

Protea

Protea specifications

Protea 4.8SP Speaker Processor



The 4.8SP is a four input/eight output digital signal processor capable of precise control of a broad range of audio functions. The front panel interface allows quick access to all control parameters by offering dedicated function buttons, eliminating the need for hidden sub-menus. A backlit 2 x 20 character LCD displays channel and function settings. Dedicated buttons provide access to all audio functions and system tools. For even faster set-ups and stronger visualization of Input/Output routing, EQ, and Filter curves, two USB (one on the front and one on the rear panel) and RS-232 port is provided for use with Ashly's control software (Protea Software Suite) and a PC. A six foot USB-A to USB-B cable is provided. Advantages of using the software include greater preset capacity, and a very intuitive visual representation of the audio routing and control process.

The Protea 4.8SP utilizes state of the art DSP technologies, beginning with 24 bit, 48kHz delta-sigma A/D converters with 128x oversampling. Digital processing includes Gain, Polarity Invert, Parametric EQ, Shelving Filters, Time Delay, Crossover Functions, Compression, Limiting, and Signal Routing, all taking place in twin 120MHz high performance DSP processors. D/A conversion uses 24 bit delta-sigma converters with 128x oversampling. All inputs and outputs are precision balanced and RF protected using XLR connectors.

Each input allows you to control gain, delay and six filters (each of them your choice of parametric, low or high shelf). In addition to setting crossover frequencies, each output may be assigned to any one or a combination of inputs, allows you to program four parametric, low or high shelf filters, delay for time delay adjustments, output gain, reverse polarity and a compressor/limiter for speaker protection. All this in one rack space with XLR input and output connections.

The 4.8SP will store up to 30 total presets. A preset file takes a "snapshot" of all current settings and stores complete control data for all channels and all audio functions. The Protea 4.8SP is similar to the older Ashly Protea 4.24C. An existing preset file from the older *.pcc format can be loaded onto the new 4.8SP unit.

In all, the Protea 4.8SP is a powerful, easy to use processor for use in live sound or fixed installation applications combining precise audio processing and superior sound.

Features:

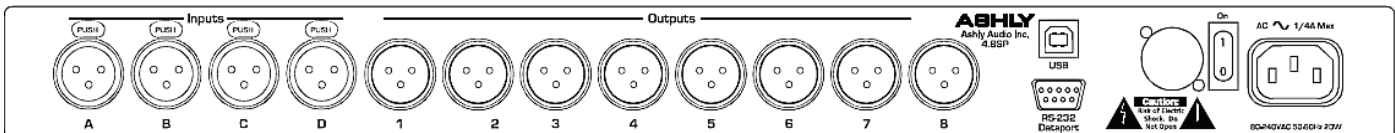
- One Rack Space
- Four Inputs - Eight Outputs
- Extremely Intuitive User Interface
- Crossover, EQ, Delay and Limiter Functions
- Outputs Assignable to Any Input
- Superior Sonic Quality
- Front Panel or PC Programming and Control
- USB and RS-232 Interface
- Third Party Control Friendly
- XLR Audio Connections
- Balanced Inputs and Outputs
- Parametric Filters and Comp/Limiter to Control Feedback Problems
- Linkwitz-Riley, Bessel and Butterworth Filters
- 12, 18, 24 and 48dB/Octave Slopes
- Parametric EQ: 1/64th to 4 Octave Range
- 682ms Input and Output Delay
- Limiter on Each Output
- Individual Input and Output Metering
- Four Levels of Security

Applications:

- Conventional PA Systems
- FOH
- Monitors
- Aux fed subs
- L-C-R configurations
- Multi-zoned systems

Protea 4.9SP Speaker Processor

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|-------------------------------|-----------------------------------|----------------------------------|--|
| Input | Active Balanced, 18 kohms | Crossover High Pass Filter Type | Linkwitz-Riley, Bessel, Butterworth |
| Max Input Level | +20dBu | Crossover High Pass Filter Slope | 12, 18, 24 and 48dB/Octave |
| Input Gain Range | +12/-40dB, 0.1dB Increments | Crossover High Pass Filter Range | Off to 21.98KHz, 245 step incr |
| Output | Active Servo Balanced, 100 ohms | Crossover Low Pass Filter Type | Linkwitz-Riley, Bessel, Butterworth |
| Max Output Level | +20dBu | Crossover Low Pass Filter Slope | 12, 18, 24 and 48dB/Octave |
| Output Gain Range | +12/-40dB, 0.1dB Increments | Crossover Low Pass Filter Range | Off to 21.98KHz, 245 step incr |
| Polarity | 0 or 180 degrees | Compressor/Limiter Threshold | -20dBu to +20dBu, 1dB incr |
| Frequency Response | 20 Hz-20kHz, ±0.25 dB | Compressor/Limiter Ratio | 1.2, 1.5, 2, 3, 4, 6, 10, 20:1, Infinite:1 |
| THD | <0.01% @1 kHz, +20 dBu | Compressor/Limiter Attack | 0.5ms to 50ms per dB |
| Dynamic Range | >110 dB (20 Hz-20 kHz) unweighted | Compressor/Limiter Release | 10ms to 1Sec per dB |
| Output Noise | <-90 dBu unweighted | Compressor/Limiter Range | 20Hz to 10.6KHz |
| EQ Filters | 6 per input 4 per output | Input A/D | 24 bit |
| Parametric EQ Bandwidth | 1/64th Octave to 4 Octave | Output A/D | 24 bit |
| Parametric EQ Range | +15/-30dB, 0.1 dB incr | Processor | 24 bit, 56 bit accumulator |
| Frequency Resolution | 1/24th octave | Sample Rate | 48KHz |
| High-Shelf EQ Slope | 6 or 12dB/Octave | Propagation Delay | 1.46ms |
| High-Shelf EQ Frequency Range | 19.7Hz to 2KHz | Power Requirements | 90-240VAC, 30W |
| High-Shelf EQ Range | +/-15dB, 0.1dB incr | Shipping Weight | 13lbs (Maximum) |
| Low-Shelf EQ Slope | 6 or 12dB/Octave | Dimensions | 19.0"W x 3.5"H x 8.5"D |
| Low-Shelf EQ Frequency Range | 3.189KHz to 20.159KHz | Connections | XLR |
| Low-Shelf EQ Range | +/-15dB, 0.1dB incr | Environmental | 40-120 deg. F (4-49 deg. C) non-condensing |
| Maximum Input Delay | 682ms, 20uS incr | | |
| Maximum Output Delay | 682ms, 20uS incr | | |
| Delay Increment | 20uS | | |



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Notes:
 0dBu = 0.775 VRMS