100°/100° HF-waveguide	100°/100° HF-waveguide
Crossover frequency	2000Hz Passiv-Bessel	2000Hz Aktiv FIR integrated
Drivers	6"-ND cone / 1.5"-ND ringradiator	6"-ND Cone / 1.5"-ND ringradiator
Amplifier	KS CA4D	Class D Bi-amp
Controller	Full-range mode DSP, FIR filtering	2-way DSP, FIR Filtering
Connectors	2 × SPEAKON NL4	2 × XLR, PowerCon
Size (h/w/d)	354/190/251mm	354/190/251mm
Weight	8kg	7,5kg
Features	Mounting bracket, M6	Mounting bracket, M6

THE COMPACT SOLUTION

The KS CL 106 is an all-round talent, made for a wide variety of tasks in the field of sound engineering: supportive speaker for theater or concert operations, sound reproduction in the multimedia sector, background music in bars and restaurants or 100V build-in speaker on walls and ceilings in high quality.

As a mid-high range system in combination with subwoofers such as the CW210, the CL 106 represents a completed small PA system. A waveguide for the 1" driver with an evenly wide sound projection is integrated in the sound baffle. The 6" speaker is protected on the entire front with a grid, which is lined with acoustic foam.

Tuning of the cabinet is achieved using a tunnel on the rear side, which allows a remarkably powerful reproduction of the bass frequencies. The cabinet is made of multi-layered birch plywood and has a matt black PU coating. It is well-shaped, robust, insensitive to weather impact, has good acoustic qualities and is easy to mount due to the 30° and 60° angle of the rear panel.

M6 thread, flush-mounted connectors and a recessed grip, plus various accessories such as the ball-joint wall mount facilitate handling.

The CL 106 is optimized for particular requirements with the controller module of the CA 4D: a pleasantly sounding broadband version for musical reproduction at medium levels is just as possible as an extremely powerful variant for supportive sound reinforcement operations or voice transmission.

A version with 100V audio transformer is also available, for which an in-wall cabinet can be provided.

High-quality components, best materials and precision workmanship determine the quality of the CL 106. The complete front is made of low-resonance PU resin and serves to provide an even sound radiation. The front can be rotated by 180° for strictly symmetrical arrangements. The connectors are flush-mounted, so that the cable plugs do not become obstructive in any mounting situation.

Special designs and surfaces can be manufactured individually upon request.

POWERED VERSION

In the CPD Version, a 2-way DSP controlled amplifier is embedded in the rear panel. It works with high efficiency and therefore requires no cooling. Cross-over and FIR filter are precisely matched to the loudspeaker, compressor and limiter ensure safe operation. The electronically symmetrical input has XLR F+M connectors.

Apart from the power switch, the following additional control elements are available: a digital level control for individual adaptation to the operating site and a delay of up to 40m for spatially divided arrangements of the sound system. For operation with a subwoofer, a high-pass can be connected.

The power supply works with internal changeover on AC voltage grids of 117 or 230V. The inrush current is limited by electronic control. Connection is provided via a PowerCon F connector.



APPLICATIONS

Theatrical application
Conference
100 V wall and ceiling speaker
Personal monitor
Multi media
Houses of worship
Ultra compact PA
Piano Bar
Under balcony
Delay system
Source speaker
Surround Sound
Trade shows
Front fills
Point source
Multi Zone
Background
Music announcer



CL 206 / CPD 26

Full Range 2 × 6" + 1.5"



Specifications	CL 206 unpowered	CPD 26 powered
frequency range	80-19000Hz ±3dB	80-19000Hz ±3dB
power capacity	250Wrms/500Wpeak at 8 ohms	200Wrms + 50Wrms/400+100Wpeak
sound pressure level	129dBpeak	126dBpeak
Dispersion (h/v)	100°/100°	100°/100°
crossover frequency	2000Hz, phase linear Bessel	2000Hz
drivers	2 × 6"-cone ND, 1.5"-driver/ waveguide	2 × 6"-cone , 1.5"-driver
amplifier	CA4D, TA4D	PWM mode, linear bridge
controller	D MOD or F MOD	2-way DSP, FIR-Filter
connector	2 × SPEAKON NL4	2 × XLR, POWERCON
size (h/w/d)	500/190/251mm	500/190/251mm
weight	15kg	19kg
features	mounting bracket, M6	mounting bracket, M6

THE SLIM ONE

The KS CL 206 is an all-round talent, made for a wide variety of tasks in the field of sound engineering: supportive speaker for theater or concert operations, sound reproduction in the multimedia sector, background music in bars and restaurants or 100V build-in speaker on walls and ceilings in high quality. As a mid-high range system in combination with subwoofers such as the CW210, the CL 206 represents a completed small PA system.

A waveguide for the 1.5" driver with an evenly wide sound projection is integrated in the sound baffle. The two 6" speakers are protected on the entire front with a grid, which is lined with acoustic foam.

The tuning of the cabinet is achieved using a tunnel on the rear side, which allows a remarkably powerful reproduction of the bass frequencies. The cabinet is made of multi-layered birch plywood and has a matt black structured lacquering. It is well-shaped, robust, insensitive to weather impact, has good acoustic qualities and is easy to mount due to the 30° and 60° angle of the rear panel. M6 thread, flush-mounted connectors and a recessed grip, plus various accessories such as the ball-joint wall mount facilitate handling.

The CL 206 is optimized for particular requirements with the controller module of the CA 4D: a pleasantly sounding broadband version for musical reproduction at medium levels is just as possible as an extremely powerful variant for supportive sound reinforcement operations or voice transmission. A version with 100V audio transformer is also available, for which an in-wall cabinet can be provided.

High-quality components, best materials and precision workmanship determine the quality of the CL 206.

The complete front is made of low-resonance PU resin and serves to provide an even sound radiation. The front can be rotated by 180° for strictly symmetrical arrangements.

The connectors are flush-mounted, so that the cable plugs do not become obstructive in any mounting situation.

Special designs and surfaces can be manufactured individually upon request.

POWERED VERSION

In the CPD Version, a 2-way DSP controlled amplifier is embedded in the rear panel. It works with high efficiency and therefore requires no cooling. Crossover and FIR filter are precisely matched to the loudspeaker, compressor and limiter ensure safe operation. The electronically symmetrical input has XLR F+M connectors.

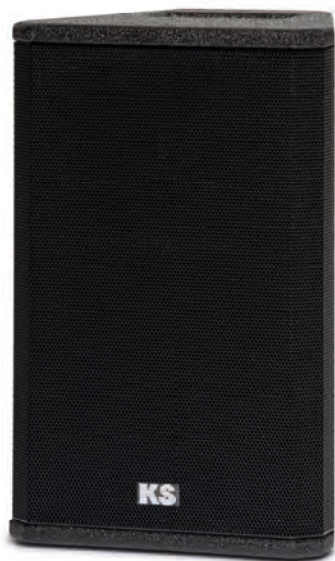
Apart from the power switch, the following additional control elements are available: a digital level control for individual adaptation to the operating site and a delay of up to 40m for spatially divided arrangements of the sound system. For operation with a subwoofer, a high-pass can be connected.

The power supply works with internal changeover on AC voltage grids of 117 or 230V. The inrush current is limited by electronic control. Connection is provided via a PowerCon F connector.



APPLICATIONS

Theatrical application
Conference
Personal monitor
Multi media
100 V wall and ceiling speaker
Houses of worship
Ultra compact PA
Under balcony
Delay system
Source speaker
Trade shows
Front fills
Point source
Surround Sound
Multi Zone
Background
Music announcer



CL 208 / CPD 08

Full Range 8" + 1.5"



Specifications	CL 208 unpowered	CPD 08 powered
frequency range	68-19000Hz ±3dB	68-19000Hz ±3dB
power capacity	250Wrms/500Wpeak at 8 ohms	200+50Wrms/400+100Wpeak
sound pressure level	129dBpeak	129dBpeak
Dispersion (h/v)	120°/60°	120°/60°
crossover frequency	2000Hz, phase linear Bessel	2000Hz
drivers	8"-cone ND, 1.5"-driver/ waveguide	8"-cone , 1.5"-driver / waveguide
amplifier	CA4D, TA4D	PWM mode, linear bridge
controller	D MOD or F MOD	2-way DSP, FIR-Filter
connector	2 × SPEAKON NL4	2 × XLR, POWERCON
size (h/w/d)	400/250/268mm	400/250/268mm
weight	9,5kg	9,8kg
features	standflange, 2 × M6	standflange, 2 × M6

THE ALL-ROUND TALENT

8"/1.5" public address loudspeaker

The KS CL 208 is an all-round talent, made for a wide variety of tasks in the field of sound engineering: background music in bars and restaurants, supportive speaker for theater or concert operations, sound reproduction in the multimedia sector or 100V build-in speaker on walls and ceilings in high quality.

As a mid-high range system in combination with a CW210 subwoofer, a high-quality satellite PA system is established.

The cabinet is made of multi-layered birch plywood and has a black structured PU coating. It is well-shaped, robust, insensitive to weather impact, has good acoustic qualities and is easy to mount. A metal sleeve for wall or tripod mounts, M6 thread, a recessed grip and various accessories ensure easy handling.

A waveguide for the 1.5" driver with an evenly wide sound projection is integrated in the sound baffle. The 8" cabinet is protected with a grid and the entire front can be lined with acoustic foam.

The tuning of the cabinet is achieved using a generously dimensioned tunnel on the rear side, which allows a remarkably powerful reproduction of the bass levels without compression.

Different variants of the CL 208 are optimized for particular requirements: a pleasantly sounding broadband passive version for musical reproduction at medium levels, an extremely powerful variant for sound reinforcement operations with active controller control from the CA 4D, as well as a version with 100V audio transformer.

High-quality components, best materials and precision workmanship determine the quality of the CL 208.

Special designs and surfaces can be manufactured individually upon request.

The compact CW210 Subwoofer provides the ideal low bass extension.

Active stereo 2-way systems with DSP controller can be realized with a single CA 4D KS amplifier.

POWERED VERSION

In the CPD Version, a 2-way DSP controlled amplifier is embedded in the rear panel. It works with high efficiency and therefore requires no cooling. Cross-over and FIR filter are precisely matched to the loudspeaker, compressor and limiter ensure safe operation. The electronically symmetrical input has XLR F+M connectors.

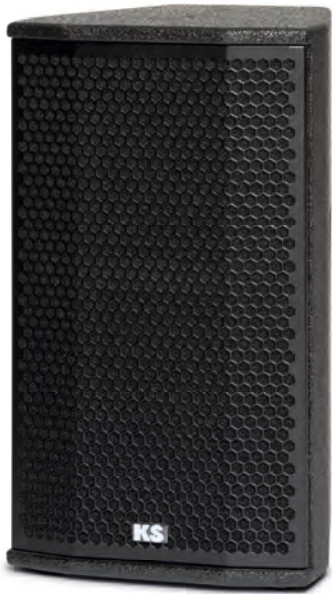
Apart from the power switch, the following additional control elements are available: a digital level control for individual adaptation to the operating site and a delay of up to 40m for spatially divided arrangements of the sound system. For operation with a subwoofer, a high-pass can be connected.

The power supply works with internal changeover on AC voltage grids of 117 or 230V. The inrush current is limited by electronic control. Connection is provided via a PowerCon F connector.



APPLICATIONS

Theatrical application
Conference
Personal monitor
Multi media
100 V wall and ceiling speaker
Houses of worship
Ultra compact PA
Under balcony
Delay system
Source speaker
Surround
Trade shows
Front fills
Point source
Multi Zone
Background



C 1 / CPD 1

Full Range 10" + 1.75"



Specifications	C 1 unpowered	CPD 1 powered
frequency range	68-19000Hz ±3dB	68-19000Hz ±3dB
power capacity	500Wrms/1000Wpeak at 8 ohms	440+60Wrms/880+120Wpeak
sound pressure level	134dBpeak	134dBpeak
dispersion	asymm. 60°-120°/35°	asymm. 60°-120°/35°
crossover frequency	1500Hz, built in	1500Hz, phase linear FIR
drivers	10"-cone ND, 1.75" Mylar-ringradiator	10"-cone ND, 1.75" Mylar-ringradiator
amplifiers	CA4D, TA4D	PWM + bipolar bridge
controller	D MOD or F MOD	2-way DSP, FIR-Filter
connector	2 × SPEAKON NL4	2 × XLR, POWERCON
size (h/w/d)	516/298/329mm	516/298/329mm
weight	17kg	18kg
features	standflange	standflange

SMALL, POWERFUL

The C 1 extends the KS C Series of compact 2-way systems with its specific radiation characteristics HDSP and consistent acoustic pressure down to the low-frequency range, along with its minimum dimensions. Due to the high-capacity voice coils of the 10" speaker and the 1" throat driver with 1.75" Mylar ring-diaphragm, the C 1 can be operated with 500Wrms continuous output.

The waveguide construction in the mid-high frequency horn and its interaction with the bass-midrange unit in the corresponding controller electronics is unique. The result is a radiation angle that widens out downwards, whereas the vertical curvature of the wavefront also continues in the crossover frequency range where it shows no declines at all. In the usual positions, the speaker therefore provides the same high-quality performance at close range as at a larger distance.

The 10" long-excursion speaker comprises a powerful lightweight neodymium magnet. The ring diaphragm of the driver consists of a special film that generates significantly lower distortion than comparable titanium diaphragms. With the C 1, KS offers the demanding user a universally applicable 2-way sound reinforcement speaker of the highest audio quality and in a highly compact format. There is practically no field of application where the C 1 cannot be applied successfully: sound reinforcement for theaters, live-music stages, comprehensive decentralized sound coverage for large rooms and tents, delay system for remote areas, or as a compact mid-high range system in combination with the CB18 active woofer of the SAT 3.

As in all KS systems, the cabinet construction is made of birch multiplex and provided with an extremely robust anthracite PU coating. On request, the surface can be lacquered in any RAL colors. A protective steel grid with or without acoustic foam is another feature of this high-quality product.

The built-in connection plate on the back with two SPEAKON NL4 and passive crossover. On the bottom side there is a flange bushing for mounting of customary stand tubes. The MR C1 mounting frame is available for secure flying operations.

POWERED VERSION

In the CPD Version, a 2-way DSP controlled amplifier is embedded in the rear panel. It works with high efficiency and therefore requires no cooling. Crossover and FIR filter are precisely matched to the loudspeaker, compressor and limiter ensure safe operation. The electronically symmetrical input has XLR F+M connectors.

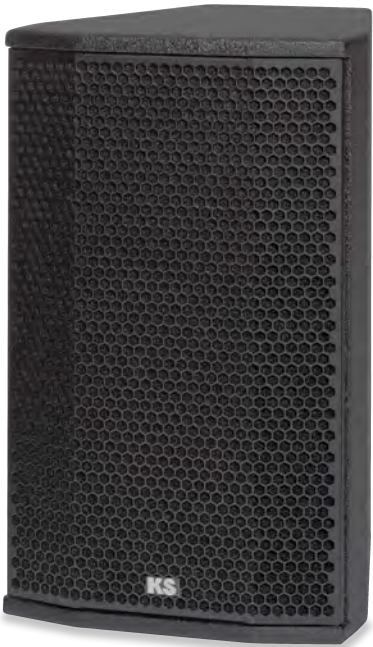
Apart from the power switch, the following additional control elements are available: a digital level control for individual adaptation to the operating site and a delay of up to 40m for spatially divided arrangements of the sound system. For operation with a subwoofer, a high-pass can be connected.

The power supply works with internal changeover on AC voltage grids of 117 or 230V. The inrush current is limited by electronic control. Connection is provided via a PowerCon F connector.



APPLICATIONS

- Live Stage Music
- Compact pa system
- Theatrical application
- Conference
- Piano Bar
- Cabaret
- Houses of worship
- Under balcony
- Delay system
- Surround
- Trade shows
- Front fills
- Multi Zone
- Background



C 2

Full Range 12" + 1.75"



Specifications	C 2
frequency range	60-19000Hz ±3dB
power capacity	1000Wrms/2000Wpeak at 8 ohms
sound pressure level	134dBpeak
dispersion	symm. 90°-60° rotatable
crossover frequency	1200Hz, built in
drivers	12"-cone ND, 175" polyester-ringradiator
amplifiers	CA4D, TA4D
controller	D MOD or F MOD
connector	2 × SPEAKON NL4
size (h/w/d)	576/350/383mm
weight	22kg
features	standflange

STATE OF THE ART

The C 2 complements the KS C series of compact 2-way systems with rotatable dispersion behavior and even sound pressure levels down to the bass range frequencies with the smallest dimensions.

Due to the high capacity voice coils of the 12" chassis and the 1" driver with 1.75" polyester ring-diaphragm the C 2 has a continuous power handling of 1000Wrms and a peak power of 2000W!

The design of the wave guide in the mid / high horn and its electrical correction in the DSP presets of the D MOD and F MOD provides a homogeneous horizontal and vertical sound field over the entire frequency bandwidth.

The horn of the C 2 can be rotated by 90°, so that the C 2 can also be used horizontally. In this driver combination the C 2 is also available as a wedge form as C 2M.

The 12" speaker comprises a powerful lightweight neodymium magnet. The ring diaphragm of the driver consists of a special film that generates significantly lower distortion than comparable titanium diaphragms. With the C 2, KS offers the demanding user a universally applicable 2-way sound reinforcement speaker of the highest audio quality and in a highly compact size. There is practically no field of application where the C 2 cannot be applied successfully: sound reinforcement for theaters, live-music stages, comprehensive decentralized sound coverage for large rooms and tents, delay system for remote areas, or as a compact mid-high range system in combination with the CB18 active woofer of the SAT 3.

As in all KS systems, the cabinet construction is made of birch multiplex and provided with an extremely robust anthracite PU coating. On request, the surface can be lacquered in any RAL colors. A protective steel grid with or without acoustic foam is another feature of this high-quality product.

The built-in connection plate on the back with two SPEAKON NL4 and passive crossover. On the bottom side there is a flange bushing for mounting of customary stand tubes. The MR C2 mounting frame is available for secure flying operations.



C 2 as wedge C 2M



APPLICATIONS

- Live Stage Music
- Compact pa system
- Theatrical application
- Conference
- Piano Bar
- Cabaret
- Houses of worship
- Under balcony
- Delay system
- Surround
- Trade shows
- Front fills
- Multi Zone
- Background



C 10 / CPD 10

Full Range 10" + 3"



Specifications	C 10 unpowered	CPD 10 powered
frequency range	63-19000Hz ±3dB	63-19000Hz ±3dB
power capacity	700Wrms + 100Wrms / 2kWpeak at 8 ohms	700Wrms +100Wrms, 2kW peak
sound pressure level	136dBpeak	136dBpeak
dispersion	asymm. 60°-120°/35°	asymm. 60°-120°/35°
crossover frequency	1200Hz, phase linear FIR correction	1200Hz, phase linear FIR correction
drivers	10"-cone ND, 1,75"-driver ND with 3" diaphragm	10"-cone ND, 1,75"-driver ND with 3" diaphragm
amplifier	CA4D, TA4D	LF: Class D fullbridge / HF: FETamplifier
controller	D MOD or F MOD	2-way DSP, FIR-Filter
connector	2 × SPEAKON NL4	2 × XLR, PowerCon F+M
size (h/w/d)	516/298/351mm	516/298/351mm
weight	18.5kg	22kg
features	Multipurpose fitting, standflange	Multipurpose fitting, standflange

GIGANTICALLY SMALL

The C 10 compliments the KS C-Series compact 2-way systems with its small dimensions, and the unique directivity of HDSP technology. The result is consistently even hi quality audio dispersion with the highest sound pressure level, while simultaneously having the lightest weight possible. The power capacity equals this quality: The 10"-long excursion low-mid speaker can handle 700Wrms and the 1.75" driver 3" aluminium diaphragm can handle 100Wrms.

The design of the HDSP mid/high frequency horn and its electronic blending with the bass/midrange driver is unique, and requires a matching electronic processor for the best results. The HDSP design results in multiple integrated dispersion angles that widen downwards towards the near field of the speaker while maintaining tight pattern control and long throw capability. The vertical bending of the HF wave front continues thru the cut-off frequency as well as the crossover frequency, without any variance in the frequency response.

Both the 10" LF driver and the 1.75" HF driver have strong but light Neodymium-Magnets. The 3" diaphragm of the compression driver consist of a special aluminum alloy that has a clearly reduced distortion factor in comparison to a titanium diaphragm. With the C 10, KS has responded to the demanding needs of the professional operator with a universally usable 2-way sound system with the highest audio quality, yet in a compact size. There are many applications in which the C 10 can be used: Theatre, Live-stage Music, in large rooms or tents, as a delay system for far away areas, or as a compact mid/high system in conjunction with any KS AUDIO sub woofer.

The C 10 is equally suitable for a normal stand as well as a flying assembly.

The speaker cabinet construction is, like all KS systems, built from birch plywood with an extremely robust charcoal colored Polyurethane coating. At your request the finish can be changed to any desired color from the RAL color charts. Another special feature are the two multipurpose fittings on the back of the speaker. Allowing the installation of different fly-ware and connectors, which are safely interlocked by means of quick release push-pins. There is a pole mount in the bottom of the cabinet and a protective steel grill on the front, with acoustic foam.

POWERED VERSION

In the CPD version, a DSP controlled amplifier is embedded as a slide-in module in the rear panel. It provides the required performance, response correction and safe protection for the loudspeaker. The power stage works with a high degree of efficiency and requires no – often disturbing – cooling fans. The wide-range switching power supply is capable of handling all AC voltages between 110V and 240V. The inrush current is limited by electronic control. Connection is provided via PowerCon F+M connectors which allow daisy-chaining, e.g. to the subwoofer. The digital differential crossover and filter stages are precisely matched to the loudspeakers. An FIR filter, individually gauged for each speaker, provides an unsurpassed equality of the systems. The symmetrical input has XLR F+M connectors.

A special feature is the automatic recognition and changeover for a pending digital audio signal according to AES/EBU standard. Apart from the power switch, the following additional control elements are available: buttons for "sensitivity" for individual adaptation to the operating site, for delay settings in m and ms, high-pass filter or selection of the digital audio channel. The settings are clearly legible on self-luminous displays.

Further settings, such as a parametric equalizer, can be downloaded and saved via integrated Ethernet switch by the KS REMOTE software.



APPLICATIONS

Live Stage Music
Compact pa system
Theatrical application
Conference
Houses of worship
Under balcony
Delay system
Surround Sound
Multi Zone
Background
Piano Bar
Cabaret



C 12 / CPD 12

Full Range 12" + 3"



Specifications	C 12 unpowered	CPD 12 powered
frequency range	58-19000Hz ±3dB	58-19000Hz ±3dB
power capacity	800Wrms + 200Wrms, 2kW peak at 8 ohms	800Wrms + 200Wrms, 2kW peak
sound pressure level	136dBpeak	136dBpeak
dispersion	asymm. 60°-120°/35°	asymm. 60°-120°/35°
crossover frequency	1200Hz, phase linear FIR correction	1200Hz, phase linear FIR correction
drivers	12"-cone ND, 1,75"-driver ND with 3" diaphragm	12"-cone ND, 1,75"-driver ND with 3" diaphragm
amplifier	CA4D, TA4D	LF: Class D fullbridge / HF: FETamplifier
controller	D MOD or F MOD	2-way DSP, FIR-Filter
connector	2 × SPEAKON NL4	2 × XLR, PowerCon F+M
size (h/w/d)	576/350/413mm	576/350/413mm
weight	21kg	25kg
features	Multipurpose fitting, standflange	Multipurpose fitting, standflange

THE EFFECTIVE

The C 12 compliments the KS C-Series compact 2-way systems with its unique directivity of HDSP technology. The result is consistently even hi quality audio dispersion with the highest sound pressure level even in the lower frequency range, while simultaneously having the lightest weight possible. The power capacity equals this quality: The 12"-long excursion low-mid speaker can handle 700Wrms and the 1.75" driver with 3" aluminium diaphragm can handle 100Wrms.

The design of the HDSP mid/high frequency horn and its electronic blending with the bass/midrange driver is unique, and requires a matching electronic processor for the best results. The HDSP design results in multiple integrated dispersion angles that widen downwards towards the near field of the speaker while maintaining tight pattern control and long throw capability. The vertical bending of the HF wave front continues thru the cut-off frequency as well as the crossover frequency, without any variance in the frequency response.

Both the 12" LF driver and the 1.75" HF driver have strong but light Neodymium-Magnets. The 3" diaphragm of the compression driver consist of a special aluminum alloy that has a clearly reduced distortion factor in comparison to a titanium diaphragm. With the C 12, KS has responded to the demanding needs of the professional operator with a universally usable 2-way sound system with the highest audio quality, yet in a compact size. There are many applications in which the C 12 can be used: Theatre, Live-stage Music, in large rooms or tents, as a delay system for far away areas, or as a compact mid/high system in conjunction with any KS AUDIO sub woofer.

The C 12 is equally suitable for a normal stand as well as a flying assembly.

The speaker cabinet construction is, like all KS systems, built from birch plywood with an extremely robust charcoal colored Polyurethane coating. At your request the finish can be changed to any desired color from the RAL color charts. Another special feature are the two multipurpose fittings on the back of the speaker. Allowing the installation of different fly-ware and connectors, which are safely interlocked by means of quick release push-pins. There is a pole mount in the bottom of the cabinet and a protective steel grill on the front, with acoustic foam.

POWERED VERSION

In the CPD version, a DSP controlled amplifier is embedded as a slide-in module in the rear panel. It provides the required performance, response correction and safe protection for the loudspeaker. The power stage works with a high degree of efficiency and requires no – often disturbing – cooling fans. The wide-range switching power supply is capable of handling all AC voltages between 110V and 240V. The inrush current is limited by electronic control. Connection is provided via PowerCon F+M connectors which allow daisy-chaining, e.g. to the subwoofer. The digital differential crossover and filter stages are precisely matched to the loudspeakers. An FIR filter, individually gauged for each speaker, provides an unsurpassed equality of the systems. The symmetrical input has XLR F+M connectors.

A special feature is the automatic recognition and changeover for a pending digital audio signal according to AES/EBU standard. Apart from the power switch, the following additional control elements are available: buttons for "sensitivity" for individual adaptation to the operating site, for delay settings in m and ms, high-pass filter or selection of the digital audio channel. The settings are clearly legible on self-luminous displays.

Further settings, such as a parametric equalizer, can be downloaded and saved via integrated Ethernet switch by the KS REMOTE software.



APPLICATIONS

- Live Stage Music
- Compact PA system
- Theatrical application
- Conference
- Houses of worship
- Delay system
- Surround
- Multi Zone
- Background



C22 / CPD 22

Full Range 12" + 4" HDSP

Specifications	C 22 unpowered (Bi-Amp)	CPD 22 powered
frequency range	55-19000Hz ±3dB	55-20000Hz ±3dB
power capacity	1000Wrms+140Wrms/ 2300Wpeak at 8 ohms	1000Wrms+140Wrms/ 2300Wpeak
sound pressure level	140dBpeak	140dBpeak
dispersion	60°/40° or 90°/40°	60°/40° or 90°/40°
crossover frequency	1000Hz, phase linear Bessel	1000Hz
drivers	12"-cone ND, 2"- driver ND with 4" diaphragm	12"-cone ND, 2"-driver ND with 4" diaphragm
amplifier	CA4D, TA4D	PFC-SMPS, PWM + MOSFET
controller	D MOD or F MOD	2-way DSP, FIR-Filter
connector	2 × SPEAKON NL4	4 × XLR, 2 × POWERCON, ETHERCON
size (h/w/d)	600/372/463mm	600/372/463mm
weight	27kg	30kg
features	AeroQuip fittings, standflange	AeroQuip fittings, standflange

PURE SOUND



The C 22 is the compact 2-way system with the highest level of performance, sound pressure levels, and audio quality it's loading capacity down to the lowest tone frequencies and the FIR steering of the 2" throath driver is unmatched in the industry in regards to the lowest distortion and absolute phase linearity. With the 12"-long stroke woofer that can handle 700W and a 2" driver that can handle 140W the C 22 gives you long term power with peak of 2000W. The sound dispersion in the mid / hi horn is completely even across the audio spectrum and the HF wave front continues thru the cut-off frequency as well as the crossover frequency, without any variance in the frequency response.

Both the 12" Long stroke woofer and the 2" compression driver have strong but light Neodymium-Magnets. The 4" membrane of the compression driver consists of a special material that has a clearly reduced distortion factor in comparison to a titanium membrane. With the C 22, KS has responded to the demanding needs of the professional user with a modular 2-way sound system with the highest audio quality, yet in a compact size. There are many applications in which the C 22 can be used: Theatre, Live-stage Music, in large rooms or tents, as a delay system for far field, or as a compact top in combination with any KS subwoofer, we recommend at least two C WH subwoofer per C 22.

The 12"-long excursion neodymium low-mid speaker with a 4" voice coil and the 2" neodymium driver with a 4" diaphragm will spoil you with it's even and smooth dispersion characteristics.

The speaker cabinet construction is, like all KS systems, built from birch plywood with PU coating. All RAL colors available. 2 different horizontal dispersion patterns, (60 × 40 or 90 × 40 are available. Another special feature are the two Aeroquip fittings on the speaker. Allowing the installation of different flyware and connectors, which are safely interlocked. There is a pole mount in the bottom of the cabinet and a protective steel grill on the front, with or without acoustic foam, and handles on the top and sides are further features of this premium product.

POWERED VERSION

Another essential technological leap has been achieved here: with the DANTE™ option directly from your desk or PC via Ethernet to the active speaker! The electronically symmetrical analog input is available through XLR F+M connectors, likewise the AES/EBU connection with active output. The digital differential crossover and filter stages are precisely matched to the loudspeakers. An FIR filter, individually gauged for each speaker, provides an unsurpassed equality of the systems. Operation is menu-driven via digital rotary encoder and graphic display. All programmed level, filter and delay values are permanently stored.

The 2-way PWM + MOSFET controlled amplifier built into the rear panel works with a particularly high degree of efficiency and requires no – often disturbing – cooling fans. The wide-range switching power supply can operate on all AC voltages between 110V and 240V. The inrush current is limited by electronic control. Connection is provided via PowerCon F+M connectors which allow daisy-chaining, e.g. to the subwoofer.

APPLICATIONS

- Theatrical application
- Live Stage Music
- Compact PA system
- Houses of worship
- Delay system
- Opera
- Play House



C 1214 / CPD 1214

Full Range 12" + 3"



Specifications	C1214 unpowered	CPD 1214 powered
frequency range	120-19000Hz ±3dB (50Hz -10dB)	120-19000Hz ±3dB (50Hz -10dB)
power capacity	500Wrms + 100Wrms / 1200Wpeak at 8 ohms	500Wrms + 100Wrms / 1200Wpeak
sound pressure level	138dBpeak	138dBpeak
Dispersion hor./ver.	60°/40° -6dB	60°/40° -6dB
crossover frequency	1200Hz, phase linear FIR correction	1200Hz, phase linear FIR correction
drivers	12"-cone ND, 1,75"-driver ND with 3" diaphragm	12"-cone ND, 1,75"-driver ND with 3" diaphragm
amplifier	CA 4D, TA 4D	LF: Class D fullbridge / HF: FETamplifier
controller	D MOD or F MOD	2-way DSP, FIR-Filter
connectors	SPEAKON F+M	2 × XLR, PowerCon F+M
size (h/w/d)	580/580/660mm	580/580/660mm
weight	41kg	45kg
features	C-flyware	C-flyware

PRECISION IN THE RADIATION

The C 1214 completes the KS AUDIO C-Series with an excellent Horn loaded-system. Due to its horn loaded coaxial arrangement of the low-mid chassis and mid-high driver the directivity is well balanced for long throw applications.

This means that with a standard two-speaker setup, the audience in close proximity to the speakers will enjoy the same audio quality and definition as those further away.

Both the 12" high efficiency low-mid speaker and the 1.4" compression driver have strong but light Neodymium-Magnets. The 3" membrane of the compression driver consist of a special aluminum alloy that has a clearly reduced distortion factor in comparison to a titanium membrane. With the C 1214, KS has responded to the demanding needs of the professional operator with a universal, loudspeaker with the highest audio quality in a compact size.

There are many applications in which the C 1214 can be used: Theatre, Live-stage Music, in large rooms or tents, as a delay system for far away areas, or as a compact middle-high tone system in combination with one of the many KS subwoofers, we recommend the C WH or U SUB Subwoofer.

The C 1214 is equally suited for standard stacking, as well as flying-assemblies with the integrated CP RIG flying-system.

The speaker cabinet construction is, like all KS systems, built from birch plywood with an extremely robust charcoal colored Polyurethane coating. At your request the finish can be changed to any desired color from the RAL color charts.

4 sturdy wheels, handles, and a protective steel grill, with or without acoustic foam, are further features of this high-quality product.

POWERED VERSION

In the CPD version, a DSP controlled amplifier is embedded as a slide-in module in the rear panel. It provides the required performance, response correction and safe protection for the loudspeaker. The power stage works with a high degree of efficiency and requires no – often disturbing – cooling fans. The wide-range switching power supply is capable of handling all AC voltages between 110V and 240V. The inrush current is limited by electronic control. Connection is provided via PowerCon F+M connectors which allow daisy-chaining, e.g. to the subwoofer. The digital differential crossover and filter stages are precisely matched to the loudspeakers. An FIR filter, individually gauged for each speaker, provides an unsurpassed equality of the systems. The symmetrical input has XLR F+M connectors.

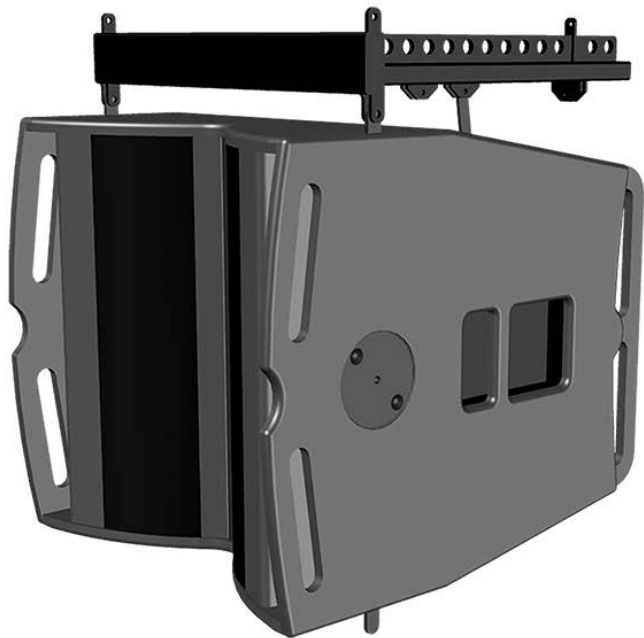
A special feature is the automatic recognition and changeover for a pending digital audio signal according to AES/EBU standard. Apart from the power switch, the following additional control elements are available: buttons for "sensitivity" for individual adaptation to the operating site, for delay settings in m and ms, high-pass filter or selection of the digital audio channel. The settings are clearly legible on self-luminous displays.

Further settings, such as a parametric equalizer, can be downloaded and saved via integrated Ethernet switch by the KS REMOTE software.



APPLICATIONS

- Live Stage Music
- Theatrical application
- Houses of worship
- Compact PA
- Delay system
- Longthrow application



C 40

Full Range 4x 10" + 3x 1.75"



Specifications	C 40 unpowered
frequency range	75-20000Hz ±3dB (40Hz @ -10dB)
power capacity	2800Wrms + 240Wrms / >6kWpeak at 8Ω LF / 24Ω HF
sound pressure level	144dBpeak
Dispersion hor./ver.	75° - minimum drop-off to 90° / manual adjustable between 0° and 20°
crossover frequency	Active 1200Hz, phase linear FIR correction
drivers	4x 10"-cone ND, 3x 1,75"-driver ND
amplifier	TA 4D
controller	D MOD or F MOD
connectors	SPEAKON F+M
size (h/w/d)	580/580/650mm
weight	51kg
features	RIG CP- flyware

Unprecedented potential, from Rock concert to Theatre hall



The C 40 complements the KS AUDIO C Series with an exceptional system with unprecedented performance. Although not immediately recognisable at first glance, the C 40 behaves like a true point-source.

Due to an ingenious arrangement of the four low-mid chassis and three mid-high drivers, the dispersion behaviour is particularly even in the near and far field and thus hardly sensitive to feedback. The use of FIR filters in the F MOD controller also ensures full level and phase linearity, ensuring accurate impulse behaviour and maximum intelligibility. And that with huge power reserves that are rarely needed. This makes the C 40 suitable not only for loud live concerts but also for very critical theatre halls.

The KS AUDIO controller amplifiers TA 4D provide 2000W to the four 10" chassis and 400W to the three 1.75" ring radiators. The peak power is over 6000W!

Both the 10" high efficiency drivers with 3" voice coils and the 1.75" ring radiators have powerful, lightweight neo-dynium magnets. The ring diaphragms of the drivers are made of a special plastic foil that produces significantly less distortion than comparable titanium diaphragms.

What is special about the C 40 is its vertical alignment with the audience:

The inclination angle can be easily adjusted at the back, allowing the element to be aimed precisely at the audience. This can be done either downwards or upwards, the latter often being necessary for halls with an ascending spectator space as in many theatres but it is also very useful for beaming sound to balconies.

The opening angle can be adjusted to the listening area in no time. The 3 cylindrical wave emitters can be mechanically adjusted so that the MHF unit can have a vertical beam opening angle between 0° and 20°.

It is also possible to use several elements directly on top of each other, whereby the vertical beam steering of the C 40 drastically reduces harmful interferences in the high frequency range.

In combination with the KS AUDIO C WH subwoofers, a very powerful and far-radiating PA system can be set up in just a few steps. The C 40 is suitable for both normal stacking and flying mounting with the QuickLock flying adapter.

With KS AUDIO T SUB and C SUB infra subwoofers, a fourth active way can be successfully added, instantly creating the "Wall of Sound" feeling. Both the C WH and C SUB have the CP RIG rigging hardware that allows the C 40 to be stacked directly on these subwoofers or flown to the subwoofers.

APPLICATIONS

- Live Stage Music
- Theatrical application
- Houses of worship
- Compact PA
- Delay system
- Longthrow application



CPD 1203

Full Range 12 × 3"

Specifications	CPD 1203 powered
frequency range	100-17000Hz ±3dB
power capacity	360Wrms
sound pressure level	130dBpeak
dispersion	150° horizontal, -6dB - Steerable vertical dispersion
drivers	12 × 3"
amplifier	12 × PWM (bridged pairs)
connectors	XLR-F, RJ45, 24VDC, 100-40VAC
size (h/w/d)	967/125/125mm
weight	8kg
features	12 × M6 mounting threads

COLUMN SPEAKER

The KS CPD 1203 is a special design speaker created for specific task in the CPD Series especially for speech reproduction with very high intelligibility in an acoustically difficult environment.

There are many applications in which the CPD 1203 can be used such as small live event, media room, conference, convention or as a delay system in a large PA system.

As the mid / high system in conjunction with subwoofers such as the CPD B2, the CPD 1203 gives you a full-range small PA system.

12 nos. integrated amplifier in bridge mode with DSP controller allows a vertically varying dispersion angle in a wide range of the direct sound field.

Inside the baffle are 12 nos. integrated broadband 3" drivers. The membranes are protected by a grille over the entire front, which is covered with acoustic foam.

The housing is made of impact-resistant synthetic material which is stylish, durable and weather resistance. It also has good acoustic performance and is easy to install no matter the shape of the back wall and at any angle. 2 × M6 threaded mounting points, recessed sockets as well as various accessories such as the ball-joint wall brackets are available for facilitate the installation.

The CPD 1203 is optimized by computer. It is possible to change both the vertical dispersion angle and the main axis of the sound projection. This enables the speaker mounted vertically on an architecturally unobtrusive location while the audience area may just below it. A subsequent accurate alignment to the speakers in an inaccessible position is also possible. Presets for different kinds of sound characteristics can also be retrieved such that a broadband pleasant sounding setting for music playback at medium levels or/and extremely powerful full range for voice communication or public address are possible.

With the high quality components, the best materials and precise processing determine the quality of the CPD 1203.

The connection sockets for power and digital audio signal are recessed so that the cable connector cannot interfere with any mounting situation.

The power supply can also be by an external 24VDC power supply with UPS – thus an emergency alarm is effortlessly achieved.



APPLICATIONS

Theatrical application
Conference
Multi media
Houses of worship
Ultra compact PA
Under balcony
Delay system
Source speaker
Trade shows
100 V wall and ceiling speaker



CPD 14

Full Range 2 × 10" + 4 × 5" + 1.75"



Specifications	CPD 14 powered
frequency range	38-20000Hz ±3dB
power capacity	500+250+100Wrms, 1,5kW peak
sound pressure level	132dBpeak
dispersion	asymm. 90°/30°
crossover frequency	120Hz, 1800Hz phase linear
drivers	2 × 10", 4 × 5", 1 3/4"
amplifier	2 × Class-D, FET-Amp
controller	3-way DSP processing, FIR-Filter
powersupply	110-240VAC, PowerCon F+M
size (h/w/d)	830/208/355mm
weight	27kg
features	Mounting frame, standflange

THREE-WAY ACTIVE

Thus resulting in an even and narrow vertical splay and a coherent wave front without notches even at crossover frequency. Due to its innovative design direct sound field is emitted exactly to your audience. Both woofers are mounted laterally to ensure slim appearance and compact footprint similar to a column speaker. The narrow and rounded baffle is an essential pre-condition for precise midrange reproduction.

The power module consists of a wide range switching power supply handling 110 V - 240 VAC including line filter technology, two pulse width modulation amplifiers for low-mid range and a high end analog field-effect transistor amplifier for high frequency range reproduction. The four five inch midrange speakers are equipped with lightweight yet strong neodymium magnets. Their frequency range is adapted to column height by a passive filter network correction. The diaphragm of high frequency driver unit consists of mylar that is famous for its extreme low distortion. CPD 14 is the right choice for professional rental companies looking for high end full range audio reproduction for any public address application combined with compact footprint.

The birch plywood enclosure is treated with a durable anthracite polyurethane coating – as seen at any KS AUDIO product. As an option all kind of RAL – coloring and a fully adjustable mounting bracket are available. Front grille without foam and a flange are further features of this premium product. CPD 14 features a built-in high efficiency convection-cooled three way digital sound processed amplifier with limiters. Finite impulse response filters (FIR) are matched exactly to the connected transducers and active limiters ensure safe and reliable operation.

The input panel consists of XLR male and female sockets and as far as an AES/EBU digital signal is connected, a digital signal path with a sample rate conversion up to 192 kHz is provided automatically. Also digital volume control and delay option up to 48 meters for vertical public address systems are provided for easy handling of the equipment.

Further features are low-cut switch for satellite use or speech and vocal reinforcement and an Ethernet remote control option via KS AUDIO software. Operation mode of CPD 14 power supply with switch-on current limiter is 110 V - 240 VAC. Input and output powerCON sockets are provided e.g. for connecting and powering a separate active sub-low cabinet.



APPLICATIONS

- Piano Bar
- Cabaret
- Theatrical application small
- Conference
- Compact PA system
- Houses of worship small
- Delay system
- Studio Monitoring



CPD 18 VALTEC

UNIQUE VERTICAL BEAMSTEERING



Specifications	CPD 18 powered
frequency range	38-20000Hz ±3dB
power capacity	1000+500+100Wrms, 3kW peak
sound pressure level	134dBpeak
dispersion	asymm. 90°/0°-30° with + or - 15° VALTEC Beamsteering
crossover frequency	150Hz, 1800Hz phase linear
drivers	4 × 10", 8 × 5", 1 3/4"
amplifier	6 × Class-D, FET-Amp
controller	7-way DSP processing, FIRTEC-Filter
input signals	analog, AES/EBU and Dante
powersupply	110-240VAC, PowerCon F+M
size (h/w/d)	1378/208/456mm
weight	51kg
features	VALTEC Beamsteering

AUDIOPHILE SOUND

A NEW WORLD STANDARD

With the CPD 18, KS Audio presents world's most audiophile PA Speaker, an unparalleled revolution and a breakthrough for every music-lover and technician for whom exact music reproduction comes first.

The CPD 18 complements the KS CPD series of self-powered systems with its variable cylindrical wave front and 3 1/2 - way crossover design. It stands for a clean reproduction of sound over the entire frequency spectrum down to the lower bass range. The CPD 18 offers beam steering in a completely new way.

The construction of the sound displacement in the wave-guide of the high frequency emitter and its electromechanical vertical alignment is unique. The result is a uniform dispersion angle, with the vertical curvature of the wavefront also continuing in the range of the crossover frequency, and no dips can be seen there. With the newly developed VALTEC principle, the slope can be varied so that regardless of the positioning of the Loudspeaker all listeners can be provided with direct sound and room reflections can be minimized.

The 4 woofers are mounted on the side to ensure slim appearance and compact footprint which looks like a column speaker and therefore requires little space to be installed.

The eight five inch midrange speakers are equipped with lightweight yet strong neodymium magnets. Due to the height of the CPD 18, the frequency range of these 5 "speakers is individually adjusted to achieve perfect beaming behavior. The 1 3/4" ring-diaphragm of the high frequency driver is made of mylar that is famous for its extreme low distortion.

The power module consists of a switched-mode power supply with Power-Factor-Correction, six Class D amplifiers for low and midrange drivers and a high-end Mosfet amplifier for the high frequency driver. The 7 channel DSP is fully digital and equipped with FIR filters that are precisely tuned and measured on the 13 components of the CPD 18. The filter controls crossover, EQ, limiter and time alignment. The CPD 18 can easily be adjusted to the room via the digital operating menu on the back or remotely via KS own remote software. With the presence of a low-cut switch, the CPD 18 can be switched as a pure speech system or as a full-range system in combination with a subwoofer. The analog electronically balanced input is designed as an XLR F + M socket. When connecting a digital audio signal according to AES / EBU or DANTE standard, there is an automatic switch to fully digital operation with SRC up to 192kHz.

The birch plywood enclosure is treated with a durable anthracite polyurethane coating – as seen at any KS AUDIO product. As an option all kind of RAL – coloring and a fully adjustable mounting bracket are available. Front grille without foam and optional foldable feet for a secure placement, are further features of this premium product.



APPLICATIONS

Piano Bar
Cabaret
Theatrical application small
Conference
Compact PA system
Houses of worship small
Delay system
Studio Monitoring



KS

SUBWOOFERS

The base of every sound



MANHEIM, GERMANY

National Theatre Mannheim

A perfectly even low-bass distribution in the auditorium with – when needed – impressive energy: P WK (4 x) mounted above the stage opening, on the partition wall to the stage tower.



C W210 / CPD B2

Subwoofer 2 × 10"

Specifications	C W210 unpowered	CPD B2 powered
frequency range	48-110Hz ±3dB / 38 - 120Hz ±6dB	48-110Hz ±3dB / 38 - 120Hz ±6dB
power capacity	800Wrms / 1600Wpeak at 16 ohms	800Wrms / 1600Wpeak
sound pressure level	134dBpeak	134dBpeak
dispersion	sphere	sphere
crossover frequency	70 / 100 / 120Hz X-over setting F MOD controller	70Hz /120Hz switchable
drivers	2 × 10"-cone	2 × 10"-cone
amplifier	TA 2D, TA 4D	Class D SMPS
controller	D MOD or F MOD	2 Channel DSP, FIR-Filter, X-over
size (h/w/d)	580/350/580mm	580/350/580mm
weight	26kg	28 kg
features	M20 standflange, handles	M20 standflange, handles

THE EXTREMELY COMPACT LOW BASS

With the CW210, KS AUDIO offers demanding amateurs and professional users a universally applicable subwoofer of high quality. In its new design, it is even more compact and efficient.

Building on the experiences with the CUBE, which has been successful for many years, great emphasis was placed on high transmission quality and simple handling. With the CW210, KS particularly addresses customers who do not exploit the full capacity reserves of usual 18" subwoofers, but require a smaller, yet equally profound solution for their applications instead.

And there is practically no field of application where the CW210 cannot be applied successfully: center bass for multi-media surround sound, the small live stage, the hotel bar or the dance floor in a bistro, and not least as a powerful low-frequency extension in installation areas where the extremely small dimensions meet all the constructional requirements of the location.

The system consists of two 10"-long excursion woofers with a capacity of 800W program material and an exceptionally large linear stroke of 30mm. Due to the special design featuring a double magnet and push-pull configuration, the small cabinet can generate incredible low-bass sound pressures.

A CW210 as mono subwoofer is sufficient in many cases, which is why two channels can be mixed at the recommended controlled amplifier CA4D. In that process, the top parts still work as a stereo pair. The bass information of the left and right channel can be added electronically without losses, this resulting additionally in a higher level of efficiency as opposed to the use of two separated basses.

As in all KS AUDIO systems, the cabinet construction is made of birch multiplex and has a PU coating. Recessed handles, M20 threaded stand flange, stacking feet, protection grid and acoustic foam are further features of this high-quality product.

POWERED VERSION

In the CPD Version, a DSP controlled amplifier is embedded in the rear panel. It works with high efficiency and therefore requires no active cooling. Crossover and filter stages are precisely matched to the loudspeakers, compressor and limiter ensure safe operation. The electronically symmetrical input has XLR F+M connectors. There are 2 channels available, so that the bass content of a stereo signal can be reproduced via a single mono woofer.

Besides the on/off switch, the following additional controls are available: a digital level control for individual room adaptation and a delay of up to 40m for spatially distributed sound system set-ups. For use with a full-range loudspeaker, a low-pass of either 70 or 120Hz can be set.

The wide-range switching power supply works without changeover on AC voltage grids between 110 and 240V. The inrush current is limited by electronic control. Connection is provided via a PowerCon F connector.



APPLICATIONS

- Theatrical application
- Conference
- Multi media
- Houses of worship
- Ultra compact PA
- Trade shows
- Multi Zone
- Background
- Music announcer

TO COMBINE WITH

- C 04 / CPD 04
- CL 106 / CPD 06
- CL 206 / CPD 26
- CL 208 / CPD 08
- C1 / CPD 1
- C2



C W1 / CPD W1

Subwoofer 1 × 15"



Specifications	C W1 unpowered	CPD W1 powered
frequency range	38-120Hz ±3dB (32Hz -6dB)	38-120Hz ±3dB (32Hz -6dB)
power capacity	1600Wrms / 3200Wpeak at 8 ohms	1600Wrms / 3200Wpeak
sound pressure level	134dBpeak	132dBpeak
dispersion	sphere	sphere
crossover frequency	70/100/120Hz	70/120Hz
driver	15"-cone, 4"-voice coil	15"-cone, 4"-voice coil
amplifier	TA 2D, TA 4D	bridged PWM, DSP
controller	D MOD or F MOD	included
size (h/w/d)	580/440/580mm	580/440/580mm
weight	28kg	33kg
features	M20 standflange, wheels	M20 standflange, wheels

THE COMPACT HIGH-PERFORMANCE LOW BASS

The subwoofer for the demanding ears! The construction is classic, 1 × 15" – and the design of the highest quality.

What makes the C W1 very special is, on the one hand the high-capacity long-excursion speaker with 100mm voice coil and fiber-reinforced membrane, and on the other hand, the construction of the waveguide for frequencies in the range of 40Hz: the diameter of the bass-reflex openings is particularly large, which results in a high degree of efficiency and low distortion levels due to minimal losses at the vent openings.

The slim size of the C W1 makes it particularly suitable for applications where little space is available on stage, or where it needs to be integrated into a wall niche or stage porch. Combined with a stand tube (M20 threaded), two C W1 are ideal for lifting fullrange tops such as the C 10 or the C 12 to the right listening height.

The recommended controlled amplifiers are KS TA 2D or TA 4D with an F MOD or D MOD digital controller module. They provide the required performance, response correction and safe protection for the speaker. When using two input channels, a mono subwoofer operation of the C W1 is possible. The low-frequency signals of both channels are added and routed via a controller to the power stages. The stereo signals are still available for the top parts at the XLR M outputs. The power stages are designed to be particularly efficient, using "cold" 3-stage Class H technology and silent, electronically controlled fans. The wide-range switching power supply is capable of handling all AC voltages between 100V and 240V.

The solid protective grid covers the entire front. A transport protection cover and a dolly with heavy duty wheels are available as accessory. The surface has a PU coating that withstands almost any mechanical stress.

POWERED VERSION

In the CPD version, a DSP-controlled amplifier is built in as a slide-in module in the rear panel. This provides the required frequency and phase response correction as well as the necessary protection options as well as, particularly KS AUDIO, limiters to protect the loudspeaker. The power stage is designed to be particularly efficient and operates without cooling fans, using "cold" PWM technology. The wideband switching power supply can handle all AC voltages between 110V and 240V. The inrush current is limited by electronic regulation. The power supply is connected via PowerCon F+M connectors that allow series connection, for example to the full-range loudspeaker.

The symmetrical input has XLR F+M connectors. There are 2 channels available, so that the bass content from a stereo signal can be reproduced via a single mono woofer. Another special feature is the automatic recognition and changeover of a pending digital audio signal according to AES/EBU standard. Apart from the power switch, the following additional control elements are available: buttons for "sensitivity" for individual adaptation to the operating site, for delay settings in m and ms, low-pass filter or selection of the digital audio channel. The settings are clearly legible on self-luminous displays.

Further settings, such as a parametric equalizer, can be downloaded and saved via integrated Ethernet switch by the KS REMOTE software.

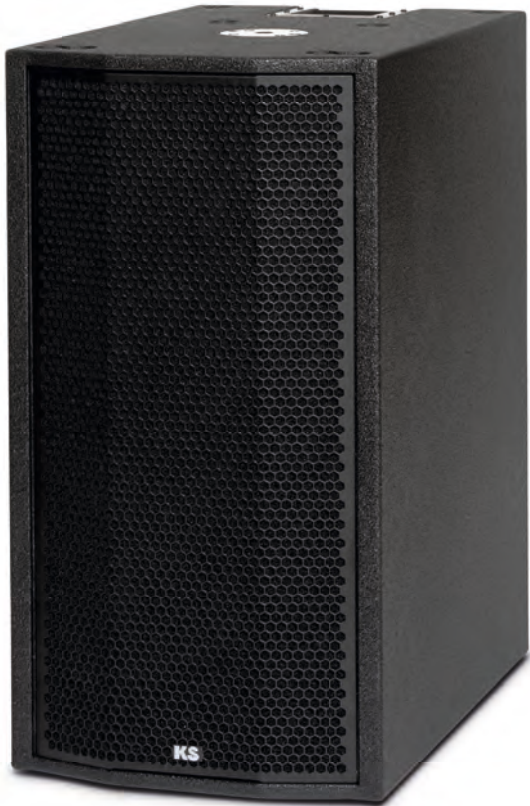


APPLICATIONS

Compact PA
Theatrical application
Piano Bar
Houses of worship
Conference
Trade Shows

TO COMBINE WITH

C 10 / CPD 10
C 12 / CPD 12
C 22 / CPD 22
CPD 14
CPD 18



C W2 / CPD W2

Subwoofer 2 × 15"



Specifications	C W2 unpowered	CPD W2 powered
frequency range	38-120Hz ±3dB (32Hz -6dB)	38-120Hz ±3dB (32Hz -6dB)
power capacity	2400Wrms at 4800Wpeak 4 ohms	2400Wrms at 4800Wpeak
sound pressure level	140dBpeak	138dBpeak
dispersion	sphere	sphere
crossover frequency	70/100/120Hz	70/120Hz
driver	2 × 15"-cone, 4"-voice coil	2 × 15"-cone, 4"-voice coil
amplifier	TA 2D, TA 4D	bridged PWM, DSP
controller	D MOD or F MOD	included
size (h/w/d)	820/440/660mm	820/440/660mm
weight	57kg	61kg
features	M20 standflange, wheels	M20 standflange, wheels

THE SUBWOOFER FOR THE DEMANDING EARS

The construction is classic, 2 x 15" – and the design of the highest quality.

What makes the C W2 very special is, on the one hand the high-capacity long-excursion speakers with 100mm voice coil and fiber-reinforced membrane, and on the other hand, the construction of the waveguide for frequencies in the range of 40Hz: the diameter of the bass-reflex openings is particularly large, which results in a high degree of efficiency and low distortion levels due to minimal losses at the vent openings.

The slim size of the C W2 makes it particularly suitable for applications where little space is available on stage, or where it needs to be integrated into a wall niche or stage porch. Combined with a stand tube (M20 threaded), two C W1 are ideal for lifting fullrange tops such as the C 10, C 12 or C 22 to the right listening height.

The recommended controlled amplifiers are KS TA 2D or TA 4D with an F MOD or D MOD digital controller module. They provide the required performance, response correction and safe protection for the speaker. When using two input channels, a mono subwoofer operation of the C W1 is possible. The low-frequency signals of both channels are added and routed via a controller to the power stages. The stereo signals are still available for the top parts at the XLR M outputs. The power stages are designed to be particularly efficient, using "cold" 3-stage Class H technology and silent, electronically controlled fans. The wide-range switching power supply is capable of handling all AC voltages between 100V and 240V. The solid protective grid covers the entire front. A transport protection cover and a dolly with heavy duty wheels are available as accessory. The surface has a PU coating that withstands almost any mechanical stress.

POWERED VERSION

In the CPD version, a DSP-controlled amplifier is built in as a slide-in module in the rear panel. This provides the required frequency and phase response correction as well as the necessary protection options as well as, particularly KS AUDIO, limiters to protect the loudspeaker. The power stage is designed to be particularly efficient and operates without cooling fans, using "cold" PWM technology. The wideband switching power supply can handle all AC voltages between 110V and 240V. The inrush current is limited by electronic regulation. The power supply is connected via PowerCon F+M connectors that allow series connection, for example to the full-range loudspeaker.

The symmetrical input has XLR F+M connectors. There are 2 channels available, so that the bass content from a stereo signal can be reproduced via a single mono woofer. Another special feature is the automatic recognition and changeover of a pending digital audio signal according to AES/EBU standard. Apart from the power switch, the following additional control elements are available: buttons for "sensitivity" for individual adaptation to the operating site, for delay settings in m and ms, low-pass filter or selection of the digital audio channel. The settings are clearly legible on self-luminous displays. Further settings, such as a parametric equalizer, can be downloaded and saved via integrated Ethernet switch by the KS REMOTE software.



APPLICATIONS

Compact PA
Theatrical application
Piano Bar
Houses of worship
Conference
Trade Shows

TO COMBINE WITH

C 10 / CPD 10
C 12 / CPD 12
C 22 / CPD 22
CPD 14
CPD 18



C WH / CPD WH

18" High Efficiency Hybrid Subwoofer

Specifications	C WH unpowered	CPD WH powered
frequency range	38-120Hz ±3dB (32Hz -6dB)	38-120Hz ±3dB (32Hz -6dB)
power capacity	1400Wrms at 8 ohms	1400Wrms
sound pressure level	136dBpeak	136dBpeak
dispersion	sphere	sphere
crossover frequency	70/100/120Hz	70/120Hz
driver	18"-cone, 4"-voice coil	18"-cone, 4"-voice coil
amplifier	TA 4D, TA 2D	bridging mode PWM
controller	D MOD or F MOD	Onboard DSP with FIRTEC technology
connectors	2x speakON NL4 on the back 1x speakON NL4 on the front	Powercon in/out, analog/AES/EBU XLR3 auto switch Ethercon RJ45 DANTE optional
size (h/w/d)	580/580/720mm	580/580/720mm
weight	54kg	57kg
features	C-flyware, M20 standflange, Multigrip handles	C-flyware, M20 standflange, Multigrip handles

THE MODERN SOUND SUBWOOFER

The C WH and CPD WH belongs to the new generation of Subwoofers tailored to modern demands of contemporary sound reinforcement. Despite its compact dimensions, it produces an impressive, powerful and dry bass that never loses its musicality.

The construction of the 1x 18" housing is a hybrid-vented both front-loaded concept with the highest quality in built as performance.

A special feature of the C WH and CPD WH is the extremely durable 18" speaker with long excursion, a 100 mm voice coil and reinforced cone. Also special is the way of sound conduction for frequencies below 40 Hz: the bass reflex port opens into a large chamber in front of the membrane, which results in particularly high efficiency and low distortion due to minimal losses at the tunnel opening.

The size of the C WH and CPD WH makes the cabinet very suitable for use in places where there is little space in front of a stage. With the bumper the C WH and CPD WH can easily be flown in line arrays like KS C LINE, VC LINE, CPD LINE, CPD LINE AC or P LINE as low frequency extension.

Three stacked C WH and CPD WH have a good height to serve as a platform for full-range systems such as the KS C 40 system. In addition, the combination of 3 cabinets can serve as a 2/1 cardioid subsystem. Useful is that also reverse subs can be firmly connected to each other with the internal C flyware.

The KS TA 2D and TA 4D / F MOD are recommended as dsp / amplifiers, they provide the required power as well the settings for frequency-response and protection for the C WH speakers.

The cabinet features Multigrip handles and 4 wheels. The connector panel with double speakON is mounted on the back of the cabinet. On the front there is a speakON for reversed use of the C WH.

POWERED VERSION CPD WH

In the CPD version, a DSP-controlled amplifier is built in as a slide-in module in the rear panel. This provides the required frequency and phase response correction as well as the necessary protection options as well as, particularly KS AUDIO, limiters to protect the loudspeaker. The power stage is designed to be particularly efficient and operates without cooling fans, using "cold" PWM technology. The wideband switching power supply can handle all AC voltages between 110V and 240V. The inrush current is limited by electronic regulation. The power supply is connected via PowerCon F+M connectors that allow series connection, for example to the full-range loudspeaker.

The symmetrical input has XLR F+M connectors. There are 2 channels available, so that the bass content from a stereo signal can be reproduced via a single mono woofer. Another special feature is the automatic recognition and changeover of a pending digital audio signal according to AES/EBU standard. Apart from the power switch, the following additional control elements are available: buttons for "sensitivity" for individual adaptation to the operating site, for delay settings in m and ms, low-pass filter or selection of the digital audio channel. The settings are clearly legible on self-luminous displays.

Further settings, such as a parametric equalizer, can be downloaded and saved via integrated Ethernet switch by the KS REMOTE software.



APPLICATIONS

Small / Medium PA
Small / Medium Open Air
Small / Medium Line Array
Theatrical application
Houses of worship
Disco & Nightclub

TO COMBINE WITH

C 12 / CPD 12
C 22 / CPD 22
C 40
C/CPD LINE Array
VC LINE Array
P LINE Array

IN CARDIOID ARRAYS

3 C WH / CPD WH
As a 2/1 Cardioid Array

1 C WH / 1 U SUB
As a 2/1 Cardioid Array



C SUB / CPD SUB

4x 10" Band-pass Subwoofer

Specifications	C SUB unpowered	CPD SUB powered
frequency range	35-120Hz ±3dB (32Hz -6dB)	35-120Hz ±3dB (32Hz -6dB)
power capacity	2000Wrms / 4000Wpeak at 8 ohms	2000Wrms / 4000Wpeak
sound pressure level	137dBpeak	135dBpeak
dispersion	sphere	sphere
crossover frequency	70/100/120Hz	70/120Hz
driver	four very long excursion 10" cone 3" voice-coil	four very long excursion 10" cone 3" voice-coil
amplifier	TA 4D, TA 2D	bridging mode PWM
controller	D MOD or F MOD	Onboard DSP with FIRTEC technology
connectors	2x speakON NL4 on the back 1x speakON NL4 on the front	Powercon in/out, analog/AES/EBU XLR3 auto switch Ethercon RJ45 DANTE optional
size (h/w/d)	720/580/720mm	720/580/720mm
weight	59kg	70kg
features	C-flyware, M20 standflange	C-flyware, M20 standflange

MAXIMUM PERFORMANCE

The C SUB generates the frequencies that the ear expects in large rooms: not only at 80Hz, the "room wavelength" of 4m, but also more than an octave deeper, efficiency remains consistently high. This means that these frequencies do not have to be forced out of the system via frequency-response correction, thus accompanied by a loss of performance, but can rather be retained effortlessly within the overall spectrum even at high levels.

As it can be expected from KS AUDIO loudspeakers, the C SUB bass is not only powerful, but also features a high sound quality. This optimum is achieved by using four heavy duty, 10" long excursion woofers with 30mm voice-coil height. The relatively low moving mass of the coated membranes combine with push-pull technology results in a precise transient response and decay. The speakers are built in pairs in two separated matched chambers with shared acoustic loads. This results in minimum distortion values.

The housing is virtually free from resonances due to its geometry alone and made of multiplex panels with multiple hardening. The rear side is provided with four stable transport wheels.

In line with years of successful experience with the T SUB, great importance was attached to high transmission quality and easy handling and use.

As the most ideal amplifier we recommend a TA 2D but a TA 4D in 2-channel bridge mode is also very suitable. The load on a TA 2D is 3 C SUB per channel, on a TA 4D in bridge mode it is two C SUB.

Depending on the used MH loudspeaker, the crossover frequency and the correct phase position can be adjusted.

The C SUB is an ideal subwoofer for any installation to add extra energy in the sub-bass. It is the perfect subwoofer to add to the VC LINE and CPD LINE, a special rigging frame is available to fly the C SUB directly with these Line Arrays.

POWERED VERSION CPD SUB

In the CPD version, a DSP-controlled amplifier is built in as a slide-in module in the rear panel. This provides the required frequency and phase response correction as well as the necessary protection options as well as, particularly KS AUDIO, limiters to protect the loudspeaker. The power stage is designed to be particularly efficient and operates without cooling fans, using "cold" PWM technology. The wideband switching power supply can handle all AC voltages between 110V and 240V. The inrush current is limited by electronic regulation. The power supply is connected via PowerCon F+M connectors that allow series connection, for example to the full-range loudspeaker.

The symmetrical input has XLR F+M connectors. There are 2 channels available, so that the bass content from a stereo signal can be reproduced via a single mono woofer. Another special feature is the automatic recognition and changeover of a pending digital audio signal according to AES/EBU standard. Apart from the power switch, the following additional control elements are available: buttons for "sensitivity" for individual adaptation to the operating site, for delay settings in m and ms, low-pass filter or selection of the digital audio channel. The settings are clearly legible on self-luminous displays.

Further settings, such as a parametric equalizer, can be downloaded and saved via integrated Ethernet switch by the KS REMOTE software.



APPLICATIONS

Small / Medium PA
Small / Medium Open Air
Small / Medium Line Array
Theatrical application
Houses of worship
Disco & Nightclub

TO COMBINE WITH

C 12 / CPD 12
C 22 / CPD 22
C 40
C/CPD LINE Array
VC LINE Array
P LINE Array



C W18 / CB 18

Subwoofer 1 × 18"



Specifications	C W18 unpowered	CB 18 powered
frequency range	38-120Hz ±3dB (32Hz -6dB)	38-120Hz ±3dB
power capacity	1200Wrms / 2400Wpeak at 8 ohms	1200Wrms / 2400Wpeak
sound pressure level	136dBpeak	136dBpeak
dispersion	sphere	sphere
crossover frequency	70/100/120Hz	70/120Hz
driver	18" ND-cone	18" ND-cone
amplifier	CB 18 or TA 2D / CA 4D / TA 4D	6× build in PWM, SMPS with PFC
controller	build in CB18 or TA2D / D MOD / F MOD	DSP with FIR Filter
size (h/w/d)	540/540/640mm	540/540/640mm
Weight	35kg	40kg
Features	M20 standflange, handles	M20 standflange, handles
accessories	dolly	dolly

LIGHTWEIGHT LOW-BASS EXTENSION

The lightweight subwoofer for high demands. The construction is classic, 1 x 18" bass-reflex – and the design of the highest quality.

What makes the C W18 very special is the high-capacity long-excursion speaker with 100mm voice coil and exceptionally powerful ND drive unit. In addition, the construction of the vents for frequencies in the range of 40Hz with its particularly large diameter ensures a high degree of efficiency and low distortion levels due to minimal losses at the tunnel openings.

The C W18 is the recommended low-subwoofer extension for the KS SAT and SESSION systems. Therefore the recommended controlled amplifier is, the free PWM power amplifier channel of the CB18. However, a KS TA 2D Amplifier or a TA 4D amplifier with a D MOD or F MOD controller provides the required frequency and phase response correction as well as the necessary protection options as well as, particularly KS AUDIO, limiters to protect the loudspeaker.

Combined with a stand tube (M20 thread), the C W18 make an ideal stand to lift fullrange loudspeakers like the C 1 or the C 12 onto the right listening level.

The solid protective grid covers the entire front and is overlaid with acoustic foam, which makes it almost "invisible". A transport protection cover with four 100mm blue wheels is available as accessory. The surface has a PU coating that withstands almost any mechanical stress.

POWERED VERSION

In the powered version, the CB 18 represents the core of SAT and SESSION systems. The two mid-high range amplifier channels operate two C1 in SAT mode, or in SESSION mode one C12 in in bridge-mode operation – for highest sound pressure and precision! Switching between these modes is done automatically as soon as the controller recognizes a connected C 12. With this combination of 10" or 12" ND and 1" ring radiator or 1,4" ND driver – both with HDSP horn – your performance leaves a strong impression on any audience!

A second passive C W18 woofer can be operated as an extension on a second integrated power stage in mono or even stereo mode.

The DSP controller processes analog signals up to 20dBv as well as digital AES format, switchover is done automatically. For the C1 and C12 systems, special FIR filters were programmed to achieve a linear-phase and impulse-true distortion correction. All manually operated functions and additional filters can be controlled via USB by the KS REMOTE3 software.

The 2000Wrms amplifier is embedded in the woofer cabinet in such a way that an easily accessible inclined front panel is formed on which the control elements do not protrude. This also ensures that the cooling for the three 2-channel PWM power stages can operate smoothly, which corresponds to the request of many customers not to use active cooling to avoid disturbing fan noise.



APPLICATIONS

CB 18 powered
subwoofer of SAT 3
C W18 unpowered
subwoofer Extension
to CB 18



T SUB B

Extended Subwoofer 8 × 10"

Specifications	T SUB B unpowered
frequency range	35-70/100/120Hz ±3dB (30Hz -6dB)
power capacity	4000Wrms / 8000Wpeak at 4 ohms
sound pressure level	144dBpeak
dispersion	spherical
crossover frequency	70/100/120Hz
driver	8 × 10"-cone, long excursion
amplifier	TA 2D, TA 4D
controller	D MOD or F MOD
size (h/w/d)	580/1160/870mm (rect. shape)
weight	131kg
features	8 handles, 4 wheels

THE ULTIMATE LOW BASS

The T SUB generates the frequencies that the ear expects in large rooms: not only at 80Hz, the "room wavelength" of 4m, but also more than an octave deeper, efficiency remains consistently high. This means that these frequencies do not have to be forced out of the system via frequency-response correction, thus accompanied by a loss of performance, but can rather be retained effortlessly within the overall spectrum even at high levels.

As it can be expected from KS AUDIO loudspeakers, the T SUB bass is not only powerful, but also features a high sound quality. This optimum is achieved by using eight! heavy duty, 10'' long excursion woofers with 30mm voicecoil height. The relatively low moving mass of the coated membranes combined with push-pull technology results in a precise transient response and decay. The speakers are built in pairs in two by two separated matched chambers with shared acoustic loads. This results in minimum distortion values.

The cabinet is virtually free from resonances due to its geometry alone and is made of multiplex panels with multiple reinforcements. The rear side is provided with four stable transport wheels.

In line with years of successful experience with the T SUB, great importance was attached to high transmission quality and easy handling and use.

As the most ideal amplifier we recommend a KS AUDIO TA 2D. As a 2-channel amplifier, the TA 2D delivers easily 2x 2000Wrms into 4 ohms. Two T SUB can be connected per TA 2D. The TA 2D's power supply is actually capable of delivering these powers long term.

Depending on the used MH loudspeaker, the crossover frequency and the correct phase position can be adjusted. The T SUB is an ideal subwoofer for any installation to add extra energy in the sub-bass. It is the perfect subwoofer to add to all our line arrays.

Who has not heard C SUB and T SUB subwoofers has no idea how much energy 10" woofers can generate. The T SUB is again a unique development by KS AUDIO and a good example of what great audio thinking "out the box" can lead to.

APPLICATIONS

Large PA
Open Air
Houses of worship
Disco & Nightclub

TO COMBINE WITH

VC LINE
P LINE
T LINE
U LINE
C 40



U SUB

High Efficiency Hybrid Subwoofer
2× 18"

Specifications	U SUB unpowered
frequency range	38-120Hz ±3dB (32Hz - 6dB)
power capacity	3200Wrms / 6400Wpeak at 4 ohms AES standard
sound pressure level	142dBpeak
impedance	4 ohms
dispersion	spherical
crossover frequency	70/100/120Hz
driver	2 × 18"-cone, long excursion with 4" voice coil
amplifier	TA 2D or TA 4D/F MOD
size (h/w/d)	580/1160/720mm (rect. shape)
weight	88kg / 194lbs
features	flyware and frontcover optional, 4 wheels standard



THE EXCEPTIONAL SUBWOOFER

The KS AUDIO U SUB belongs to the new generation of Subwoofers tailored to modern demands of contemporary sound reinforcement.

The high-performance hybrid subwoofer for reproducing frequencies down to 30 Hz and despite its compact dimensions, it produces an impressive, powerful and dry bass that never loses its musicality.

The optimally tuned, horn-shaped multiplex enclosure with bass reflex tuning accommodates two extremely durable 18" high-performance chassis with a 100mm voice-coil and a linear stroke of 60 mm. The load capacity is 6.4 kWpeak.

Thanks to the linear flared bass reflex design, the result is extremely high efficiency and low distortion thanks to minimal losses at the tunnel port. This is especially true at high levels, while increasing the efficiency of the LF system and extending the frequency response below 40 Hz.

The large central linear bass reflex horn provides greater directivity forward when several cabinets are placed one above the other or vertically side by side.

Three stacked U SUB have a good height to serve as a platform for full-range systems. In addition, the combination of 3 cabinets can serve as a 2/1 cardioid subsystem. Useful is that also reverse subs can be firmly connected to each other with the U SUB-flyware.

Compact dimensions and exceptional power reserves combined with minimal distortion make the U SUB a modern and flexible tool for touring and large installation applications requiring extreme low-frequency sound pressure and maximum control over dispersion.

The recommended TA 2D and TA 4D / F MOD - in bridge mode- controller amplifiers provide the necessary power, frequency response correction and limiters for the drivers. One U SUB can be connected to one channel of a bridged TA 4D or to one channel of the TA 2D.

The cabinet features a large multigrip handles at each side and 4 wheels.

The connector panel with double speakON NL4 is mounted on the back of the cabinet. On the front there is a speakON NL4 for reversed use of the U SUB.

APPLICATIONS

Large PA
Open Air
Houses of worship
Disco & Nightclub

TO COMBINE WITH

VC LINE
P LINE
T LINE
U LINE
C 40



KS

LINE ARRAYS

Clearest intelligibility



SEOUL, SOUTH KOREA

Seoul University

A multifunctional hall needs an equally multifunctional sound transmission system: C LINE with center cluster and C WL subwoofers arranged as well in a line array. From highly intelligible speech requirements, to theatrical performances or pop concerts – always maximum performance.



S LINE

Line Array 2 × 6" + 1"



Specifications	S LINE unpowered (Bi-Amp)
frequency range	70 - 20,000Hz ±3dB
sound pressure level	123dB peak single element
dispersion HxV	100°/20° (wide) 100°/7° (narrow) asymmetric
drivers	2 × 6" cone ND + 1 × 1,75" ringdriver
power in Wrms	200 + 80Wrms / 400 + 160Wpeak at 16 Ohms
crossover frequency	1200Hz, active
connectors	2 × speakon NL4
amplifier	CA 4D, TA 4D
controller	F MOD
size (h/w/d)	230/478/255mm
weight	14 kg
features	integrated S-flyware, standflange

ULTRA-COMPACT

The ultra-compact Line Array System S Line offers a host of technical innovations for easy universal application and the best possible sound reproduction

Due to the asymmetrical radiation, the axis shifts 5° towards the centre of the room if the S LINE is used as a line array. This reduces disturbing reflections caused by blasting on walls. If the S LINE is used vertically, for example as a cluster of three or four, the axis points downwards.

The S LINE is available in narrow and wide versions with 100° x 20° and 100° x 7° dispersion angles respectively.

The fully integrated fly-ware is recessed into the housing. It is connected to the next element or to the flying frame without any loose parts. The angle may still retains adjustable.

The HF unit is formed by a driver with ring membrane whose energy radiates directly into the waveguide. This is a new way of converting energy to a cylindrical wavefront. This results in an unsurpassed linear and distortion-free high-frequency behavior. The DSP of the controller integrates system equalization with FIR filter, crossover network, subsonic filter, limiter the time alignment. Beyond that, the controllers offer additional benefit: The required pre-equalizations for line-arrays of different lengths and splay are available as presets and can be chosen in a very simple way. You name the number of elements and the angle between the elements for achieving best acoustic energy distribution.

The performance of all drivers of the S LINE is generated by KS AUDIO amplifiers CA 4D or TA 4D with state-of-the-art controllers. An amplifier operates in 2-way active mode up to eight S LINE elements generating more than 130dB SPL.

A particularly user-friendly innovation is the splay angle adjustment mechanism: all parts are completely recessed in the housing - you do not need any additional connecting elements. An adapter frame is available for combo with bigger VC LINE or P LINE elements

Used as stand-alone unit S-LINE is excellently suitable for speech reinforcement. The narrow and tilt vertical splay-prevents interferences in delay units.

Used in a line array configuration or vertically clustered, in combination with KS AUDIO subwoofers, the S LINE is also capable of trouble-free complex dynamic music reproduction.



APPLICATIONS

Line Array
Conference
Houses of Worship
Play House
Parliament small size



VC LINE

Line Array 2 × 8" + 1" VALTEC™



Specifications	VC LINE unpowered (Bi-Amp)
Frequency range	60Hz-20000Hz ±3dB
Power capacity	1000Wrms + 100Wrms at 16ohms / >2000Wpeak
Sound pressure level	140dBpeak single element
Dispersion HxV	120°/0-15° single, VALTEC™ Beamsteering
Crossover frequency	1000Hz active
Drivers	2 × 8" ND cone, 1 3/4" driver
Amplifier	KS CA 4D, TA 4D
Controller	KS F MOD 2-Way mode FIR filtering
Connectors	2x SPEAKON NL4
Size (h/w/d)	260/580/420mm
Weight	16.5kg
Features	Integrated C-flyware

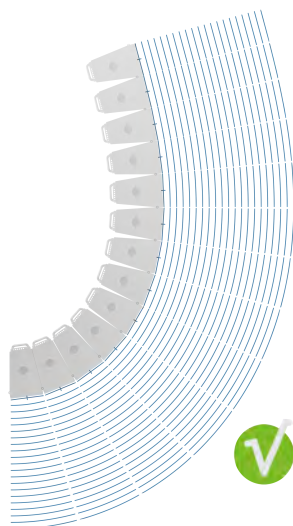
VERTICAL VARIABLE DISPERSION ANGLE

KS has established a reputation as a manufacturer of excellent line array systems for professional users. With the C LINE, KS sets the benchmark in compact Line Array systems, a system that meets the highest requirements for both high sound quality and simple handling.

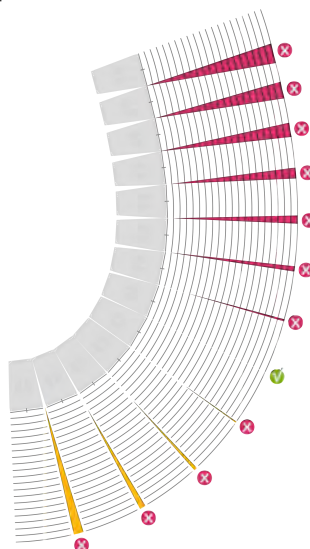
Completely new and revolutionary is the adjustable variable vertical beam angle. This latest version of the C LINE is named VC LINE with the V of VALTEC™ (see page 10-13).

With the VALTEC™ technique, KS ensures that even large and far-field arrays can be realized without the dreaded interference in the overlapping high range frequencies. In the nearfield with strong curving, there are more even levels without high-frequency drops.

VALTEC™ VC LINE Array dispersion behaviour



Typical Line Array dispersion behaviour



The system comprises two 8" neodymium speakers with fiber-reinforced membrane and a driver with 1.75" mylar ring diaphragm. The 1.75" diaphragm radiates via two rotating acoustic lenses in KS own highly accurate waveguide. The angle of these lenses determine the vertical projection angle of the HF sound waves. This angle is variable from 0°-15°.

The VC LINE is because of its flexibility and ease of use the perfect tool for rental companies and finds application from small to medium size venues. Because of its unprecedented sound quality, the VC LINE is also the choice for use in Theatres and other spacious venues where no compromise is made. In addition, the VC LINE is compact so that it doesn't detract from the stage image. In addition to the typically flown version, the VC LINE can also be easily used as a ground stack in combination with KS AUDIO Subwoofers.

The combination of the individual elements into a line array and the radiation behaviour versus frequency response at different angles were fundamentally researched by KS during the development of the VC LINE. It results in exact presets that make it very easy for the user to configure the Array. These presets are available to the user in the KS F MOD module.

The flyware requires no external components and is easily and securely locked in position by ball lock pins.



Interferences due to the overlap of the radiation behavior in the high frequency range. The further the distance to the array, the more interferences arise.

No interferences in the

high frequency range

APPLICATIONS

Line Array
Live Venue
Opera House
Conference
Houses of Worship
Play House
Parliament
Small/ medium
Open Air

RECOMMENDED SUBWOOFERS

C WH
U SUB
C SUB / T SUB



P LINE

Line Array 2 × 10" + 2 × 1.75"



Specifications	P LINE unpowered (Bi-Amp)
frequency range	60-20000Hz ±3dB
power capacity	1000Wrms/2000Wpeak at 4Ω + 160Wrms/320Wpeak at 8Ω
sound pressure level	142dBpeak
dispersion HxV	90°/5° single
crossover frequency	1000Hz, active
drivers	2 × 10"-cone ND, 2 × 1,75"-ringdriver
amplifier	CA 4D, TA 4D
controller	F MOD
size (h/w/d)	316/580/526mm
weight	30kg
features	Integrated C flyware



POWER LINE ARRAY

Following in the footsteps of the highly successful C LINE series, now VC LINE, KS AUDIO has developed the very powerful P LINE as a cost-effective solution for users where power and compactness are important. Yet the P LINE undoubtedly fits in with the main idea of KS AUDIO to develop only products with the best audio performance on the market.

The components are equipped with neodymium magnets, which translates into low weight and, in combination with the special membrane shape of the two high-frequency drivers, the lowest distortion factor. With a frequency range of 60-20,000Hz it is a full-range system that only needs to be complemented in certain cases by KS AUDIO subwoofers.

The amplifier for the P LINE is the KS AUDIO TA 4D whose 4 amplifier channels are switched in 2-channel Bi-amp mode. The load on a TA 4D is four P LINE modules.

Each line array requires a frequency equalization that is determined by the length of the array and the angle between the individual elements. It is often recommended to simulate the intended array with special software or standard programs like EASE. This is a tedious process and it finally demands a compromise from the user, since the frequency response may not be expected to be the same at every point of the acoustic surface to be covered, and therefore only an average correction is possible.

On top of that, in practice, the local conditions often do not allow the exact realization of the simulated array, and thus a high degree of uncertainty arises when the system is put into operation. Therefore, KS AUDIO has stored presets in the F MOD controllers, which convert the entered values for array length "PCS" and angulation "CUR" into optimal equalization. These uncomplicated and "on-site" modifiable parameters are listed in the manual next to the required number of TA 4D amplifiers. The chart is designed in a way that the connection between electronics and mechanics becomes immediately apparent.

APPLICATIONS

- Line Array
- Live Venue
- Opera House
- Conference
- Houses of Worship
- Play House
- Parliament
- Medium Open Air



T LINE B

Line Array 2 × 12" + 3 × 1.75"



Specifications	T LINE unpowered (Bi-Amp)
frequency range	60-20000Hz ±3dB
power capacity	1000Wrms/2000Wpeak at 4Ω + 240Wrms/480Wpeak at 5.6Ω
sound pressure level	144dBpeak
dispersion HxV	90°/0-10° Variable Beam Steering between 0° and 10° in 1° increments
crossover frequency	900Hz, active
drivers	2 × 12"-cone ND, 3 × 175"-driver ND
amplifier	TA 4D
controller	F MOD
size (h/w/d)	359/1038/538mm – with flyware
weight	52kg
features	including T-flyware



THE VERTICAL INNOVATION

The KS AUDIO T LINE Array was developed for highest transmission quality in LIVE CONCERT applications. The T LINE features a variable vertical radiation behavior of 0° to 10°, which always ensures a continuous transition to the next element and eliminates the need for different types with different dispersion angles.

The components are equipped with neodymium magnets, which translates into low weight and, in combination with the special membrane shape of the three high-frequency drivers, the lowest distortion factor. With a frequency range of 60-20,000Hz it is a full-range system that only needs to be complemented in certain cases by KS AUDIO subwoofers.

The amplifier for the T LINE is the KS AUDIO TA 4D whose 4 amplifier channels are switched in 2-channel Bi-amp mode. The load on a TA 4D is four T LINE modules. Thereby it delivers on the woofer channels 2x 2000Wrms.

Each line array requires a sound pressure frequency equalization that is determined by the length of the array and the angle between the individual elements. It is often recommended to simulate the intended array with special software or standard programs like EASE. This is a tedious process and it finally demands a compromise from the user, since the frequency response may not be expected to be the same at every point of the acoustic surface to be covered, and therefore only an average correction is possible.

On top of that, in practice, the local conditions often do not allow the exact realization of the simulated array, and thus a high degree of uncertainty arises when the system is put into operation. Therefore, KS AUDIO has stored presets in the F MOD controllers, which convert the entered values for array length "PCS" and angulation "CUR" into optimal equalization. These uncomplicated and "on-site" modifiable parameters are listed in the manual next to the required number of TA 4D amplifiers. The chart is designed in a way that the connection between electronics and mechanics becomes immediately apparent.

APPLICATIONS

- Line Array
- Live Venue
- Opera House
- Conference
- Houses of Worship
- Play House
- Parliament
- Large Open Air



U LINE



Line Array 2 × 15" + 4 × 6.5" + 4 × 1.75"

Specifications	U LINE unpowered
frequency range	50-20000Hz ±3dB
power capacity	4000Wrms (1300+1300+1080W+320W) at 8 ohms
sound pressure level	147dBpeak
dispersion	75°/2° single
crossover frequency	250Hz, 1250Hz
drivers	2 × 15"-cone, 4 × 6,5"-cone, 4 × 1,75"-Ringradiator
recommended amplifier	TA4D
controller	F MOD
size (h/w/d)	424/1200/580mm
weight	82kg
features	integrated U-flyware



ULTRA-HIGH AUDIO PERFORMANCE, SMART HANDLING

U LINE extends the KS AUDIO program with a system that meets the requirements of highest sound quality and easiest handling. The quality of the audio performance exceeds almost all the systems available on the market.

The system consists of two 15" speakers, four 6.5" mid-range drivers and four high-frequency drivers with 1 3/4" ring diaphragm. All components are equipped with the strongest neodymium magnets. Both the midrange and high-frequency ranges operate via cylindrical waveguides. The principle was developed by KS AUDIO and already shows its outstanding qualities in the P LINE.

The combination of the individual elements into a line array and the therefore required pre-correction were already fundamentally researched by KS AUDIO during the development of the T LINE and successfully implemented for its other line arrays. The result is a software that, after the input of array length (number of elements) and curving (angle to the next element), calculates the equalization for the entire system and transfers it to the DSP's of the system controllers. In this way, the user has an immediately ready-to-use line array with optimum sound and dispersion characteristics.

A special feature is the new fly-ware. It requires no external components, can be easily and securely prepared on the ground and then lifted and locked in position into the required angle. Thus a single person is able to mount and dismount the array completely.

The cabinet is made of multi-layered, waterproof glued birch multiplex and has a structured polyurethane coating. A steel grille, covered with acoustic fleece, protects the high-quality components.

The amplifier for the U LINE is the KS AUDIO TA 4D, whose 4 amplifier channels are switched in 1-channel tri-amp mode with woofer bridge operation. The load on a TA 4D is two U LINE modules.

The cradle allows an array with 16 elements which only weighs 1.5 tons including the dolly.

The U LINE is a large high-end public address system, which, because of its conception, enables arrays of almost infinite capacity. Whether in arenas or open-air, it enables concerts with outstanding sound quality. The combination with the exceptional T SUB in a cardioid array leaves nothing to be desired, even in the low frequency range.

APPLICATIONS

- Line Array
- Live Venue
- Opera House
- Conference
- Houses of Worship
- Play House
- Parliament
- Large Open Air

KS

FLOOR MONITORS

Good vibrations





WORMS, GERMANY

Das Wormser

Stage monitors are more than just a source of information – artists use them to communicate, the performance benefits from mutual impulses, and the audience experiences the uniqueness in the finest nuances (CPD12M).



CPD 1M / C 1M

Floor Monitor 10" + 1.75"



Specifications	CPD 1M powered	C 1M unpowered
frequency range	68-19000Hz ±3dB	68-19000Hz ±3dB
power capacity	400Wrms/800Wpeak + 60Wrms/120Wpeak	400Wrms/800Wpeak + 60Wrms/120Wpeak @ 8Ω
sound pressure level	134dBpeak	134dBpeak
dispersion	50° / 90° rotatable	50° / 90° rotatable
crossover frequency	1500Hz, phase linear	full range mode 1500Hz
drivers	10" ND cone, 1.75"- ND compression driver	10" ND cone, 1.75"- ND compression driver
amplifiers	PWM, Bipolar bridge	CA 4D, TA 4D
controller	2-way DSP processing, FIR	D MOD 2 or F MOD
connector	2 × XLR, PowerCon	2 × SPEAKON NL 4
size (h/w/d)	498/279/375mm	498/279/375mm
weight	15kg	15kg
features	Standflange, 4 × M6, integrated digital delay	Standflange, 4 × M6, integrated digital delay



If compact good sound is a requirement

The C(PD) 1M complements the KS AUDIO floor monitor series with its extremely compact wedge format and low weight. The sound pressure is exceptionally high and even right down to the low frequencies.

The 10" long excursion chassis has a very powerful lightweight neodymium magnet. The 1" driver uses a 1.75" diaphragm made of polymer which produces significantly less distortion than comparable titanium diaphragms.

The sound path in the mid-/high-range horn is designed for the usual operation as a floor monitor. Due to the square installation dimension, however, it is also possible to mount the speaker rotated by 90°. In this case, the C(PD) 1M can also be used on stands as a universal full-range loudspeaker.

The power electronics of the CPD 1M include a "cold" PWM output stage for the low-midrange chassis and an analogue bipolar output stage with best audio properties for the high frequency driver.

The DSP Controller uses FIR filter technology for accurate impulse response of the loudspeakers and it also minimises feedback. The two integrated amplifiers provide 400W of power to the 10"chassis and 40W to the 1" driver.

With the C(PD) 1M, KS offers the demanding professional user an active stage monitor and full-range loudspeaker that can be used universally of particularly high quality and that is also very compact.



C 2M

Floor Monitor 12" + 1.75"

Specifications	C 2M unpowered
frequency range	60-20000Hz ±3dB
power capacity	1000Wrms / 2000Wpeak at 8 ohms
sound pressure level	134dBpeak
dispersion	90° × 60° rotatable
crossover frequency	full-range mode 1200Hz
drivers	12"-ND cone + 1.75" compression driver
amplifiers	CA 4D, TA 4D
controller	D MOD 2 or F MOD
connector	2 × SPEAKON NL4
size (h/w/d)	350/576/412mm
weight	24kg
features	Stand lange,handle

For more information please see **page 29**



CPD 12M / C 12M

Coaxial Floor Monitor 12" + 3"



Specifications	CPD 12M powered coaxial	C 12M unpowered coaxial
frequency range	60-19000Hz ±3dB	60-19000Hz ±3dB
power capacity	500W + 100Wrms / 1200Wpeak	500Wrms/1000Wpeak @ 8Ω + 100Wrms/200Wpeak @ 16Ω
sound pressure level	134dBpeak	134dBpeak
dispersion	symm. 60°	symm. 60°
crossover frequency	1200Hz, phase linear Bessel	full range / biamp switchable
drivers	12"-cone ND, 3"-driver ND	12"-cone ND, 3"-driver ND
amplifier	PWM, Class-D fullbridge	KS CA 4D, TA 4D
controller	2-way DSP processing	D MOD 2 or F MOD
powersupply	110-240VAC, PowerCon F+M	2x SPEAKON NL4
size (h/w/d)	350/576/412mm	350/576/412mm
weight	25kg	21kg
feature	Standflange, 4x M6	Standflange, 4x M6



12" Coaxial precision floormonitor

When you need the best sound in a small package, this C(PD) 12M coaxial combination of 12" cone and 1.4" driver is unsurpassed. The dispersion behaviour is ideal for use as a stage monitor. The 60° coaxial dispersion is very even and minimises feedback without loss of control.

The 2-way controller amplifier built in at the rear of the CPD 12M works with a very high efficiency. Furthermore, the use of FIR filters in the DSP controller achieves complete level and phase linearity - this guarantees the most natural intelligibility - pure! Two integrated amplifiers provide 500W continuous power to the 12" chassis and 100W to the 1.4" driver - the peak power is 1200W!

The speaker is equipped with a 12" ND low-mid chassis with a 4" voice coil and a coaxial 1.4" ND driver. As a coaxial monitor the C(PD) 12M is equally suitable for normal stand-mounting as horizontal applications.

The 2-way controller amplifier built into the rear of the CPD 15M works with a very high degree of efficiency and does not require a - often disturbing - cooling fan. The digital frequencies and the FIR filters are precisely tuned to the speakers, while limiters ensure safe operation. The electronically balanced input is designed as XLR F+M sockets. In addition to the mains switch, there are further controls: A stepped level control for individual adaptation to the location, a delay in ms and m and a LoCut switch for pure speech reproduction or when using additional subwoofers.

C 12M features two speakON NL4 connectors and has a switch to use the monitor in active or passive mode.



CPD 15M / C 15M

Floor Monitor 15" + 3"



Specifications	CPD 15M powered coaxial	C 15M unpowered coaxial
frequency range	58-19000Hz ± 3 dB	58-19000Hz ± 3 dB
power capacity	1000W + 100Wrms, 2kW peak	1000W + 100Wrms, 2kW peak @ 8 Ω
sound pressure level	134dBcont (139dB peak)	134dBcont (139dB peak)
dispersion	symm. 60°/40° rotatable	symm. 60°/40° rotatable
crossover frequency	1000Hz, phase linear Bessel	full range / biamp switchable
drivers	15"-cone ND, 3"-driver ND	15"-cone ND, 3"-driver ND
amplifier	PWM, Class-D fullbridge	KS CA 4D, TA 4D
controller	2-way DSP processing	D MOD 2 or F MOD
powersupply	110-240VAC, PowerCon F+M	2x SPEAKON NL4
size (h/w/d)	405/670/534mm	405/670/534mm
weight	35kg	35kg
feature	Standflange, handles	Standflange, handles



When power alone is not enough but also necessary.

Anyone familiar with large and loud stages knows that sometimes you need a monitor that can cut through all that loud sound energie. The C(PD) 15M is the tool for projecting information very clearly even then.

The perfectly matched woofer and HF-range driver/CD- horn combination gives the C(PD) 15M a true point source experience. The impulse behaviour is phenomenal across the entire bandwidth and the linearity in frequency is also very balanced.

The CPD 15M contains two powerful amplifiers delivering 1000Wrms to the woofer and 100Wrms linear MOSFET power to the driver. The two amplifiers are controlled by KS AUDIO's own unique FIRTEC™ DSP.

The speaker is equipped with a 15" ND low-mid chassis with a 4" voice coil and a 3" ND driver. The 60°x 40° large horn is rotatable, his makes the C(PD) 15M equally suitable for normal stand-mounting as horizontal use.



KS

ELECTRONICS

System Amplifiers and Controllers



HEIDELBERG, GERMANY

Theater Heidelberg

A new theater is created, with the technology of our time for the artistic requirements of tomorrow. The audio electronics has to cope with this – remotely controlled and monitored in the air-conditioned amplifier room, modifiable and extendable due to their modular design (TA4D, CA4D, controller modules).



TA 2D

2x2 Power Amp



Specifications	TA 2D
frequency range	5-50000Hz -1dB without controller
continuous sine wave power (THD+N<0,5%, both channels driven)	2000W @ 4Ohms 3000W @ 2.7Ohms
peak power	all channels driven with pink noise 12dB crest factor: 12000W at 2.7 ohms
Amplifier	48 MOSFET , Class-H
Controller	27Bit ADC, AES/EBU SRC bis 192kHz, 32Bit DSP, FIRTEC™
Modes	2x2 All KS AUDIO Subwoofer presets
mains	110-240VAC, 30/16A
weight	12kg
size	19" / 2HE / 350mm



THE DIGITAL SUBWOOFER TOOL

The versatile amplifier with perfect features: from a basic stereo power stage to a digitally controlled 2-way active loudspeaker system with network control and monitoring, any operating mode is possible.

However, the TA 2D finds its best application as high-performance amplifier for all KS AUDIO woofers. For this purpose, the basic program is ideally matched with configurable parameters to the respective loudspeaker type. The actual set-ups are located on board of the integrated FIRTEC™ DSP.

Two independent amplifier channels featuring a highly efficient 3-stage Class-H circuit provide the basic configuration of the TA 2D. Each power output stage comprises 24 fast FET transistors that guarantee superb audio performance with a frequency range of up to 50kHz.

The performance of the 2HE/19" amplifier with its typical $2 \times 2000W$ at a 4 ohm load, is at the upper limit of the energy level that common 16A protected 230V circuits can supply. Already at 8 ohms there are 1,000W available, which is sufficient power to operate almost any loudspeaker.

It is important to note that all our power statements are continuous powers, and not, the in the industry often used, short-term peak powers.

The power stages are supported by a digital audio processor with high-quality 27 bit A/D converters using gain stacking technology. This allows the implementation of 2 single channels, a stereo or a 2-way system.

The signal processing programs for all KS full-range loudspeaker systems are equipped with the FIR filter technology FIRTEC™. This means individually measured, phase-linear sound reinforcement systems with an unsurpassed sound resolution.

Modern wide-range switching power supply featuring power factor correction.

TECHNICAL EQUIPMENT

Modern wide-range switching power supply featuring power factor correction.

48 FET power transistors with NF-conducted triple operating voltage

Regulated switch-mode power adapter with PFC and inrush-current limiting, plus separate standby power supply, loudspeaker outputs with relay power-up delay, protective circuit against low-impedance and electrical overload.

Two particularly silent running, temperature-controlled fans

APPLICATIONS

High Power Subwoofers



CA 4D

4x4 Power Amp

Specifications	CA 4D
frequency range	5-50000Hz (without controller)
continuous sine wave power THD+N<0.5% all channels driven)	700W @ 4Ohms - Ch 1 and 3 350W @ 4Ohms - Ch 2 and 4
peak power	all channels driven with pink noise 12dB crest factor: 9100W at 2 ohms
amplifier	MOSFET, triple supply voltage
controller	D MOD or F MOD
output connectors	4 × Speakon NL4, mode switched
input connectors	4 × XLR3F, 4 × XLR3M
mains	100-240VAC
weight	8kg
Size (w/h/d)	19"/ 2U/ 350mm



4-CHANNEL AMPLIFIER

The CA 4D is a 4 channel MOSFET amplifier with controller card system configuration technology, using digital controller cards D MOD or F MOD. Both exclusively supporting the KS AUDIO FIRTEC™ finite impulse response technology. When changing D MOD cards or when loading a new program from the internal memory of the F MOD controller, both the inputs and the outputs are appropriately configured to reflect the correct set up.

Whether or not the system is configured as 4 single channels – 2 channel / 2 way – 2 channel with mono Sub woofer – 2 channel mono bridged high power sub woofer – 1 channel 3 way, nearly every combination of KS speaker systems is possible. This allows for a wide field of application, from large concert-size sound reinforcement to speech reproducing at the highest quality.

The CA 4D is equipped with 4 independent analog FET power amp modules. Two of them deliver a continuous sinewave power of 700 watts into 4 ohms each. While the other two modules deliver half that power. The controller card and an applicable program determines the distribution of power to always deliver the maximum available. The high performance of the CA 4D amplifier is achieved by three balanced supply voltages. The power losses are substantially lower than with any other conventional analog power-amplifier designs. A total of 40 quality selected power transistors, each featuring a $P_{vmax}=250\text{watts}$, deliver a maximum headroom. Soft clipping circuits working in conjunction with the operating voltage, limit the NF signals and therefore enable the power amps to always work with a high damping factor as well as remaining fully regulated.

The power supply is a state-of-the-art, heavy duty wide-range switch mode design, with Power-Factor-Correction (PFC) built in. The start-up current is limited to assure maximum protection. A second power supply is used to independently supply the controller card electronics along with the low voltage cooling fans and to operate the stand-by switch. In the production of high output, high levels of heat are also generated as a by-product at the amplifier. The reduction of these is done by 2 regulated cooling fans. The air is taken in from the front panel inlet thru an easy to clean filter. It is passed through to the back panel outlet, while passing over the heat fins and the power transformer to cool these units down to nominal operating temperatures.

On the front panel there are 4 mute switches corresponding to the 4 channels of the amplifier. Each of these switches has a red LED below it to indicate the mute status. On the rear panel there are 4 Neutrik Speakon output connectors. Their status is indicated by 4 green LEDs. The mains cable is connected there via a PowerCon.

The housing is constructed of 1.5mm thick steel while the 19" front plate is constructed of 4mm thick anodized aluminum and has 2 handles for ease of use.

APPLICATIONS

Controller Amplifier for KS full-range and BI-amp applications



TA 4D

4x4 Power Amp

Specifications	TA 4D
frequency range	5-50000Hz (without controller card)
sine wave power per channel (THD+N<0.5% all channels driven)	1000W per channel @ 4Ohms 2000W per channel @ 2Ohms
peak power	all channels driven with pink noise 12dB crest factor: 16000W at 2 ohms
amplifier technique	Class H MOSFET, 3 rails supply
controller	D MOD or F MOD
output connectors	4 × Speakon NL4, mode switched
input connectors	4 × XLR3F, 4 × XLR3M
mains	100-240VAC
weight	14kg
dimensions (w/h/d)	19"/ 133mm/ 350mm



4-CHANNEL POWER AMPLIFIER

The KS TA 4D is a unique solution for all applications in the field of professional sound reinforcement. From a linear 4-channel power amplifier to a “digital controlled multiway PA system”, any conceivable configuration is available simply by changing D MOD cards or when loading a new program from the internal memory of the F MOD controller, both the inputs and the outputs are appropriately configured to reflect the correct set up.

With the F MOD, controller all KS systems can be operated with the most modern linear-phase FIRTEC™ equalization, simply by downloading new programs from the internal memory. 8 balanced XLR connectors and 4 speakON power outputs are automatically adjusted in their function: the power outputs switch over to “bi-amp” or “bridge” mode when necessary, the XLR's can be alternately used as input or output, both for analog and AES/EBU signals.

One slot is intended for the optional DANTE™ card. Thus 4 further audio inputs are available. An Ethernet switch allows simple daisy-chaining.

Of course, the TA 4D contains all necessary protective devices in the power output stages. The 4 channels are largely independent of each other, so that e.g. in case of under-impedance on one channel only the respective channel is switched off. The “ready” status is displayed separately. In addition, the three variable cooling fans, fitted with an easy-to-clean air filter on the front, offer a high level of comfort. The amplifier can be remote-controlled with a logic level. A 1.5mm thick sheet steel housing, large handles, a 5mm front panel and, if required, angle brackets on the back underline the sturdiness of this device.

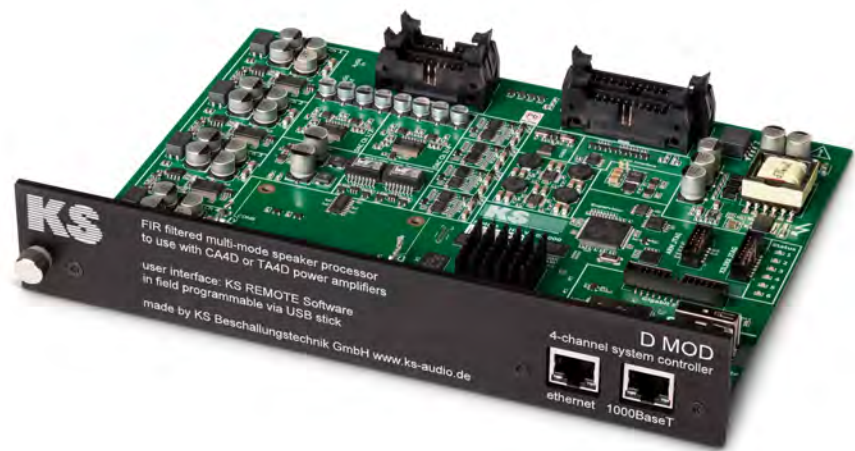
The TA 4D delivers 1,000W distortion-free sinus power per channel. This is possible because the MOSFET power stages are supplied with a symmetrical triple operating voltage, which results in a high degree of efficiency and therefore little heat dissipation.

The wide-range switching power supply operates with PFC on almost any alternating voltage. The layout of the power supply has to take into account that sufficient connected load must be provided for each TA 4D. Fuse rating slow-blow.

The maximum output power of all 4 channels is achieved when a “pink noise” signal with a crest value of 12dB is reinforced without “clipping”. Such a test signal is used by most loudspeaker producers to indicate the power capacity.

APPLICATIONS

High power Controller
Amplifier for KS
Bi-amp and Woofer
applications



D MOD

Digital Control Module



Specifications	D MOD
frequency range	10-20000Hz (without filtering)
analog inputs	4 × 20dBv balanced, 27 Bit A/D
digital inputs	2 × AES/EBU, 4 × DANTE (optional)
sample rates	30 - 192kHz
signal processing	4 independant DSPs
operating modes	4-ch, 2-ch biamp, 1-ch triamp, 2-ch woofer bridge mode, 3-ch SAT (mono bridge woofer), 1-ch 3-way
speaker equalization	IIR and FIR filters
user interface	PC-Remote, webserver
size (h/w/d), weight	40/232/190mm, 0.6kg

COMPLETE NETWORKING

Ethernet system controller

The 4-channel loudspeaker controller module with digital signal processing for amplifiers of the KS AUDIO series CA 4D and TA 4D. A unique convincing solution for perfect sound and easiest handling. The KS D MOD controller module complements the F MOD modules for applications where no quick change of the loudspeaker systems is required - i.e. especially in the installation area.

The one-time configuration of the loudspeaker system is done on the module by a USB stick transmitting the data while the system is switched on. During that process, both the signal inputs and the power outputs automatically receive the correct function:

- from four individual channels
- via two channels in Bi-Amp
- or high-power bridge mode
- to a single-channel 3-way active loudspeaker system with woofer-bridge mode output, and optionally "BI-Amp" control.
- A SAT mode is also available in which the L+R signal is summed up to mono sub-low.

In addition to digital signal processing with FIR filter technology, the special feature of the D MOD is its complete operability and controllability via standard networks. An

integrated gigabit switch allows daisy-chaining to the next device. The KS REMOTE PC software enables easy management and graphically, easy to understand, operation of an unlimited number of controller amplifiers arranged in groups.

All inputs can be controlled either digitally or analogously. Simultaneous digital and analog operation is also possible. A network-audio transmission using DANTE™ protocol is available as an option.

Despite the many new possibilities and state-of-the-art technology, the D MOD can replace an existing analog or digital controller by simple front-panel installation. This puts your public address system back on the cutting edge of technology.

APPLICATIONS

Fix Installation

SUITABLE AMPLIFIERS

CA 4D

TA 4D



F MOD

Digital Control Module



Specifications	F MOD
frequency range	10-22000Hz (without processing)
analog inputs	4 × 20dBv balanced, 27 Bit A/D
digital inputs	4 × AES/EBU, 8 × DANTE (optional)
sample rates	30 - 192kHz
signal processing	4 independant DSPs
operating modes	4-ch, 2-ch biamp, 1-ch triamp, 2-ch woofer bridge mode, 3-ch SAT (mono bridge woofer), 1-ch 3-way
speaker equalization	IIR and FIR filters
user interface	Soft menu, PC-Remote, webserver
size (h/w/d), weight	40/230/190mm, 0.6kg

ADVANCED SYSTEM CONTROLLER

The 4-channel speaker controller plug-in unit with digital signal processing for the amplifiers of the KS AUDIO CA 4D and TA 4D series. A unique and convincing solution for perfect sound and easy handling.

The KS AUDIO F MOD controller module replaces the FIRMOD 1+2 modules that have been in production for 12 years. Its special features are digital signal processing with

FIR filter technology and the complete implementation of all KS AUDIO speaker systems. The configuration of your loud-speaker system is menu-driven directly on the module, with power outputs automatically assigned the correct function:

- 4 Single channel operation mode
- Bi-amp operation mode
- High-performance bridge operation mode
- Tri-amp with 1 ch. bridge operation mode
- Mix mode operation (any combination of the above modes)

The control and display elements allow very fast and comfortable work: Directional and input keys for the display and a rotary knob for parameters. When the full load is reached, LEDs visible from afar provide information on the use of the limiters.

Besides digital signal processing with FIR filter technology, the special features of the F MOD are its full operability and controllability over standard networks. An integrated gigabit switch allows looping through to the next unit. The KS RE-MOTE PC software allows clear management and graphical control of any number of control amplifiers in groups.

All inputs can be controlled both analogue and digital. Simultaneous digital and analogue operation is also possible. Optionally, a network transmission via DANTE™ protocol is provided. Despite the many new possibilities and state-of-the-art technology, the F MOD can replace an existing analogue or digital controller by simple front installation. Your sound system is thus once again at the cutting edge of technology.

For years, the 4-channel KS AUDIO system amplifiers have represented a technically and economically unique solution. With the freely configurable F MOD, further new possibilities are added: Each channel can operate any loudspeaker. You can specify the operating mode, e.g. full-range or bi-amp, and combine it with a subwoofer. The crossover frequency can also be selected.

The inputs can be freely assigned to the DSP channels, which makes it possible, for example, to control both analogue and digital at the same time - an often useful backup option - or to connect a mobile analogue console in addition to the permanently installed digital console. The routing is clearly displayed in a matrix.

The quality of the inputs has also improved: In analogue mode, 4 channels with 27-bit dynamics are available. Four channels can also be controlled with an AES/EBU signal.

Up to 192kHz sample rate are processed. With the DANTE™ option, a further 4 audio channels can be transmitted.

For signal processing, 4 DSPs are implemented. In addition to the loudspeaker-specific functions and FIR filters, freely programmable parametric filters are now also available.

Via the Ethernet connection, the KS REMOTE software to monitor and adjust all speakers. Each connected loudspeaker appears there as an independent device. All settings can be saved as presets in F MOD.

If new speakers or new firmware are available, you can always download a complete update directly to your controller via USB stick.

APPLICATIONS

Touring, Rental Companies

SUITABLE AMPLIFIERS

CA 4D

TA 4D



KS

SETS

Plug & Play



SAT 3

We created the MicroSat for all those users, who are looking for the sound of a HiFi system with the live audibility of a PA at a minimum of size.

SPIRIT

SMALL, STRONG, BLACK

Among KS AUDIO systems, the SAT is one of the most successful – a concept that was developed more than 35 years ago, has often been copied and today represents the perfect example of a small PA system with active mono subwoofer. For many applications, our classic SAT, which has become steadily more efficient, is simply too powerful. This is why we created the SPIRIT for all those users who are looking for the sound of a good HiFi system, require the live audibility of a PA and whose audience usually consists of a few hundred people.

The mid-high range speakers are the CPD 08, self-powered systems that are unique in their compactness and transmission quality in the field of sound reinforcement of voice and music. The driver/ horn combination has an equally good frequency response up to 20kHz at all angles. The 8" low-mid range driver provides an extremely powerful ND drive unit and high power capacity. The cabinet features PU coated multiplex panels, equipped with flange adapter, threads, protective grille, hinged handle and vented ports on the rear side. The built-in controlled amplifier operates in active 2-way operation mode, the connections are on two parallel XLR F+M.

The active subwoofer of the SPIRIT is the CPD B2: a vented cabinet, equipped with two 10" speakers in push/pull operation mode with voice coils of 30mm (!) length. These 400W speakers even reproduce the lowest frequencies distortion-free. The controlled amplifier is embedded in the woofer cabinet in such a way that an easily accessible front panel is formed on which the control elements do not protrude. This ensures efficient air circulation to both power stages (PWM mode), which corresponds to the request of many customers not to use active cooling to avoid disturbing fan noise.

As in all KS systems, the cabinet construction is made of birch multiplex. Due to its new PU coating, it is tough on mechanical and chemical stress.

Recessed handles, M20 connector plate, rubber feet, protection grille and optionally acoustic front foam are further features of this premium product.

On request, we also provide custom enclosures with additional RAL coloring for permanent installation.

INCLUDING

2 × CPD 08
1 × CPD B2

APPLICATIONS

Piano Bar
Cabaret
Conference
Multi media
Ultra compact PA
Trade shows
Multi Zone
Background
Music announcer



SAT 3

THE ORIGINAL

The KS AUDIO SAT 3 consists of a CB 18 powered mono subwoofer with integrated amplifiers and a controller unit in one handy cabinet and two KS AUDIO C 1 satellite speakers, using a 10" driver and 1,75" compression HF driver handling 500 watts.

The integrated amplifier of the CB 18 has no less than 6 amplifier channels. Channels 1 and 2 as well as channels 3 and 4 are bridged and serve as pure low-frequency amplification. In SAT mode, channels 5 and 6 are respectively the left and right channels of the stereo signal. Here, the equalisation is optimised for KS AUDIO C 1 full-range loudspeakers.

The SAT3 can be easily extended by adding one unpowered CW 18 and connect it to the existing CB 18 subwoofer(s).

More information about CB 18 at **page 58** and about C 1 at **page 26**

INCLUDING

2 × C 1

1 × CB 18

APPLICATIONS

Compact PA

Piano Bar

Cabaret

Conference

Multi media

Multi Zone

Background

Music announcer



SESSION 3

ECONOMICAL SOLUTION

The KS AUDIO SESSION 3 consists of two powered mono subwoofer CB 18 with integrated amplifiers and two KS AUDIO C 12 satellite speakers, using each a 12" chassis and 3" compression driver. The driver is connected to a directivity horn with HDSP technology. For details on HDSP technology see page 8.

The integrated amplifier of the CB 18 has no less than 6 amplifier channels. Channels 1 and 2 as well as channels 3 and 4 are bridged and serve as pure low-frequency amplification.

As soon as a C 12 is connected to the output of the amplifier, the electronics recognise it and automatically switch channels 5 and 6 to bridge mode and the equalisation is adjusted on the KS AUDIO C 12.

In the latter SESSION mode, the amplifier operates in mono.

The SESSION 3 can be easily extended by adding two unpowered CW 18 and connect it to the existing CB 18 subwoofer(s).

More information about CB 18 at **page 58** and about C 1 at **page 32**

INCLUDING

2 × C 12
2 × CB 18

APPLICATIONS

Compact PA
Piano Bar
Cabaret
Conference
Multi media
Multi Zone
Background
Music announcer





K3

CUSTOMIZED

A solution for each task



HETTENLEIDELHEIM, GERMANY

KS Audio Showroom

KS AUDIO is appreciated and known for special solutions and installations all over the world. Enjoy our products in the unique surroundings of our newly opened test center. Everyone is welcome.

VICELLO

Sound art for rooms

With the electronic room-acoustic system VICELLO you transform your room into a concert hall with natural-sounding acoustics. At the push of a button acoustically dry and damped rooms develop a vivid and free room sound, multiplying the joy of singing and making music. Suddenly the room carries the music and a clean intonation becomes an effortless matter of course.

Like in a concert hall, room acoustics also play the decisive role in an auditorium, assembly hall, a multipurpose hall or in the hall of a music school. Only if the sound of the instruments can fully develop, the artistic performance becomes a really unique experience for musicians and audience. With the right acoustics the room will be the instrument, a vivid and important part of the music.

Small live rooms are often too loud. With VICELLO the music will not be louder, it remains detailed and transparent. After a short familiarization, it is hardly imaginable how music was played in this room before.



PRINCIPLE

The VICELLO processor supports a maximum of 16 input channels for miniature microphones and 24 output channels for power amplifiers, where up to 30 loudspeakers can be connected. The microphones are each positioned between the loudspeakers to register the room sound as well as the emitting loudspeaker signal for regenerative processing.

The basic version of VICELLO uses the same processing algorithms as the room-acoustic system VIVACE which has been operated for many years worldwide in famous opera houses and concert halls and used enthusiastically by renowned orchestras, conductors and soloists. All signals and impulse responses are processed at a sample rate of 48 kHz and an amplitude depth of 24 bit. The registered microphone signals are combined with especially developed impulse responses and convolution algorithms to tonally widen and optimize the room in its perception without audible alienation.

The individual loudspeaker contributes to the room sound only with a small share. Therefore the loudspeaker signals are not perceivable even at directly adjacent audience seats. It is only by superimposing the different loudspeaker signals, that the modified room sound is created. The added energy shares homogeneously blend in the room sound and do not differ from natural acoustics. This is also reflected in measurement recordings.

INSTALLATIONS

Customized solutions

JIANGSU, CHINA

Jiangsu Grand Theatre

One of the most advanced Culture Buildings in China – Line Arrays and Point Sources from KS Audio.



DRESDEN, GERMANY

Semperoper

Where nothing but the highest transmission quality is required, color adjustment and functionality of the swiveling mount cannot lag behind.



DÜSSELDORF, GERMANY

Federal state parliament

Elegant and functional, small steerable and self-powered column speakers CPD1202, adapted to the extraordinary architecture of the assembly hall.





REFERENCES

Places with permanent installations



BERLIN, GERMANY

German Parliament

One of the most challenging installations ever done – 236 speakers in one room, specially designed for the parliament chamber.

SOME PLACES WITH PERMANENT INSTALLATIONS

Germany

SEMPEROPER, DRESDEN

Fix installation (CPD14, ADM2)

PFALZBAU, LUDWIGSHAFEN

Fix installation Konzertsaal (T4, CL 208)

ALTE OPER, FRANKFURT

Fix installation Großer Saal (T4)
Fix installation Mozart Saal (custom)
Fix installation Hindemith Saal (custom)
Fix installation Foyer (T3)
Several mobile sound systems (T12, T3, T1, TW)

TAT, FRANKFURT

Fix installation "Altes Straßenbahndepot" (T3, T1, TW)

ENSEMBLE MODERN, FRANKFURT

several mobile sound systems (CPA15, CPA5W)

NATIONALTHEATER, MANNHEIM

Fix installation (C LINE, P WK, T4, C12)
Mobile system (SESSION, CPD08, CPD10)
Jugendtheater Schnawwl (T3, TW)

GASTEIG BETRIEBS GMBH, MUNICH (PHILHARMONIE)

"Blackbox" (T1, TW)
Mobile Systeme (custom)
Quell-Lautsprecher für Delta Stereophonie

CONVENTION CENTER "NEUE TERRASSE", DRESDEN

Fix installation (T10F, T10W, T4, CI212)

MESSE, NÜRNBERG

Fix installation (C1214, CPD LINE AutoCurve)

FRAPORT ARENA, FRANKFURT

Fix installation (50x C LINE, C1214)

KURHAUS, WIESBADEN

Mobile Tonanlage (CPA2)

STADTVERORDNETEN SITZUNGSSAAL IM RÖMER, FRANKFURT

Fix installation (T4, CPA1 custom)

HAUS AM DOM, FRANKFURT

Fix installation Großer Saal (T4), Giebel-Saal (CL206)

WANDELHALLE PAULSKIRCHE, FRANKFURT

Ceiling speakers (custom)

ORF, WIEN

Fix installation (CPA2)

ANTENNE MECKLENBURG-VORPOMMERN, ROSTOCK

Mobile system (SAT)

MUSIKALISCHE KOMÖDIE, LEIPZIG

Fix installation (T11, TW)

HAFEN-MUSICAL, ANTWERPEN

Fix installation (T4, T4-W)

SCHAUSPIELHAUS, LEIPZIG

Fix installation (T3, CT212, CL208)

THEATER DER STADT AMBERG, AMBERG

Fix installation (T4, TW)

OPER HALLE, HALLE

Fix installation (T 12, TW, T 3)

„DAS HAUS“, LUDWIGSHAFEN

Fix installation Großer Saal (CH1214, CW11)
Fix installation Kleiner Saal (T3, TW)

NEUES THEATER, HALLE

Fix installation (CPA2, TW, T10)

THEATER DER STADT HANAU, HANAU

Fix installation (T4, T4-W)
Oper Leipzig, Leipzig
Fix installation (T 12, customen)

BÜRGERHAUS COSWIG, COSWIG

Fix installation (CPA2, TW)

SCHAUSPIELHAUS DRESDEN, DRESDEN

Fix installation Großes Haus (T 3, TW, T4, T4W, FIRMOD)
Fix installation Kleines Haus (T 3, TW, T4, FIRMOD)

SCHAUSPIELHAUS THALIA, HAMBURG

Surround-Anlage (3 galleries, 42x CPA04)

THEATER DER JUNGEN WELT, LEIPZIG

Mobile system (CPA12)

CONVENTION CENTER MESSE, FRANKFURT

Mobile system (CPA11, CPA2)

KULTUR UND TAGUNGSZENTRUM, WORMS

Fix installation (C LINE, C WL, CPA08)
Mobile system (C LINE, CWL, CPD12M)

STAATSSCHAUSPIEL KLEINES HAUS, DARMSTADT

Fix installation (CL208, FIRMOD)

VOGTLANDTHEATER, PLAUE

Fix installation (T4, CPA2, TW)

THEATER COTTBUS, COTTBUS

Fix installation (CPA2, TW, custom)

THEATER ZWICKAU, ZWICKAU

Fix installation (T 11, TW, T 3, CL104)

REICHSTAG, BERLIN

All speakers at the german parliament chamber, including all conference rooms

KAMMERSPIELE, MÜNCHEN, MUNICH

Fix installation Kammerspiele Auditorium: (T4, T3, CI208)
Stage: (T10F, T10L, T1)

FIX INSTALLATION NEUES HAUS

Stage 1 (CPD 12, CPD SUB, CPD08)

Stage 2 (CPA 2, CPA W)

Stage 3 (CPA 2, CPA W)

Several mboiel sound systems
(P LINE, CPD15, CPA 04, CPA
1, CPA 2, CPA W)

DEUTSCHES THEATER, BERLIN

Fix installation (CPA1, CPA04)

**FELSENBÜHNE RADEBEUL,
LANDESBÜHNE SACHSEN**

Fix installation (C LINE)

PUPPENBÜHNE, ZWICKAU

Fix installation (CL104, CPA W)

**STAATSTHEATER GÖTTINGEN,
GÖTTINGEN**

Fix installation

(T4, CL208, FIRMOD, CPA10)

THEATER GERA, GERA

Fix installation (CPA 2, T W)

FREIKIRCHE SCHÖNEBERG, BERLIN

Fix installation (T 3)

**MEHRZWECKHALLE,
GROSSKARLBACH**

Fix installation (CPA 2)

STADTHALLE, BREMERHAVEN

Fix installation (STANDARD)

STADTHALLE, KASSEL

Mobile system (CPA 2)

“TUCHFABRIK”, TRIER

Fix installation (T 12)

PHILHARMONIE, KÖLN

Fix installation (CPA 2, CL 104)

Mobile systems (CPA 04, CPA M)

“TANZBRUNNEN”, KÖLN

Musical-Installation

(T 11, T W, CL104)

“SNAP” STUDIO, FRANKFURT

Fix installation (CPA 2, T 12-custom)

**PRIVATER SÄCHSISCHER
RUNDFUNK, LEIPZIG**

Mobile systems (SIGNUM)

**SAARLÄNDISCHER RUNDFUNK,
SAARBRÜCKEN**

Großer Sendesaal (T 4- Aktiv)

**LANDESBÜHNE SACHSEN,
RADEBEUL**

Saalbeschallung (C LINE, CL208)

Mobile system (CPA3)

**MITTELDEUTSCHER RUNDFUNK,
LEIPZIG**

Außenübertragungsanlage
(CONCEPT, CM210)

**“WINTERGARTEN” DER DG BANK,
FRANKFURT**

Fix installation (CPA 2-custom)

THEATER DER STADT, HEIDELBERG

Fix installation

(C LINE, C 1214, T4M, CL206)

Mobile systems

(CPA 2, CPA 3, CPA5,
CPA15, CPA08)

**LICHTHOF DER DRESDNER BANK,
FRANKFURT**

Fix installation (T 3-custom)

STAGE 602, ROSTOCK

Fix installation (SAT, CPA 1)

**LICHTHOF DER DEUTSCHEN BANK,
BERLIN**

Fix installation (CH 110)

**AULA DER HOCHSCHULE
MANNHEIM, MANNHEIM**

Fix installation (CPA LINE)

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ENBW CITY, STUTTGART

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Surround system (32x CPA 04)

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**THEATER AM GOETHEPLATZ,
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Fix installation (T 4, T4W, CT212,
CL208, CPD1)

**MERCEDES BENZ ARENA,
STUTTART**

Fix installation

(149 weatherproof CI1214, CIW215,
TI10L, CI112, 60x TA4U, TA4D)

EISSPORTHALLE, FRANKFURT

Fix installation

(56x weatherproof CPA LINE)

THEATER FREIBURG, FREIBURG

Fix installation (CPD 15)

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