

CPD 12 HDSP™



The **CPD 12** compliments the KS AUDIO CPD-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 800Wrms and the 1.4" driver 100Wrms. .

With the **CPD 12**, particular attention has been paid to a correct transition in dispersion of the HF unit and the 12" woofer. Within the entire dispersion range of the loudspeaker, the listener experiences a straight frequency response over the entire bandwidth of the speaker. This is unique for any speaker but very special with the complicated dispersion behaviour of the **CPD 12**.

Both the 12" LF driver and the 1.4" 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 **CPD 12**, KS AUDIO has responded to the demanding needs of the professional sound engineer with a universally usable 2-way sound system with the highest audio quality, yet in a compact size. There are many applications in which it 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 KS AUDIO CPD W1, W2 or WH subwoofer.

The rear mounted, separately housed, 2-way PWM + MOSFET Controller /amplifier operates without the need of a cooling fan thus avoiding the typical fan noise found in most amplifiers. The electronically balanced analog in/out and AES/EBU section is equipped with XLR F+M connectors. The unit is controlled via digital rotary knob, menu configuration shown on LCD graphic display. All adjusted levels, filters, and delay- settings are permanently saved.

Once more KS AUDIO presents an improvement: Audio Over Ethernet direct from your console or PC into the active loudspeaker via DANTE™ option! Furthermore, every Loudspeaker can be addressed to an adjustable IP address, and over the same network all functions of the system can be monitored and controlled via KS AUDIO REMOTE software.



HDSP™ High Definition Sound Projector ✓

120° nearfield and 60° farfield coverage ✓

Linear phase and frequency response ✓

Optimized impuls-response ✓

FIRTEC™ 2-channel bi-amp DSP ✓

1800W of undistorted power ✓

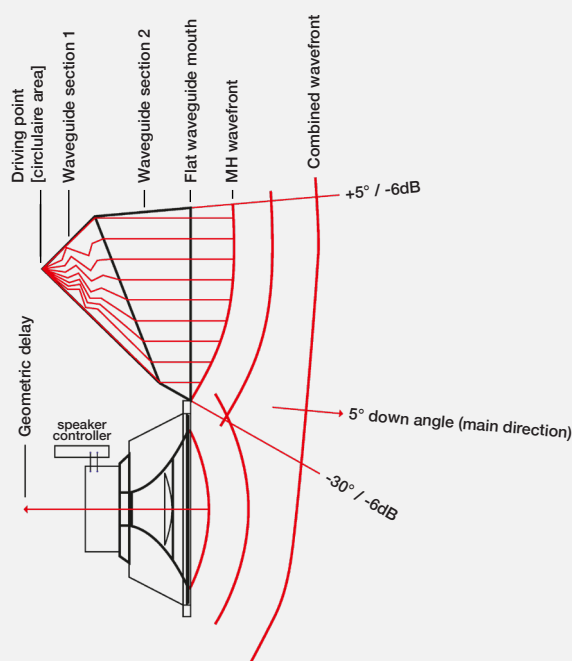
136dB peak SPL ✓

The speaker cabinet construction is, like all KS AUDIO 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 ball-lock-pins. There is a pole mount in the bottom of the cabinet and a protective steel grill on the front, with acoustic foam.

HDSP™

Figure A

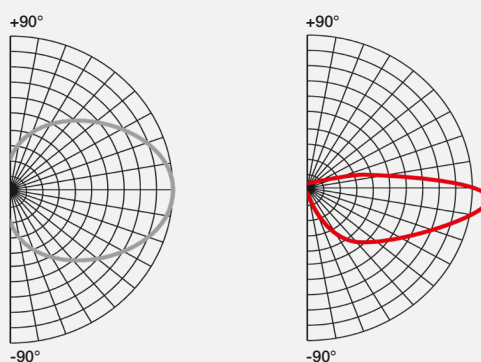


HDSP - High Definition Sound Projector is a unique development in the dispersion behaviour of a compact loudspeaker. Although the optical focus is on the waveguide of the tweeter unit, the dispersion behaviour of the entire loudspeaker is additionally optimised by electronic adjustments.

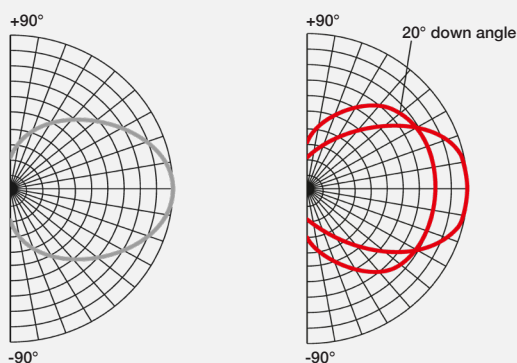
A good principle is easily explained: Figure A shows how the waveguide, Section 1, converts the energy of the driver into a cylindrical wavefront, as seen in line arrays. However, the HDSP™ waveguide does this more in the upper part than in the lower part, causing the wavefront to slope downwards.

The flatter wavefront in the upper part carries the sound further, so that the energy is transmitted there at a greater distance from

VERTICAL POLAR PATTERNS



HORIZONTAL POLAR PATTERNS



the loudspeaker remains higher. On the other hand, the more curved wavefront at the bottom of the waveguide ensures that the energy is lower directly in front of the speaker. This effect is amplified by the difference in horizontal dispersion.

The horizontal dispersion is determined in section 2 of the waveguide. Here the waveguide is deeper and narrower in the upper part, resulting in a narrower radiation of 60°. The waveguide opens up towards the bottom, resulting in a wider dispersion of 120°.

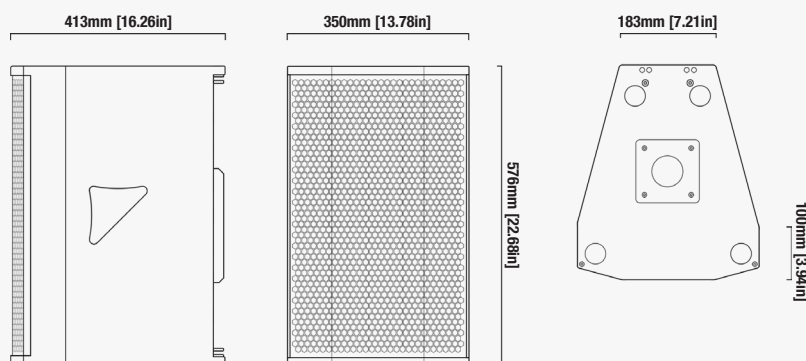
The 12" woofer is frequency-adjusted so that it forms one unit with the HF driver/waveguide. This results in a very even dispersion over the entire frequency range of the loudspeaker.

CPD 12 HDSP™

SPECIFICATIONS

Frequency response	58 - 19.000Hz \pm 3dB
Low cut modes	OFF / 70Hz / 120Hz
Max. SPL - 1m. free field	136dB
Nominal horizontal dispersion	120° nearfield down to 60° into the farfield
Nominal vertical dispersion	35° with 5° down-angle
Transducers	LF: one 12" ND cone - 4" voice-coil HF: one 3" aluminium diaphragm 1.4" throat compression driver
Acoustic Principle	LF: bass-reflex HF: HDSP™ High Definition Sound Projector
Power handling AES RMS / peak	LF: 800W / 1600W HF: 100W / 200W
Amplifier type	1x PWM low-mid / 1x MOSFET mid-high - 750Wrms
Power supply	SMPS (Switched Mode Power Supply) with power factor correction (PFC)
DSP	2-channel, 32-bit, floating point, 192kHz sampling frequency
Filter technology	IIR and FIR filters, delay adjustments, contour filter
Power input - output	powerCON 110-240V 50-60Hz
Signal input - output	XLR3-F and XLR3-M Analog/AES-EBU autoswitch RJ45 Ethernet 1G T Base for Dante™ and KS AUDIO REMOTE Control

DIMENSIONS AND WEIGHTS



25kg | 55lb