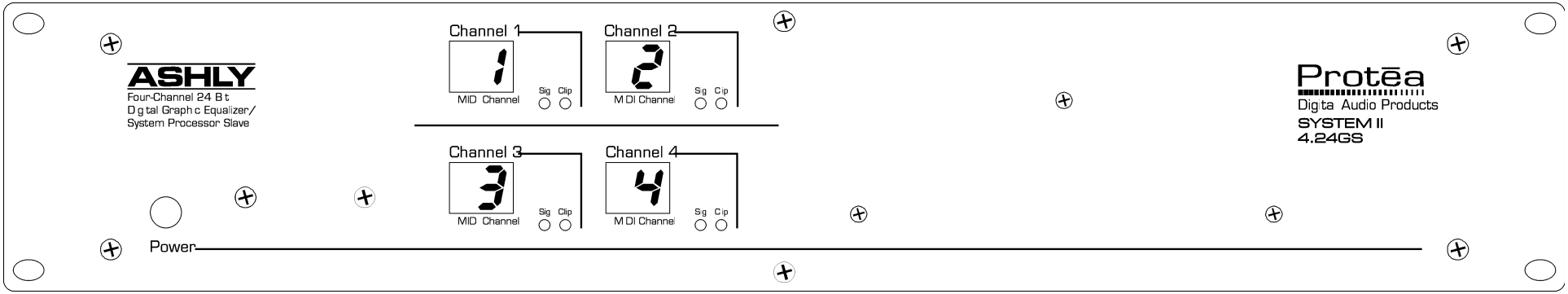
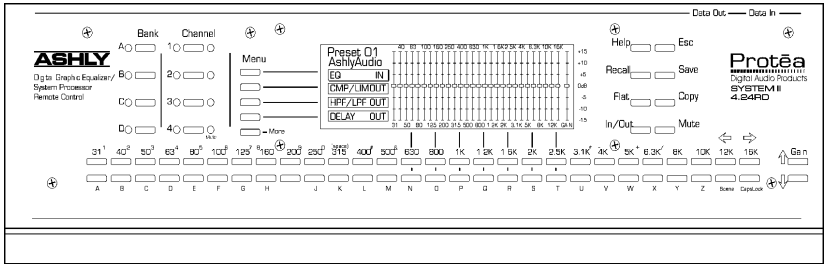
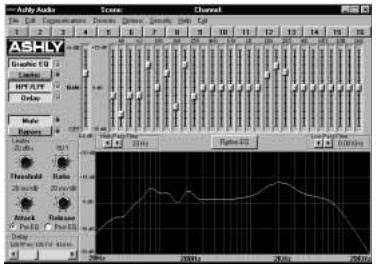
ASHLY Protea System II 4.24GS Four Channel Digital Graphic Equalizer Slave

TECHNICAL NOTES & SPECIFICATIONS







ARCHITECTS SPECIFICATIONS

Protea System II 4.24GS

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. The range of equalization per band shall be ±15dB 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. Individual filters shall be of a constant Q reciprocal filter design. Boost and cut characteristics shall be fully symmetrical. 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 from the 4.24G, via the optional 4.24RD remote control, via 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 an Ashly Audio Protea System II 4.24GS.

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 standard XLR mic cables. 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 desktop operation. The remote controller shall be the model Protea System II 4.24RD.

- **24 Bit A/D - D/A Audio Resolution**
- **24 Bit/100MHz (x2) Digital Signal Processing**
- **Four 28-Band 1/3 Octave Channels of EQ**
- **Programmable Compressor/Limiter**
- **Programmable Delay up to 1.364 Seconds**
- **Programmable High and Low Pass Filters**
- **Control From 4.24G, 4.24RD, PC or MIDI**
- **Contact Closure for External Recall of 6 Scenes**
- **Balanced XLR and 1/4" Inputs and Outputs**
- **Linkable Channels**
- **Constant Q/Reciprocal Filter Design**
- **+/- 15dB 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 4.24GS

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 (20Hz-20KHz) unweighted
Output Noise:	<-90dBu unweighted
FILTERS	
Type:	Constant Q, Reciprocating
Number:	4 X 28
Filter Spacing:	1/3 Octave
Range:	±15dB, 0.5dB Increments
Q:	Fixed, 3.2
Power Requirements:	90-125VAC, 50-60Hz, 30W
	180-250VAC 50-60Hz, 30W
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

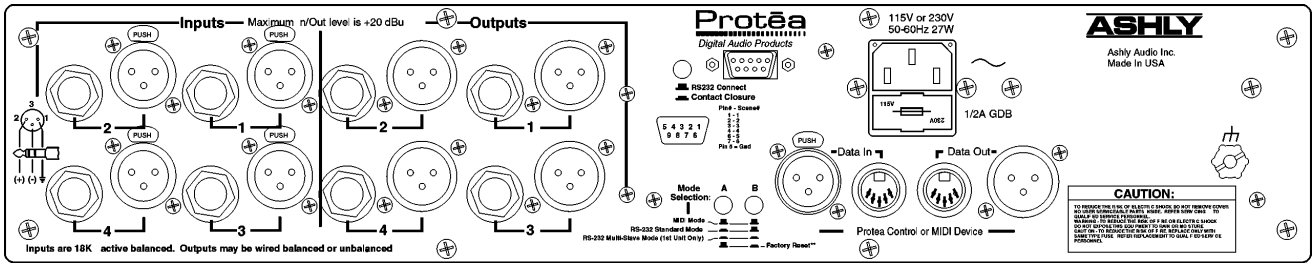
COMPRESSOR/LIMITER	
Threshold:	-20dBu to +20 dBu
	1dB increments
Ratio:	1.2:1 to Infinity
	(1.2:1, 1.5:1, 2:1, 3:1, 4:1, 6:1, 10:1, 20:1, inf:1)
Attack:	0.5ms to 50ms per dB
	(.5, 1, 2, 5, 10, 20, 50ms)
Release:	10ms to 1 sec per dB
	(10, 20, 50, 100, 200, 500ms, 1 Sec)
HPF	24dB/Octave
Range:	20Hz to 10.6Khz
LPF	24dB/Octave
Range:	33Hz to 20.1KHz
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

General Specifications: 4.24RD

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

Rear Panel 4.24GS



Rear Panel 4.24RD

Applications:

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

Misc: **Protea System Software** for PC control of the Protea 4.24GS 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.

Ashly Audio Inc., 847 Holt Road, Webster, NY 14580-9103, Toll Free (800) 828-6308, Telephone (585) 872-0010, FAX (585) 872-0739
Internet: http://www.ashly.com, email: info@ashly.com