

Architects Specifications

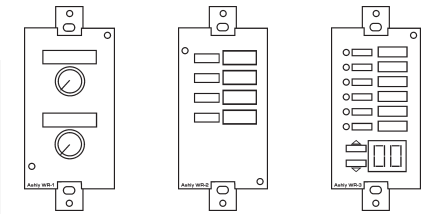
Protea System II 24.24M

The base unit digital matrix processor shall consist of four inputs and four outputs with a dedicated DSP processor and A/D, D/A circuitry. All programming shall be accomplished using Protea System Software to be supplied with each device and a PC using a Windows™ 95, 98, 2000/XP, ME or NT platform. The installer shall have the ability to expand the processor's input or output configuration by installing input or output module cards for a total of twenty-four audio channels with fifteen specific configurations. Each input or output card shall have its own DSP processor for all digital signal processing blocks and shall have their own A/D or D/A circuitry. The installer shall be allowed to expand the base unit's total inputs or outputs four channels at a time. The input and output cards shall be field installable without the need to replace or reprogram the device's firmware and shall automatically recognize the base unit's new configuration and display the new configuration upon power up. The 24.24M Matrix Processor's firmware shall be supported by flash making the device capable of field upgrades using Ashly Audio's Protea System Software.

Each input channel shall include fixed architecture processing blocks of Mic Preamp with +48V Phantom Power, Gain, Delay, fifteen EQ Filters, Gate, Autoleveler and Ducker. Inputs shall have the option to be configured to accommodate either mic or line levels. Each output channel processing block shall include fixed architecture processing blocks of a Cross Point Mixer, HPF/LPF, Delay, fifteen EQ Filters, Gain and Limiter. The cross point mixer

in the output section shall allow for routing any input to any output at any level and mute any input at any output without affecting the true input configuration. Each input and output shall have individual mute capability.

The matrix processor shall have a maximum in/out level of +20dBu. Frequency response shall be ± 0.25 dB 20Hz to 20kHz. Dynamic Range shall be greater than 110dB (20-20KHz, unweighted) and SMPTE intermodulation distortion or THD shall be less than 0.01% at 1KHz, +20dBu. Input impedance shall be 18K ohms active servo-balanced. Output impedance shall be active balanced, 112 ohms. Inputs and outputs shall be balanced type on euroblock connectors. LED indicators shall show signal level, clip, limit threshold and mute conditions. Full programming and control of the unit shall be via the front or rear panel accessible RS-232 serial ports using Ashly Protea System Software. There shall be 35 factory presets that may be programmed by the user and stored in the device's internal memory. The matrix device shall have separate rear panel euroblock connections providing remote control for DC voltage level, recall of presets via momentary or on/off switching and a data-in/data-out port. These remote ports shall be accessible for control from either dedicated remote controls or third party devices. There shall also be a three level security lockout feature. The digital matrix processor shall weigh 13 lbs net and mount in a standard 19" rack using 2 spaces (3.50" high). The power requirement shall be 90-240VAC, 50-60Hz, 40W. The unit shall be the Ashly Audio Protea System II 24.24M Matrix Processor.



Remote Controls - WR-1, WR-2, WR-3

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
- Three dedicated remote controls for Level, Preset Recall and Programmable Functions
- AMX Compatible NetLinX Control
- Input and output metering viewable in dB or VU
- Password protection of system operation
- Five year worry-free warranty

General Specifications Protea System II 24.24M

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: 20µs
 Output Maximum Delay: 682.5ms
 Increment: 20µs

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

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

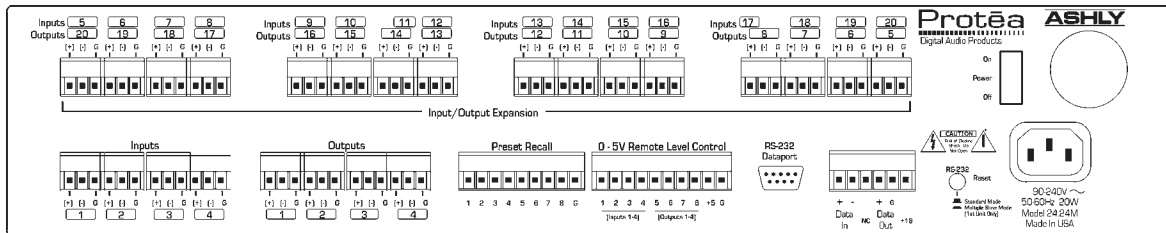
Processor

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

Rear Panel Protea System II 24.24M



Applications:

Corporate Boardrooms, Restaurants, Courtrooms, Houses of Worship, Left/Center/Right Systems, Auditoriums or Conference Centers

Misc:

Protea System Software for PC control of the Protea 24.24M may be downloaded free from our website. Use it to control the 24.24M, 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, XP and NT 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.

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