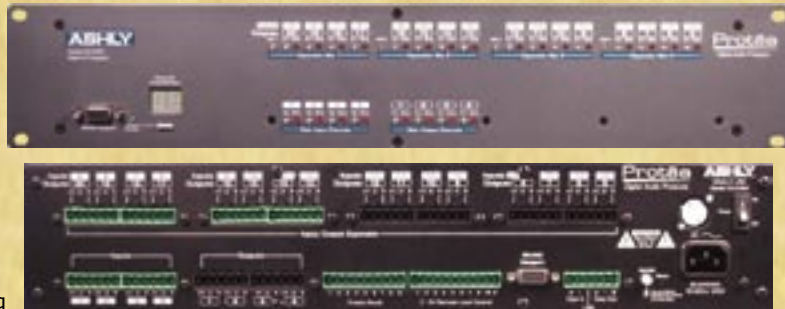


Protea System II Digital Processors



24.24M MATRIX PROCESSOR

The Protea 24.24M Matrix Processor uses modular expansion cards to provide up to twenty-four channels of audio matrixing and processing. The base unit offers a four-input/four-output configuration. Each input and output expansion card has an individual DSP processor allowing you to expand the base unit's total inputs or outputs four channels at a time. These cards are easily installed in the field without the need to reprogram the device. Matrixing allows you to route any input to any output and control individual levels once they have been assigned. Fixed path architecture and extensive processing power per channel will reduce the amount of time it takes to set up your system. All programming is accomplished using Ashly's Protea System Software on a PC platform. No front panel controls and multi-level software security assures you a tamperproof audio system. Whether you are designing or installing a system for corporate boardrooms, restaurants, courtrooms, houses of worship, left/center/right theatres, auditoriums or conference centers, the Protea 24.24M will more than satisfy your requirements for any zoned system requiring input/output matrixing with signal processing.



Input channel processing blocks include Mic Preamp with Phantom Power, Gain, Delay, fifteen EQ Filters, Gate, Autoleveler and Ducker. Inputs may be configured as either mic or line level. Output channel processing blocks consist of a Cross Point Mixer, HPF/LPF, Delay, fifteen EQ Filters, Gain and Limiter. The cross point mixer in the output section allows you to route any input to any output at any level and mute any input at any output without affecting the true input configuration. The HPF/LPF block offers Bessel, Butterworth and Linkwitz-Riley filters with 12, 18, 24 and 48dB/octave slopes.

FEATURES:

- 24-bit A/D-D/A audio resolution
- 24-bit/100 MHz (x2) digital signal processing
- Up to 24 channels of audio processing
- 4x4 base unit configuration
- Expand inputs or outputs 4 channels per module
- Modules easily field installable
- Euroblock connectors for audio, preset recall, dc remote level control and data in/out
- Mic/Line inputs
- Intuitive user interface
- 35 preset locations
- RS-232 computer interface
- AMX Compatible NetLinX Control
- Input and output metering viewable in dB or VU
- Password protection of system operation
- Five year worry-free warranty

SPECIFICATIONS:

Input: Active Balanced, 18 kohms

Max Input Level: +20 dBu

Input Gain Range: -50dB to +12dB, selectable polarity

Output: Active Servo Balanced, 112 ohms

Max Output Level: +20 dBu

Output Gain Range: -50dB to +12dB, selectable polarity

Frequency Response: 20 Hz-20kHz, ± 0.25 dB

THD: <0.01% @1 kHz, +20 dBu

Dynamic Range: >110 dB (20 Hz-20 kHz) unweighted

Output Noise: <-90 dBu unweighted

Mic Preamp

Gain: 0dB, +40dB, +60dB

Phantom Power: +48VDC (9.6ma/input)

EIN: -128dBu, 20-20kHz, 50 ohm source

Eq Filters

Number: 15 per Input, 15 per Output

Selectable As:

Parametric

Bandwidth: 1/64th Octave to 4 Octave

Range: +15/-30dB, 0.1 dB increments

Frequency Resolution: 1Hz

Low-Shelf

Slope: Selectable 6 or 12dB/Octave

Frequency Range: 20Hz to 2KHz

Range: +/-15dB, 0.1dB increments

High-Shelf

Slope: Selectable 6 or 12dB/Octave

Frequency Range: 3.886KHz to 20KHz

Range: +/-15 dB, 0.1 dB increments

All-Pass

Type: Second-Order (-180 degrees)

Frequency Range: 20Hz to 20KHz

Crossover Filters

High Pass Filter

Type: Linkwitz-Riley, Bessel, Butterworth

Slope: 12, 18, 24 and 48dB/Octave

Frequency Range: Off to 20KHz, 1Hz increments

Low Pass Filter

Type: Linkwitz-Riley, Bessel, Butterworth

Slope: 12, 18, 24 and 48dB/Octave

Frequency Range: Off to 20KHz, 1Hz increments

Delay

Input Maximum Delay: 682.5ms

Increment: 20 μ s

Output Maximum Delay: 682.5ms

Increment: 20 μ s

Gate

Threshold: -80 to +20dBu, 1dBu increments

Floor: Off, -80 to 0dBu, 1dBu increments

Attack: .2, .5, 1, 2, 5, 10, 20, 50ms/dB

Release: 5, 10, 20 50, 100, 200, 500, 1000ms/dB

Autoleveler

Basic Screen

Target Level: -40 to +20dBu, 1dBu increments

Action:

Aggressive/ Ratio 10:1, Hold Time 0 sec, Gain Incr. Rate 20 ms/dB, Gain

Dec. Rate 5 ms/dB

Normal/ Ratio 4:1, Hold Time 1 sec, Gain Incr. Rate 50 ms/dB, Gain Dec.

Rate 10 ms/dB

Gentle/ Ratio 2:1, Hold Time 2 sec, Gain Incr. Rate 100 ms/dB, Gain Dec.

Rate 20 ms/dB

Maximum Gain: 0dB to 22dB, 1dB increments

Advanced Screen

Target Level: -40 to +20dBu, 1dBu increments

Ratio: 1.2:1, 1.5:1, 2:1, 3:1, 4:1, 6:1, 10:1

Hold Time: 0, 1, 2, 3, 4, 5, 6Sec

Threshold Below Target: -30 to 0dB, 1dB increments

Gain Increase Rate: 5, 10, 20 50, 100, 200, 500, 1000ms/dB

Gain Decrease Rate: 5, 10, 20 50, 100, 200, 500, 1000ms/dB

Ducker

Trigger Threshold: -80 to +20dBu, 1dBu increments

Ducker Depth: Off, -30 to 0dBu, 1dBu increments

Ducker Release: 5, 10, 20 50, 100, 200, 500, 1000ms/dB

Cross Point Mixer

Gain: Inf, -50 to +12dB, 1dB increments with Mute

Compressor/Limiter

Threshold: -20dBu to +20dBu, 1dB increments

Ratio: 1.2 :1 to Infinity (1.2, 1.5, 2, 3, 4, 6, 10, 20, Infinite:1)

Attack: 0.5 ms to 50 ms per dB

Release: 10 ms to 1 sec. per dB

Processor

Input A/D: 24 bit

Output D/A: 24 bit

Processors: 24 bit signal, 48 bit filters, 56 bit accumulator

Sample Rate: 48 kHz

Propagation Delay: 1.46 ms

Other

Power Requirements: 90 - 240VAC, 40W

Shipping Weight: 13lbs (Maximum)

Dimensions: 19.0"L x 3.5"H x 8.5"D

Connections: Euroblock

Environmental: 40-120 deg. F, (4-49 deg. C) noncondensing