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RESTAURANT & BAR APPLICATION GUIDE

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The audio system for a restaurant or bar has a number of unique requirements, including:

- The ability to select multiple audio sources and distribute them to several zones as either mono or stereo signals
- The need to control the audio from a number of locations in the restaurant / bar
- The necessity for host / hostess paging announcements to override the background music in selected zones
- A two-way PA in the bar for live performances

Multiple audio sources (in this case, multiple satellite receivers), often have a significant variations in their audio outputs levels. This variation needs to be controlled so that the sound levels are relatively consistent no matter where you are in the restaurant. By using the Leveller inside the Soundweb London BLU-100 automatic adjustments are made to compensate for discrepancies between the levels of different audio sources. This results in an even volume level when switching between sources.

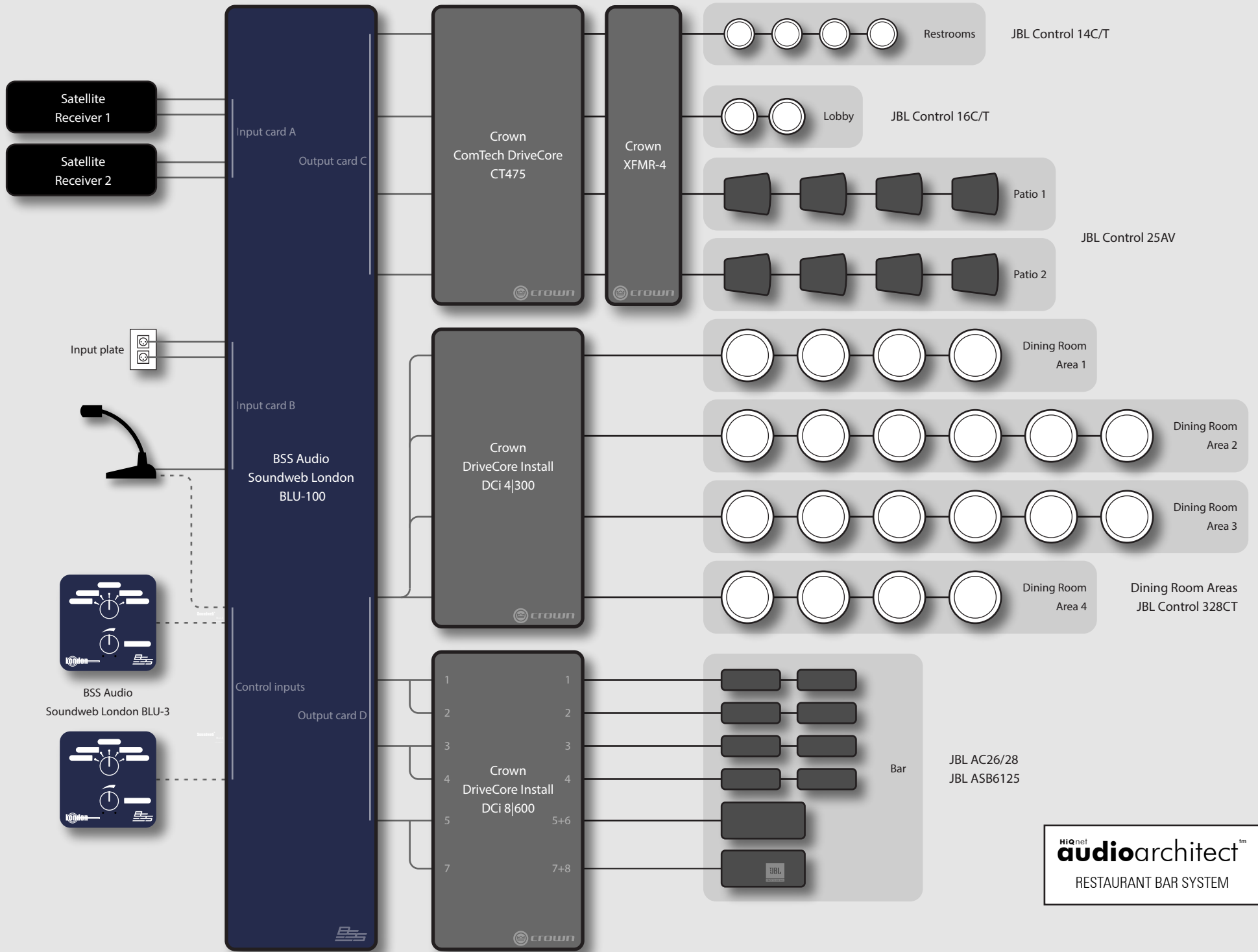
After passing through the Leveller, the signals are then equalized using a parametric equalizer (EQ). This processing object can be used to adjust for the acoustics of the room and help make the listing experience more consistent as a customer moves from space to space. Proper EQ also assures the highest intelligibility of voice announcements throughout the system.

Depending on the restaurant / bar and the wishes of the designer, music can be sent to the Crown ComTech and DriveCore Install DCi amplifiers (and then to the loudspeakers) as either stereo or mono signals. In the case of this design, it was desired to have the higher impact bar system in stereo utilizing distributed JBL AC26/28 speakers combined with mono JBL ASB6125 subwoofers, while the Dining Room, Patio and other spaces employ mono audio playback only. To accomplish this, the audio source was split. Part of the signal was sent to a Summer processing object to create a mono source for the lobby, courtyard and rest room areas. At the same time, part of the signal was kept as a stereo feed and sent to the bar and restaurant zones for playback in stereo.

A BLU-3 analog remote wall controller mounted behind the bar and reception area allows staff to select from available audio sources as well as adjust the volume levels in the restaurant and the bar. A stereo input plate in the bar will allow a small DJ mixer to be routed to the high impact JBL / Crown

audio system on the weekends. This configuration requires a Stereo Crossover, a Stereo Parametric EQ and input and output Limiters (to protect the system from high levels coming from the DJ's mixer). This provides the installer with the tools necessary to create the best sound for any space.

By using the Ducker processing object, a true override paging system has been designed that will automatically "duck" the background music (reducing it in level by a prescribed amount), so that announcements can be clearly heard above the level of the music. Upon completion of the announcement, the background music is automatically restored to its previous level. Duckers used in this way allow clear paging, whether the source is a paging microphone or Telco (telephone) interface. With this configuration, announcements would only be heard in necessary zones (lobby, bar and rest rooms), leaving diners undisturbed.



# DSP CONFIGURATION

In order to route a mono signal to the restaurant and a stereo signal to the bar, the stereo sources are split as they enter the processor. One stereo path is connected to a mono summer to provide a mono signal to most of the restaurant, while the other is routed to the amplifiers in the bar for a full stereo playback experience. All output signal paths follow a similar routine: Gain stage, Parametric EQ, Filter, and Limiter.

Special input processing is provided for each source. The paging microphone passes through Compressor, Gain, High Pass Filter and Parametric EQ processing objects, very similar to the input strip of a console. The Satellite receivers have Levelers to adjust for the varying levels of the content, and the wall plate input has a hard Limiter processing object on its input to protect the system from an enthusiastic DJ mixer. Finally a Ducker is used on the outputs that feed the lobby and rest rooms allowing the music to be reduced in level when the host pages a guest for seating.

