

ARCHITECTS SPECIFICATIONS

Protea 4.24G

The programmable graphic equalizer shall consist of four independent channels of 24 bit digital graphic equalization. Each channel shall consist of 28 bands centered on standard ISO frequencies at intervals of 1/3 octave and covering a frequency range of 31Hz to 16kHz. Frequency bands shall be activated by individual up and down tactile switches. The range of equalization per band shall be $\pm 15\text{dB}$ 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 $\pm 20\text{dBu}$. Frequency response shall be $\pm 0.25\text{dB}$ 20Hz to 20kHz. Dynamic Range shall be greater than 100dB (unweighted) and SMPTE intermodulation distortion or THD shall be less than 0.01% at 1KHz, $\pm 20\text{dBu}$. Input impedance shall be 18K ohms balanced. Output impedance shall be 200 ohms. Inputs and outputs shall be active (transformerless) balanced type on XLR and 1/4" phone jacks. Individual filters shall be of a constant Q reciprocal filter design. Boost and cut characteristics shall be fully symmetrical. Individual filters shall be accurate to within 3% of indicated center frequency and shall be non-adjustable to insure long term accuracy. The equalizer shall also include on each channel an 18dB per octave high pass filter adjustable from 0.0Hz to 10.6KHz, an 18dB per octave low pass filter adjustable from 33Hz to 20.1KHz, a full function, pre/post switchable

compressor/limiter with adjustable threshold, ratio, attack and release controls, and a time alignment delay capable of a maximum of 341ms adjustable in 20us increments. A 240 X 64 fluorescent backlit LCD display will show all parameter, function and utility information. LED indicators shall show signal present and mute conditions. Channel gain shall be adjustable over a range of $+6\text{dB}$ to $-\infty$ in 0.5db increments. Control of the unit shall be from the front panel, via the optional 4.24RD remote control, via RS-232 serial port using Ashly Protea System Software, or via MIDI. The equalizer shall weigh 14 lbs net and mount in a standard 19" rack using 2 spaces (3.5" high). The power requirement shall be 110-115VAC, 50-60Hz, 35W. The unit shall be an Ashly Audio Protea 4.24G.

The optional remote controller shall operate all functions of the Protea unit using push-buttons and shall be phantom powered from the Protea unit so that no batteries or AC line cords are needed while controlling the Protea unit. Connections between the controller and Protea unit shall be accomplished using XLR connectors and standard mic cable. A 240 X 64 fluorescent backlit LCD display shall show all parameter, function and utility information. LED indicators shall show channel and mute conditions. The remote controller shall have a low profile for desk-top operation. The remote controller shall be the model Protea 4.24RD.

- 24 Bit A/D - D/A Audio Resolution
- 24 Bit Digital Signal Processing
- Four 28-Band 1/3 Octave Channels of EQ
- Programmable Compressor/Limiter
- Programmable Delay
- Programmable High and Low Pass Filters
- Balanced XLR and 1/4" Inputs and Outputs
- Intuitive User Interface
- Large, 240 X 64 Fluorescent Backlit Display
- Linkable Channels
- Constant Q/Reciprocal Filter Design
- +/- 15dB Boost and Cut, 0.5dB increments
- 128 Preset Locations
- RS-232 Computer Interface
- Full MIDI Implementation
- Input and Output Metering
- Password Protection of System Operation
- 5-Year Worry-Free Warranty

General Specifications Protea 4.24G

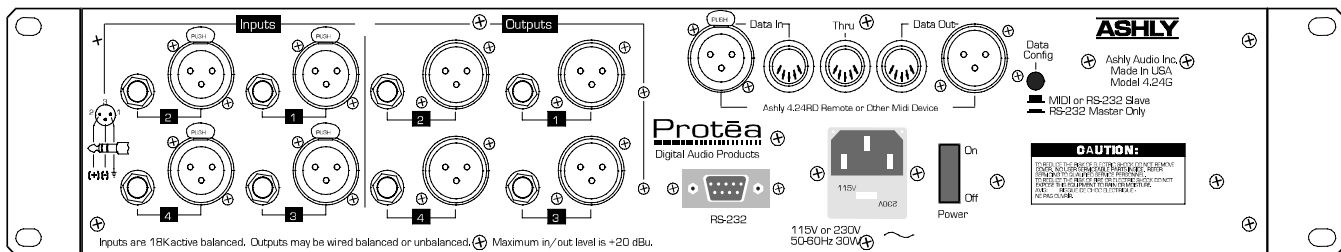
INPUT		COMPRESSOR/LIMITER	
Type:	Active Balanced	Threshold:	-20dBu to +20 dBu
Impedance:	18 K ohms	Ratio:	1dB increments 1:1 to Infinity (1:1, 1.5:1, 2:1, 5:1, 10:1, 20:1, 50:1, 100:1)
Max. Level:	+20dBu	Attack:	0.5ms to 50ms
OUTPUT		Release:	(.5, 1, 2, 5, 10, 20, 50ms)
Type:	Pseudo-Balanced	10ms to 1 sec	(10, 20, 50, 100, 200, 500ms, 1 Sec)
Min. Load Impedance:	200 ohms	HPF	
Max. Level:	+20dBu	Range:	0Hz to 10.6KHz
Frequency Response:	±.25dB 20Hz-20kHz	LPF	
THD (20Hz-20kHz):	<.01% @ 1KHz, +20dBu	Range:	33Hz to 20.1KHz
Dynamic Range:	>100dB	DELAY	
FILTERS		Maximum Delay:	341ms
Type:	Constant Q, Reciprocating	Increment:	20us
Number:	4 X 28	PROCESSOR	
Bandwidth:	1/3 Octave	Input A to D	24 Bit
Tolerance:	±3%	Output D to A	24 Bit
Range:	±15dB, 0.5dB Increments	Processor	24 Bit
Q:	Fixed, 3.2	Sample Rate	48KHz
Power Requirements:	93-125VAC, 50-60Hz, 35W (240VAC switchable)		
Shipping Weight:	14 lbs		
Dimensions:	19"L x 3.5"H x 6"D		
I/O Connectors:	XLR, 1/4"		

Notes: 1. 0 dBu = .775 V RMS

General Specifications: Protea 4.24RD

Shipping Weight: 5 lbs., Dimensions: 16.9"L x 1.65"H x 5.36"D, I/O Connectors: XLR, Power: Phantom

Protea 4.24G (back)



Protea 4.24RD (back)



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 4.24G may be downloaded free from our website. Use it to control the 4.24G, 4.24GS and 2.24GS. Download it now to preview the capabilities of the Protea Series Graphic Equalizer products.

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