

PCX™ Series

PCX™ 480 - Digital Audio Matrix Processor

CREST
AUDIO®

PRELIMINARY



Description

The Crest Audio® PCX™ 480 is a four input - eight output digital matrix speaker management processor boasting 96 kHz sample rate processing with an exceptionally quiet and accurate AD/DA interfaces and filter response. Either of the 4 input channels, balanced line XLR's, can be routed to any/or all of the 8 output channels, being fully adjustable on either input or output via the digital matrix system, for any speaker management cabinet configuration. The units software and advanced DSP algorithms offer professional audio grade signal processing and control features to manage, optimise and protect FoH, monitor and multi-zone speaker systems while ensuring exceptional audio signal clarity and integrity without loss or coloration.

Input features include gain, mute, HP / LP filters, 8-band PEQ, polarity and up to 680ms of delay. Each output features an additional 9-band PEQ, gain, compressor/ limiter, polarity, up to 680ms of delay, and mute. Crossover & band-pass filters can be selected between Butterworth, Bessel or Linkwitz-Riley with alignments from 1st order (6 dB/Oct) to 8th order (48 dB/Oct). EQ filter types include PEQ, Low-Shelf, Hi-Shelf, Low Pass, High-Pass, All-Pass1 and All-Pass2. An internal signal generator provides sine, white noise and pink noise.

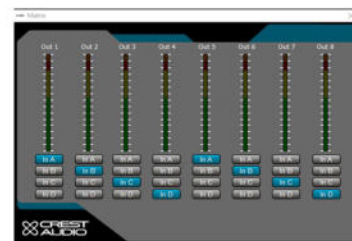
The front panel of the PCX 480 offers quick and simple local configuration and control via a front panel LCD display, rotary encoder and dedicated function buttons. Alternatively an Ethernet port, located at the back panel, allows for higher resolution graphical user interface configuration and control from a PC utilising the Crest Audio PCX Editor Software that also allows configuration files to be saved and loaded from the user's PC.

Features

- 4 balanced XLR inputs & 8 balanced XLR outputs
- Sample rate: 96 kHz
- A/D & D/A Converters: 24-bit Delta-Sigma
- Setup & Control via Ethernet or USB-B
- Serial control via RS232 / RS485
- 5-segment LED meters on each input and output
- Input: Gain, Mute, HP & LP filters, 8-band PEQ, Polarity, Delay
- Output: 9-band PEQ, Gain, Compressor / Limiter, Polarity, Delay, Mute, Crossover / Band-pass filters
- Signal generator: Sine, white noise, pink noise
- EQ filter types: PEQ, Low-Shelf, Hi-Shelf, LP, HP, All-Pass1 & All-Pass2
- Crossover / Band-pass filters: Butterworth, Bessel & Linkwitz-Riley from 1st to 8th order
- Security lock
- PCX Editor software for PC allows complete remote setup and operation via Ethernet or USB

Configuration:	4 Inputs & 8 Outputs	Inputs:	XLR female balanced
Input Impedance:	20 k Ohms	Outputs:	XLR male balanced
Output Impedance:	100 Ohms	Ethernet Interface:	RJ-45 / 10 Mbps / Static IPv4 address
Frequency Response Input to Output:		USB Interface:	USB "B"
+0 / -0.5 dB	10 Hz - 21 kHz	RS-232 & RS-485:	D-Sub 9
+0 / -1.0 dB	10 Hz - 32 kHz	Baud Rate:	115200
Maximum Input Level:	+20 dBu	Data Bits:	8
Maximum Output Level:	+20 dBu	Parity:	None
THD +N @ 1 kHz:	0.007%	Stop Bits:	1
Noise Floor (22 Hz - 22 kHz):	-87 dBu (unweighted) & -89 dB (A-weighted)	AC Power Input Voltage:	95 to 240 VAC 50/60 Hz
Dynamic Range:	> 107 dB (unweighted) & > 109 dB (A-weighted)	Fuse:	F2AL 250V (5x20 mm)
Crosstalk between Channels:	< -100 dB @ 1 kHz	Power Consumption:	15 Watts
Latency (analog in to analog out):	3.5 ms	Net Weight:	5.28 lbs (2.4 kg)
Sample Rate:	96 kHz	Dimensions (HWD):	1.75 x 19 x 8.25 in (45 x 483 x 205 mm)
Delta-Sigma A/D & D/A Converters:	24-bit		

PCX Editor Software



Architect's & Engineer's Specifications

The unit shall be a 1u rack-mountable digital audio matrix processor for loud speaker management, capable of 4 input channels and 8 output channels, all independently assigned.

The unit shall operate at 96 kHz sample rate and 24-bit Delta-Sigma A/D and D/A conversion. The system latency from analogue input to output shall not exceed 3.5ms.

All input channels shall provide the following processing: Gain, Mute, HP and LP filters, 8-band PEQ, Polarity and up to 680ms of Delay. All outputs shall provide the following processing: 9-band PEQ, Gain, Compressor/ Limiter, Polarity, up to 680ms of Delay, and mute.

All speaker processing outputs shall provide the following processing: Crossover & band-pass filters selectable between Butterworth, Bessel or Linkwitz-Riley each with alignments from 1st order (6 dB/Oct) to 8th order (48 dB/Oct). EQ filter types include PEQ, Low-Shelf, Hi-Shelf, Low Pass, High-Pass, All-Pass1 and All-Pass2.

The unit shall have 4 balanced XLR inputs and 8 balanced XLR outputs. All output channels shall be routable to any local output. An USB B port on the front panel and an RJ-45 Control Network port on the rear of the unit shall be provided for connection to a networked PC running the devices proprietary editor software.

The unit shall provide the facility to save presets. The presets shall be nameable and a descriptive text entry per preset provided.

The unit shall have an integrated power supply accepting AC mains voltages of 95 to 240 VAC, 50/60Hz, 15W max via an earthed 3-pin IEC male connector mounted on the rear chassis. The unit shall be no more than 1.75 inches (45 mm) high by 19 inches (483 mm) wide by 8.25 inches (205 mm) deep weighing no more than 5.28 pounds (2.4 kg).

The digital audio matrix processor shall be the Crest Audio PCX™ 480.