HiQnet audioarchitect™

SMALL BOARDROOM APPLICATION GUIDE

SMALL BOARDROOM APPLICATION GUIDE

The audio system for a small boardroom has a number of unique requirements, including:

- Correct microphone input gain to ensure maximum signal with minimum noise
- An automatic mixer allowing microphones to turn on only when someone is speaking
- A mix minus matrix that determines which microphones will be heard in each speaker, and at what level
- A high pass filter on the microphone inputs to eliminate any low frequency noise that may trigger the automatic mixer

The input gain of the microphones must be set up correctly – this allows maximum signal through the system with minimum amount of noise. The optimal situation is to have the level set as high as possible without the signal clipping.

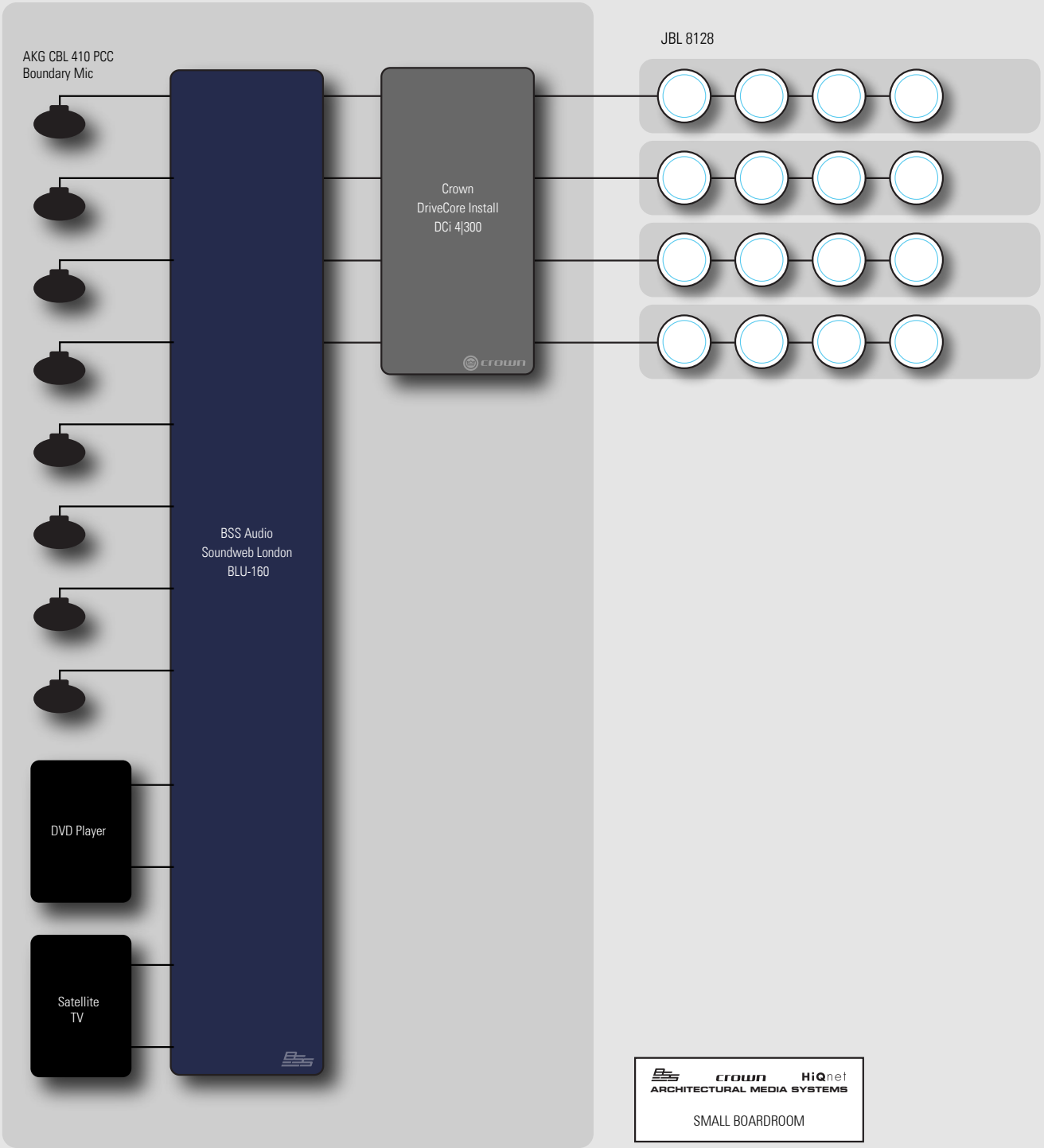
When using the Automixer, all inputs share the available gain; i.e. an 'open' microphone will attract the most gain. If more than one microphone is in use, the gain in the active channels is shared to give the same overall system gain. When all inputs are idle, the shared gain keeps all channels slightly active to avoid 'pumping' of the background noise. Downward expansion is available for further reducing the background noise contribution from idle microphones however.

A mix minus matrix will further increase intelligibility by routing the active microphone at a lower level to the speaker nearest the microphone, reducing the potential for feedback.

Normally a mix minus matrix will allow the microphone to be cancelled from the speaker that is directly above the microphone. Of course this does not affect the microphone signal that is present in other speakers. Doing this provides a much cleaner signal with plenty of headroom. A mix minus matrix in HiQnet Audio Architect is achieved by feeding the direct outputs of the Automixer into a Matrix Mixer. Normally, the mix output from the Automixer is not used except for a recording feed.

High pass filters can be used on the inputs of the microphones to eliminate any low frequency noise which could trigger the Automixer. The voice-band filters in the Automixer can also be activated to enable the Automixer to limit triggering to vocal frequencies.

A common method of control in boardrooms is the use of third party control systems such as AMX or Crestron. Soundweb London devices, including the BLU-160, communicate with third party control systems using messages sent via serial or Ethernet. It is very intuitive to program control systems to adjust level controls, mutes on microphones, source selections or preset recalls configured with the HiQnet Audio Architect Third-Party Controller tool.


AKG CBL 410 PCC
Boundary Mic
BSS Audio
Soundweb London
BLU-160
Crown
DriveCore Install
DCi 4|300
JBL 8128
DVD Player
Satellite
TV
crown HiQnet
ARCHITECTURAL MEDIA SYSTEMS
SMALL BOARDROOM

DSP CONFIGURATION

Another common process used in boardrooms is camera switching. With Soundweb London, a signal can be transmitted from the logic output ports on the rear of the device to indicate when a person is speaking. This logic output may then be connected to a camera controller allowing the camera to point at the person speaking. The logic output ports may also be connected to third party control systems which then provide more comprehensive camera control.

With Audio Architect there is a wide variety of processing available to use at any point in the system, input or output, as the application requires.