technical specifications DDP

general

The Digital Drive Processor, DDP™, is an exchangeable signal processing device, which is complementary to the Alcons ALC controller-amplifiers. The device offers a range of speaker-specific processing and controlling options, enabling the ALC to optimally drive the Alcons speaker systems.

Emphasizing Alcons' "system synergy" philosophy, the DDP module with powerful 56 bit, 120 Mips DSP engine has been designed to offer intuitive control and utmost reliability while preserving the sonic excellence of Alcons' pro-ribbon based sound systems.

The SDP™ circuit of the ALC can be seen as the "brain" of the amplifier; Activating the DDP converts the ALC from a "standard" stereo power-amp into a dedicated amplified loudspeaker controller. The analog (single channel) SDP modules or the digital (dual channel) DDP module can be placed into the SDP slots, located in the front of the ALC.

features

The Digital Drive Processor features three individual processing functions, all operating at the same time. The sections consist of fixed, factory-set functions and variable, user-definable functions, with channel-dependent control.

The control of the DDP is done by a single "click & rotate" encoder with ergonomic, logical operation.

1) Input section:
This section features channel-dependent gain control and mute function.
It also provides a signal routing matrix for configuring signal distribution over the 2 channels (input selection: input 1 or input 2 individual; input 1 > input 2; input 2 > input 1; input 1 > inputs 1+2; input 2 > inputs 1+2, inputs 1+2 > input 1, inputs 1+2 > input 2).

2) System Drive section:
This section provides system controlling and optimizing, with presets for all available Alcons systems and system configurations. Simply select the correct speaker and speaker configuration and all parameters are set to give the best sonic performance; Protection, dedicated filtering, optimised system response.

The Intelligent Driver Guidance IDG™ processing offers optimized power response through "True-RMS" intelligent power limiting guidance and (separate) excursion limiting guidance.

Crossover filtering is done with "Von Helsing's Filterslope Architecture"; This filter design protocol consists of dedicated, hybrid Bessel, Butterworth or Linkwitz Riley responses.

The optimization of the system's response is taken care of by factory-set dedicated driver alignment and system configuration equalising a.o.

3) User control section:
This sections offers user definable equalising and delay functions.

The equalising can be done through 4-bands of parametric equalising per channel; Each band provides +12dB to -19dB gain with a choice of 83 selectable frequencies. Each band can also act as notch-filter. The filters feature CSQ™ (Constant & Symmetrical Q), with a selectable Q from 0.3 to 15, in 36 steps.

Per channel there's also a user-definable delay function; The delay can be set from 1 to 294ms. for a total of 99.9m/328ft. delay.

Up to 99 user-presets can be made, consisting of factory system preset, gain, input-mode, equalising and delay, or a selection of each of these functions. The presets can be tagged with a 21-character name.

Apart from the three processing sections, another important feature is the LimitLog™. In combination with the internal crystal-controlled daytime clock, this function provides real-time signal logging; A visual tracing report on the signal present and dB limiting of the selected system, over the elapsed period of time. With up to 420.000 minute samples, a usage history of more than 7.000 operating hours can be read out.

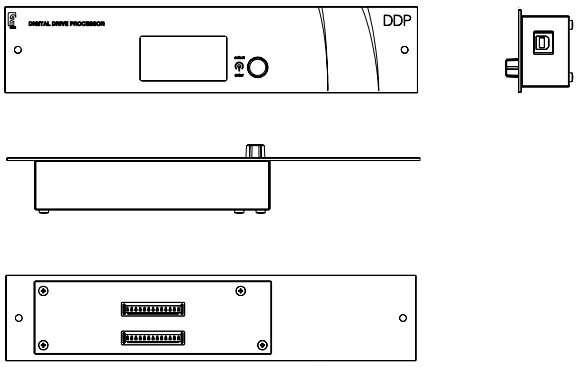
Furthermore, the DDP is fitted with a wide-angle view backlit LCD; The large display of 128x64 dots, enables a complete processor status report with just a single view.
The display can be configured for 10-seconds Time-out, or 9-level Dimmer-mode; The display also features a 9-step contrast control.

Firmware updates are performed via the side-located USB-port; Dedicated boot-loader software makes the firmware updates internet-downloadable.

A: Alcons Audio B.V.
De Corantijn 69
1689 AN Zwaag
The Netherlands

E: info@alconsaudio.com
W: www.alconsaudio.com
T: +31 (0)229 28 30 90
F: +31 (0)229 28 30 99

dimensional drawing



technical specifications

General:	
I/O	"2-in / 2-out"
Gain range	-59 dB - +6 dB
Freq. response	10 Hz. - 45 kHz. @ -3 dB
Total harmonic distortion	<0,01%
A/D section:	
Type	Delta-Sigma conversion, 128 times oversampling
Sample rate	96 kHz.
Word length	24 bit (27 bit, stacked)
Dynamic range	128dB A-weighted
D/A section:	
Type	Delta-Sigma conversion, 128 times oversampling
Sample rate	96 kHz.
Word length	24 bit
Dynamic range	123 dB A-weighted
Internal processing	48 bits, fixed point
System Drive section	all Alcons systems and configurations selectable
Equaliser section	2x 4-band, parametric
Delay section	2x 294 ms (99,9m/328ft)
Display	blue/white 128x64 dots
Power	through SDP slot
Weight	300 gr. / 0.66 lb.
Dimensions HxWxD	50x240x32 mm / 2.0x9.5x1.3 in.
Warranty	3 years