ARCHITECTS SPECIFICATIONS

Protea System II 4.24PS

The programmable parametric equalizer shall consist of four independent channels of 24 bit digital parametric equalization. Each channel shall consist of 12 bands with an adjustable Q ranging from 1/25th to 3.3 octaves. Frequency adjustment shall be twenty-four step/octave from 20Hz to 20KHz. The range of equalization per band shall be +10/-20dB in 0.5dB increments. The equalizer shall have a gain of unity with all bands set at zero, and shall have a maximum in/out level of +20dBu. Frequency response shall be ±.25dB 20Hz to 20kHz. Dynamic Range shall be greater than 110dB (20Hz-20KHz, unweighted) and SMPTE intermodulation distortion or THD shall be less than 0.01% at 1KHz, +20dBu. Input impedance shall be 18K ohms balanced. Output impedance shall be 200 ohms. Inputs and outputs shall be balanced type on XLR and 1/4" phone jacks. Each channel shall have a programmable high shelf filter adjustable from 1.6KHz to 20KHz and a low shelf filter adjustable from 20Hz to 240Hz. Level adjustment of the High and Low Shelf shall be in 0.5dB increments with a range of +/-15dB and shall have a selec-

table slope of 6 or 12dB. The equalizer shall also include on each channel a 24dB per octave high pass filter adjustable from 20Hz to 10.6KHz, a 24dB per octave low pass filter adjustable from 33Hz to 20KHz, a full function, pre/post switchable compressor/limiter with adjustable threshold, ratio, attack and release controls, and a time delay capable of a maximum of 1.364 seconds adjustable in 20us increments. LED indicators shall show signal present, clip and MIDI channel number. Channel gain shall be adjustable over a range of +6dB to - infinity in 0.5db increments. Control of the unit shall be via the RS-232 serial port using Ashly Protea System Software, or via MIDI. External recall of up to six scenes via contact closure shall be accessable through a db9 connector. The equalizer shall weigh 13 lbs net and mount in a standard 19" rack using 2 spaces (3.50" high). The power requirement shall be 90-125VAC (180-250VAC, switchable), 50-60Hz, 27W. The unit shall be the Ashly Audio Protea System II 4.24PS.

- 24 Bit A/D - D/A Audio Resolution
- 24 Bit/100MHz (x2) Digital Signal Processing
- Four Channels of 12-Band Parametric EQ
- Programmable Compressor/Limiter
- Programmable Delay up to 1.364 Seconds
- Programmable High and Low Pass Filters
- Programmable High and Low Shelf Filters
- Control From PC or MIDI
- Contact Closure for External Recall of 6 Scenes
- Balanced XLR and 1/4" Inputs and Outputs
- Linkable Channels
- +10/- 20dB Boost and Cut, 0.5dB increments
- 128 Preset Locations, 50 Scenes
- RS-232 Computer Interface
- Full MIDI Implementation
- 5-Year Worry-Free Warranty

General Specifications 4.24PS

INPUT

Type:	Active Balanced
Impedance:	18 K ohms
Max. Level:	+20dBu

OUTPUT

Type:	Pseudo-Balanced
Impedance:	200 ohms
Max. Level:	+20dBu

Frequency Response:	±.25dB 20Hz-20kHz
THD (20Hz-20kHz):	<.01% @ 1KHz, +20dBu
Dynamic Range:	>110dB (20-20KHz) unweighted
Output Noise:	<-90dBu unweighted

FILTERS

Type:	Parametric
Number:	4 X 12
Bandwidth:	1/25 Octave to 3.3 Octave
Frequency Resolution:	1/24 Octave
Range:	+10/-20dB, 0.5dB Increments

Power Requirements:	90-125VAC, 50-60Hz, 27W
	180-250VAC 50-60Hz, 27W
Shipping Weight:	14 lbs
Dimensions:	19"L x 3.5"H x 8"D
I/O Connectors:	XLR, 1/4"
Environmental	40-120 deg. F Noncondensing

COMPRESSOR/LIMITER

Threshold:	-20dBu to +20 dBu
	1dB increments
Ratio:	1.2:1 to Infinity
	(1.2:1, 1.5:1, 2:1, 3:1, 4:1, 6:1, 10:1, 20:1, inf:1)
Attack:	0.5ms to 50ms per dB
	(.5, 1, 2, 5, 10, 20, 50ms)
Release:	10ms to 1 sec per dB
	(10, 20, 50, 100, 200, 500ms, 1 Sec)

HPF	24dB/Octave
Range:	20Hz to 10.6Khz
LPF	24dB/Octave
Range:	33Hz to 20.1KHz
HIGH SHELF FILTER	Selectable, 6 or 12dB/Octave
Range:	1.6KHz to 20Khz
LOW SHELF FILTER	Selectable, 6 or 12dB/Octave
Range:	20Hz to 240Hz

DELAY

Maximum Delay:	1.364 seconds
Increment:	20us

PROCESSOR

Input A to D	24 Bit
Output D to A	24 Bit
Processor	24 Bit, 56 Bit Accumulator
Sample Rate	48KHz
Propagation Delay	1.46ms

Notes: 0 dBu = .775 V RMS

Rear Panel 4.24PS
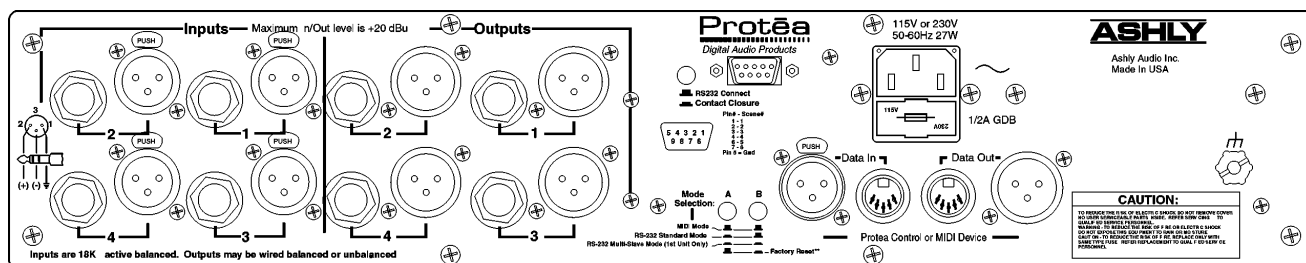
Applications:

PA Systems, Concerts, Outdoor Festivals, Churches, Sports Stadiums, Auditoriums, Studios, Dance/Night Clubs, Lecture Halls

Misc:

Protea System Software for PC control of the Protea 2.24GS may be downloaded free from our website. Use it to control the 4.24C, 4.24D, 4.24G, 4.24GS, 4.24PS, 2.24GS and 2.24PS. Download it now to preview the capabilities of the Protea System II Digital Products. Protea System Software operates on Windows™ 95, 98, 2000, NT, ME and XP platforms.

Ashly manufactures a complete and comprehensive line of Graphic and Parametric Equalizers, Electronic Crossovers, Power Amplifiers, Compressor-Limiters, Mixers, and Amplifier Input Options. Please call, write or visit our web site for information on any of these Ashly Products.