



# KPA Series Amplifiers

TWO-CHANNEL DIGITAL AMPS WITH K8 BUS



## KEY FEATURES

- K8 system compatible
- Power factor correction
- Low cost of operation and ownership
- Load monitoring
- Comprehensive protection feature set
- Full status monitoring
- Small and light weight
- High efficiency
- Downloadable status log
- Single cable connection for digital audio and control
- Optional advanced function DSP

## PRODUCT DESCRIPTION

The KPA series amplifiers are specifically designed for fixed installations where high sonic performance and ease of installation and management are paramount. Each KPA amplifier is equipped with analogue and K8 bus digital inputs. Used in conjunction with Klein+Hummel K8 products, the KPA series amplifiers provide a flexible, easy to manage signal and power train for houses of worship, performance halls, arenas and stadiums.

## TECHNICAL SPECIFICATIONS

<b>Power Requirements</b>	
Power supply	115-230V (±15%)
Power factor	more than 0.95 from 500W to full power
Operating temperature	0° C, 45° C (32°F, 113°F)
Weight	12Kg (26.5 lbs.)
External dimensions	Standard rack 19" (W), 1 RU 1.75" (H), 18.7" (D)
<b>Audio Section</b>	
Bandwith (1W, 8 Ohm)	20Hz-20KHz ±0,2 dB
Damping factor (8 Ohm)	(20Hz-200Hz) > 5000
Slew Rate (8 Ohm)	50V/uS (input filter bypassed)
S/N ratio	>110 dB
Distortion THD	Max < 0.5% from 1W to full power (typically < 0.05%)
Intermodulation SMPTE	Max < 0.5% from 1W to full power (typically < 0.05%)
Intermodulation DIM	Max<0.5% from 1W to full power (typically < 0.05%)
Inputs	Balanced to ground, XLR female combo jack 6.3mm, K8 digital audio bus, RJ-45
Impedance	10 Ohm each leg, balanced to ground
Gain	26, 29, 32, 35dB, user selectable
Outputs	Neutrik 4-pole Speakon (pins 1+ 2+ paralleled, 1-2- paralleled)

## OUTPUT POWER SPECIFICATIONS (Watts per channel, EIAJ measurement conditions)

	Stereo Mode			Bridged Mode		
	2 Ohm	4 Ohm	8 Ohm	4 Ohm	8 Ohm	16 Ohm
KPA 2400	6000	4000	2000	12000	8000	4000
KPA 2290	4500	2900	1450	9000	5800	2900
KPA 2220	3000	2200	1100	6000	4400	2200



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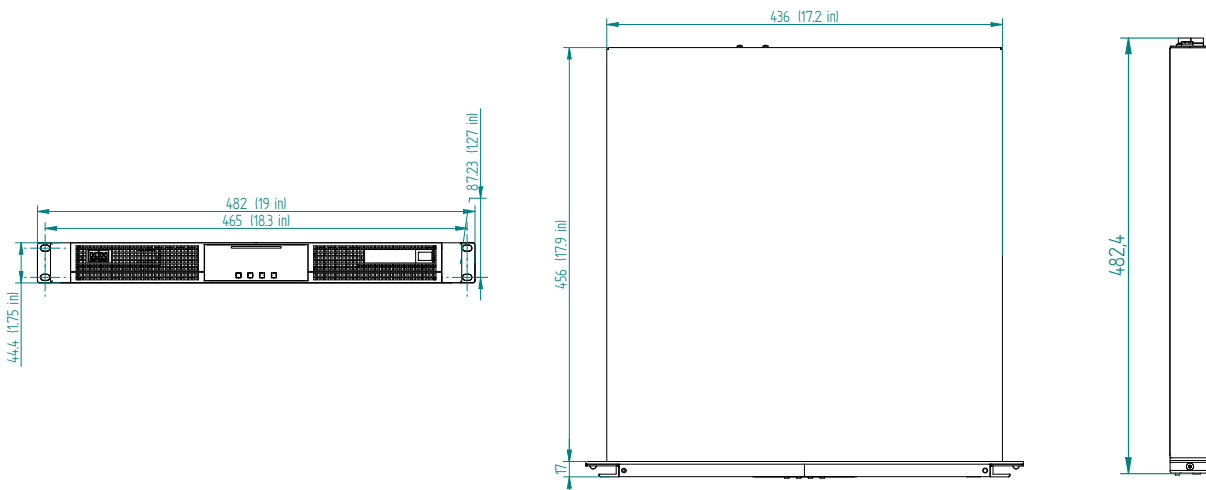
## K8 CONTROL FEATURES

Control Functions via K8	Power on/off, optional DSP all settings, thermal limiting, input current limiting, clip limiting, output voltage limiting, average output power limiting
Monitoring Functions via K8:	Load impedance, temperature, input signal level, output voltage, output current
Additional Amplifier Protection:	Load short shutdown and self recovery, thermal limiting, DC and infrasonic and ultrasonic frequency signal protection

## TECHNICAL SPECIFICATIONS

Link	K8 loop through, RJ-45, passive bus coupling
K8 channel select	Rotary switch, behind front panel, software override
Control	Directly via K8 bus
Termination Switch	4-position DIP
Digital Audio Format	48 kHz sampling rate, 24 bit, proprietary
Latency	1/2 millisecond worst case, analogue in to analogue out
K8 Rear Panel Indicators	Sync, Wink

## MECHANICAL DRAWING



## ARCHITECT & ENGINEERING SPECS

The audio power amplifier shall be 1 EIA rack unit tall and provide 2 channels of amplification at 4000/2900/2200 Watts into 4 Ohms, shall be capable of driving a load down to 2 Ohms, provide power factor correction, have a 1 Watt bandwidth of 20Hz-20kHz (+/- 2 dB), have a signal to noise ratio greater than 110dB, slew rate of at least 50V/microsecond, typical total harmonic distortion of 0.05% and shall not exceed 0.5% at full power. Gain shall be user selectable from 26, 29, 32 and 35 dB settings. Inputs shall be K+H K8 system compatible and analog. K8 digital audio channels shall be selectable via rotary switches behind the front panel. Remote monitoring and control shall be via the same cable as digital audio distribution and shall include load monitoring capability. The amplifier shall be capable of inrush current limiting, clip limiting, power supply current draw limiting, output voltage limiting, thermal protection, load short protection and recovery. The audio power amplifier shall be the K+H KPA Series.