Protea

Protea 3.6SP Speaker Processor

The 3.6SP is a three input/six 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 3.6SP 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 3.6SP 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 3.6SP is similar to the older Ashly Protea 3.24CL/CL-d. An existing preset file from the older *.pcc format can be loaded onto the new 3.6SP unit.

In all, the Protea 3.6SP 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
- Three Inputs - Six 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 specifications

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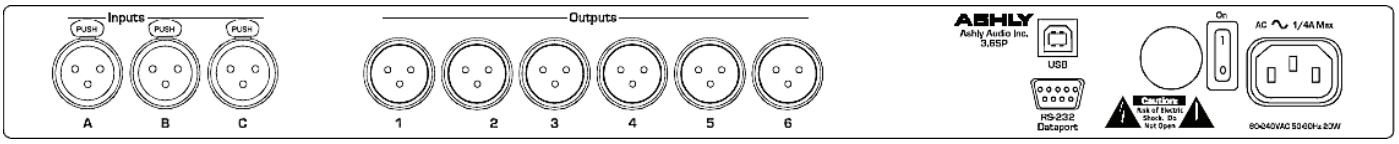
Input	Active Balanced, 18 kohms	Crossover High Pass Filter Type	Linkwitz-Riley, Bessel, Butterworth
Max Input Level	+20dBu	Crossover High Pass Filter Slope	12, 18, 24 and 48dB/Octave
Input Gain Range	+12/-40dB, 0.1dB Increments	Crossover High Pass Filter Range	Off to 21.98KHz, 245 step incr
Output	Active 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	Propogation 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