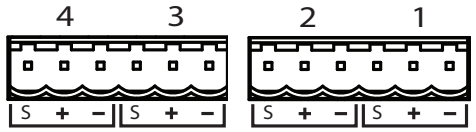
Soundweb™ London
AEC Input Cards



OVERVIEW:

The Soundweb London Acoustic Echo Cancellation (AEC) Input Cards are designed to populate any of the four card slots on Soundweb London BLU-800, BLU-320, BLU-160 and BLU-120 devices. These AEC Input Cards enable Soundweb London devices to cancel acoustic echo arising when sound from a loudspeaker enters a microphone in the same room in a conference application.

Like the Soundweb London Analog Input Cards, the Soundweb London AEC Input Cards offer Phantom Power, configurable per channel and software controlled analog gain in 6dB steps from 0dB to 48dB.

They offer four independent channels of AEC which can be freely configured in software and individual AEC references allowing users to provide a solution for multiple spaces using a single device.

Automatic Gain Control (AGC) ensures that the inputs of the microphones are set at the optimum level. Noise Cancellation (NC) removes steady state noise (such as from a projector fan or air conditioning device) from the signal path. This stops the noise from being amplified.

Non-Linear Processing (NLP) dynamically adjusts to minimize echo caused by under or over-cancellation.

The Soundweb London AEC Input Cards also offer a direct microphone feed for local sound reinforcement. This allows full-bandwidth, low latency, direct microphone signals to be mixed and processed for local sound reinforcement purposes.

KEY FEATURES:

- Compatible with BLU-800, BLU-320, BLU-160 and BLU-120 Devices
- Phantom Power (Configurable per Channel)
- Software Controlled Analog Gain (0dB to 48dB, 6dB steps)
- Four Independent Channels of AEC
- Individual Reference per Channel
- Automatic Gain Control (AGC)
- Noise Cancellation (NC)
- Non-Linear Processing (NLP)
- Direct Microphone Feed for Local Sound Reinforcement

AEC INPUT CARD:

- **Connector 1**
  - Balanced / Unbalanced Audio, Channel 1 - Mic/Line
  - Balanced / Unbalanced Audio, Channel 2 - Mic/Line

- **Connector 2**
  - Balanced / Unbalanced Audio, Channel 3 - Mic/Line
  - Balanced / Unbalanced Audio, Channel 4 - Mic/Line

Connector	[Mic/Line Combicon]		[Mic/Line Combicon]	
Signal	4	3	2	1
Pin	[S + -]	[S + -]	[S + -]	[S + -]

Balanced	Hot: to + Cold: to - Shield: to S	**Unbalanced**	Hot: to + Link to Shield: to - Shield: to S

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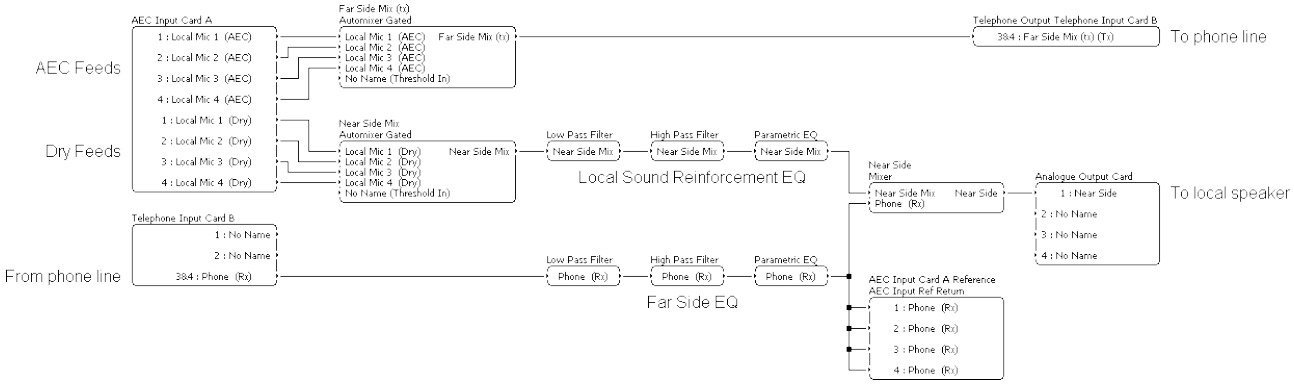
TECHNICAL SPECIFICATIONS:

Analog Inputs:	Up to 16 electronically balanced on Phoenix/Combicon removable screw connectors
Mic/Line Inputs:	Nominal gain 0dB, electronically switchable up to +48dB, in +6dB steps
Input Impedance:	3.5kΩ
Maximum Input Level:	+20dBu with 0dB input gain, +8dBu with 12dB gain
CMRR:	>75dB at 1kHz
Input Noise (E.I.N.):	<-128dBu typical with 150Ω source
Phantom Power:	48V nominal, selectable per input
Pre-AEC Input Latency:	38/Fs [0.79ms@48k]
Post-AEC Input Latency (Original 8k Algorithm):	2385/Fs [49.68ms@48k]
Post-AEC Input Latency (Full Bandwidth Algorithm):	1609/Fs [33.52ms@48k]
Tail Length:	200 ms
Average Convergence Rate:	49dB/s (Net convergence over multiple FFT bands)

EXAMPLE SOUNDWEB LONDON TELECONFERENCING PROCESSING DESIGN:



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