

CPD 1 powered



By using KS AUDIO own developed HDSP™ waveguide there are two significant differences in comparison to normal CD horns; 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 varies 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 into a 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.

The **CPD 1** is the smallest member of the HDSP™ family, but it makes full use of this amazing technology. As can be expected from KS AUDIO, the components; speakers, filter components and later also the presets for the optimization of the impulse response, have been assembled with great developmental zeal.

The 10" long-excursion speaker comprises a powerful light-weight neodymium magnet. The ring diaphragm of the 1.75" driver consists of a special film that generates significantly lower distortion than comparable titanium diaphragms.

The 2-way DSP controller amplifier built into the rear operates with very high efficiency and requires no cooling fan. The FIR crossover and EQ filter shapes are precisely matched to the loudspeakers, and limiters ensure safe operation.

The power electronics include a Class D output stage for the low-midrange chassis and a Mosfet output stage with best audio properties for the HDSP™ driver. The electronically balanced input is designed as XLR F+M sockets.

In addition to the mains connection, further operating elements are available: A digital level control for individual adjustment to the location and a delay of up to 40m for use as a delay loudspeaker in relation to a main loudspeaker system.



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



1000W undistored power



134dB peak SPL



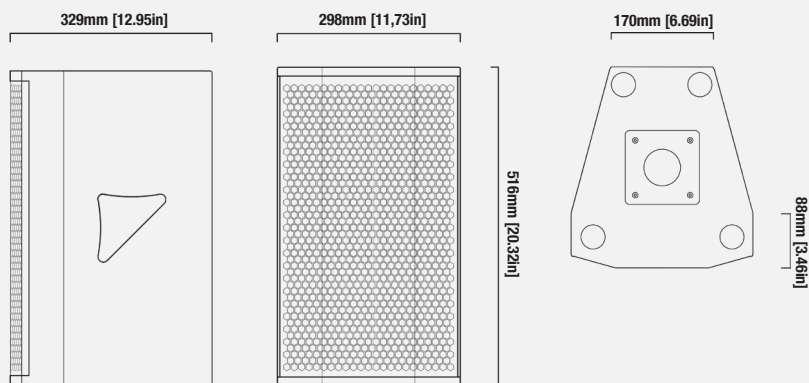
The power supply unit of the **CPD 1** operates with internal changeover at AC voltage mains of 117 or 230 V. The inrush current is electronically limited. The connection is made via a PowerCon F connector.

High-stand flange, steel protective grille with or without acoustic foam are further features of this high-quality product.

SPECIFICATIONS

Frequency response	68 - 19.000Hz \pm 3dB
LOW CUT modes	70 / 100 / 120Hz
Max. SPL - 1m. free field	134dB
Nominal horizontal dispersion	120° nearfield down to 60° into the farfield
Nominal vertical dispersion	35° with 5° down-angle
Transducers	LF: one 10" ND cone 3" voice-coil HF: one 1.75" Mylar ring-diaphragm 1" throat compression driver
Acoustic Principle	LF: bass-reflex HF: HDSP™ High Definition Sound Projector
Power handling AES RMS / peak	LF: 400W / 800W HF: 40W / 80W
Amplifier type	2 power stages, PWM + Linear power stage
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	powerCON 110-240V 50-60Hz
Signal input - output	XLR3-F and XLR3-M

DIMENSIONS AND WEIGHTS



18kg | 40lb