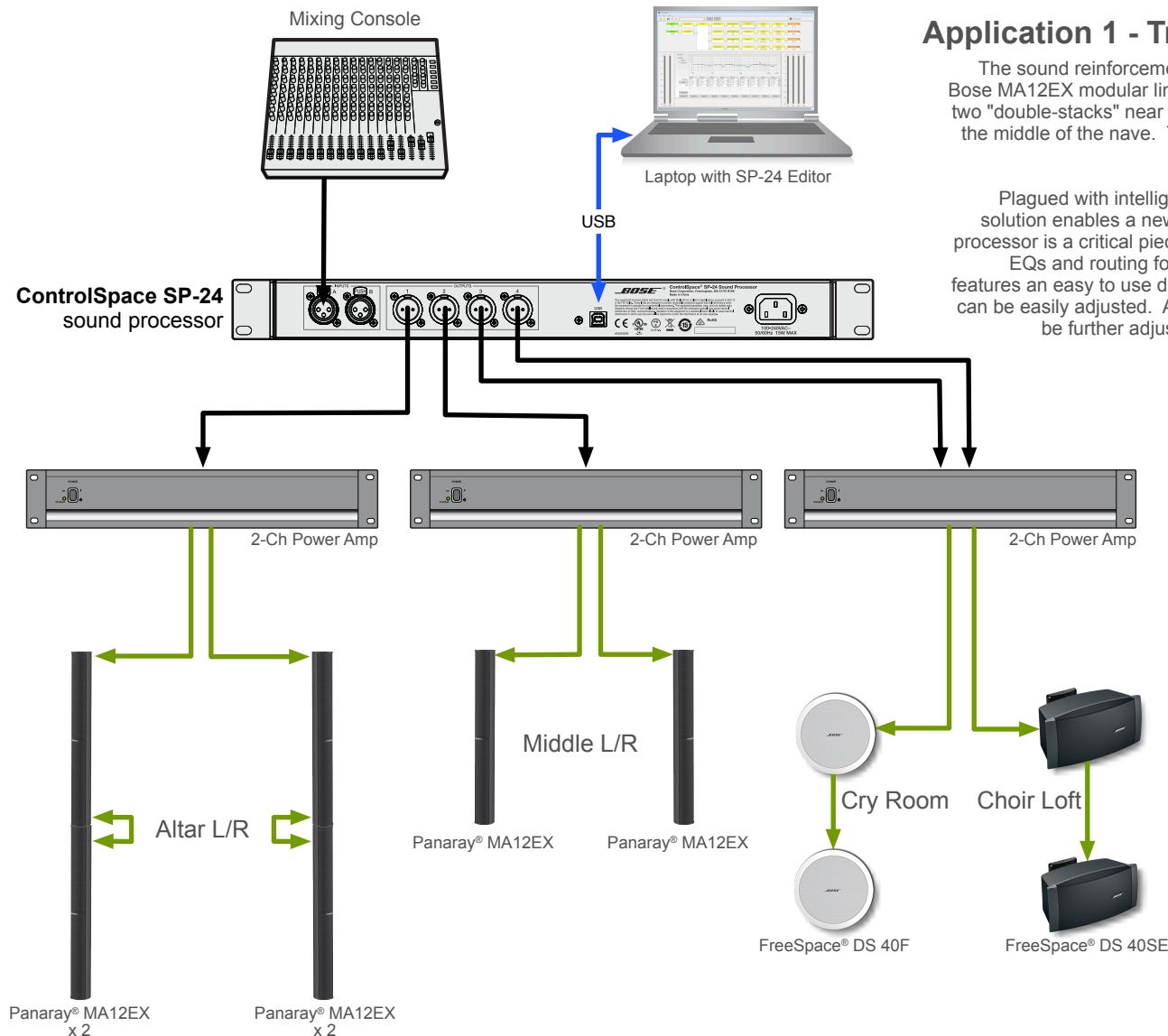


Application 1 - Traditional House of Worship

The sound reinforcement system in a traditional church is updated with Bose MA12EX modular line array loudspeakers at two mounting locations: two "double-stacks" near the altar, and a pair mounted on columns toward the middle of the nave. The cry room and choir loft has Bose FreeSpace loudspeakers installed.

Plagued with intelligibility problems from previous systems, the Bose solution enables a new level of clarity for the spoken word. The SP-24 processor is a critical piece of equipment in allowing the appropriate room EQs and routing for the 4 zones. Featured below, the SP-24 Editor features an easy to use delay interface where the delay time of each zone can be easily adjusted. After the SP-24 Editor is disconnected, delay can be further adjusted from the front panel of the SP-24 processor.



SP-24 Editor: Delay

Selecting a delay block brings up an intuitive delay interface where the four loudspeaker channels independently can be dragged across a timeline to easily tune delay time.

A delay time of up to 170 ms per output channel is possible. SP-24 Editor software also allows for fine adjustment, up to +/-20 microseconds of resolution.

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ControlSpace® SP-24 sound processor



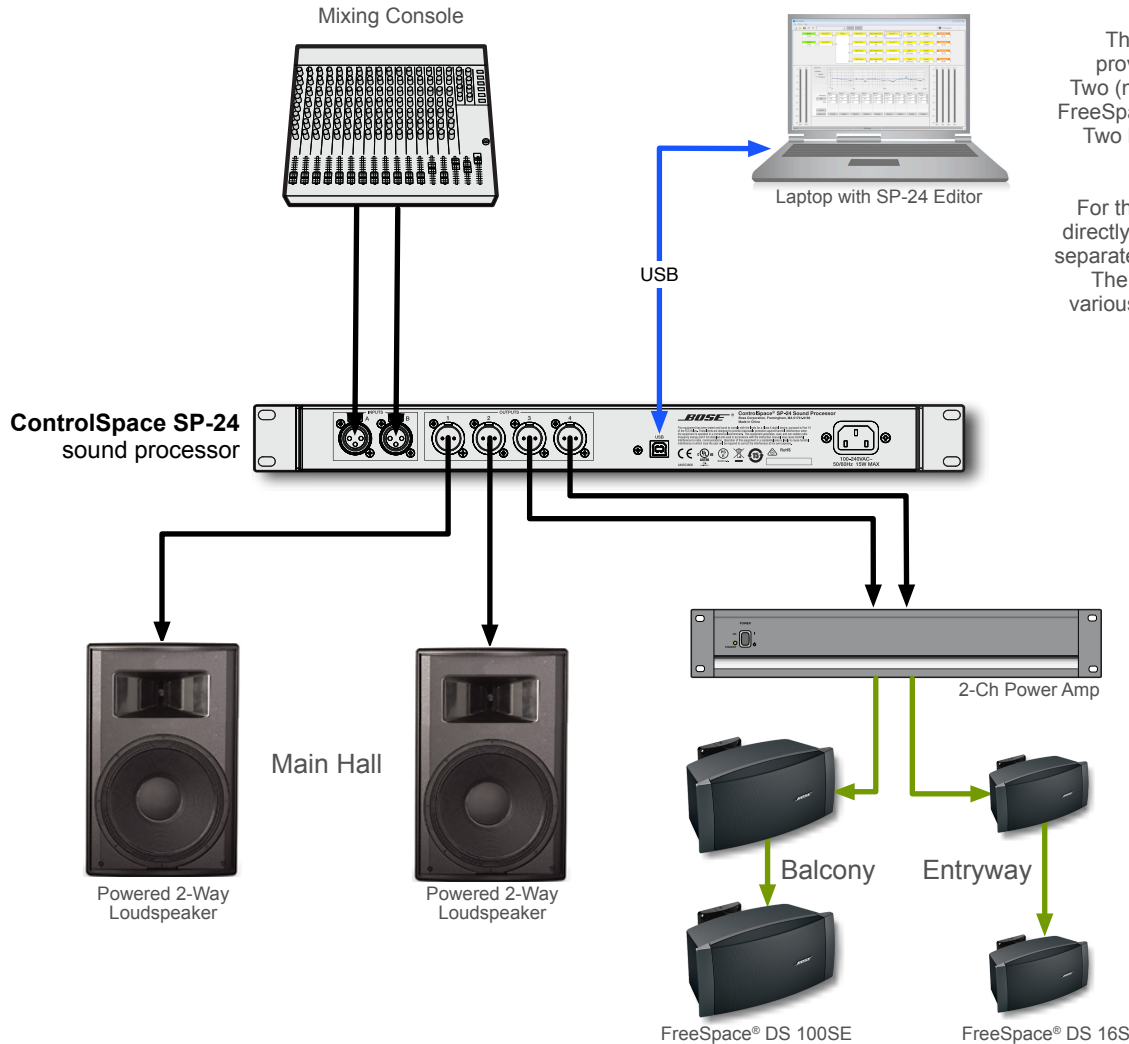
Application 2 - Town Hall

APPLICATIONS

The main meeting room of a town hall is outfitted with loudspeakers to provide sound reinforcement for town meetings and community events. Two (non-Bose) powered loudspeakers are used on stage while two Bose FreeSpace® DS 100SE loudspeakers provide sound to an upstairs balcony. Two Bose DS 16S loudspeakers are positioned in the entryway for times when audiences spill into this area.

For this setup, the SP-24 processor feeds the two powered loudspeakers directly from output channels 1 and 2, while channels 3 and 4 are sent to a separate 2-channel amplifier which drives two zones of Bose loudspeakers.

The SP-24 Editor software helps to help provide complete control of the various parameters offered in the SP-24 processor. In this case, four zone EQ blocks are used to optimize for the three spaces.



SP-24 Editor: DualEQ

SP-24 Editor software provides the capability to control all parameters of the SP-24 processor live or offline.

Each input and output channel has a DualEQ block from which users can create equalization for inputs, rooms/zones, and loudspeakers.

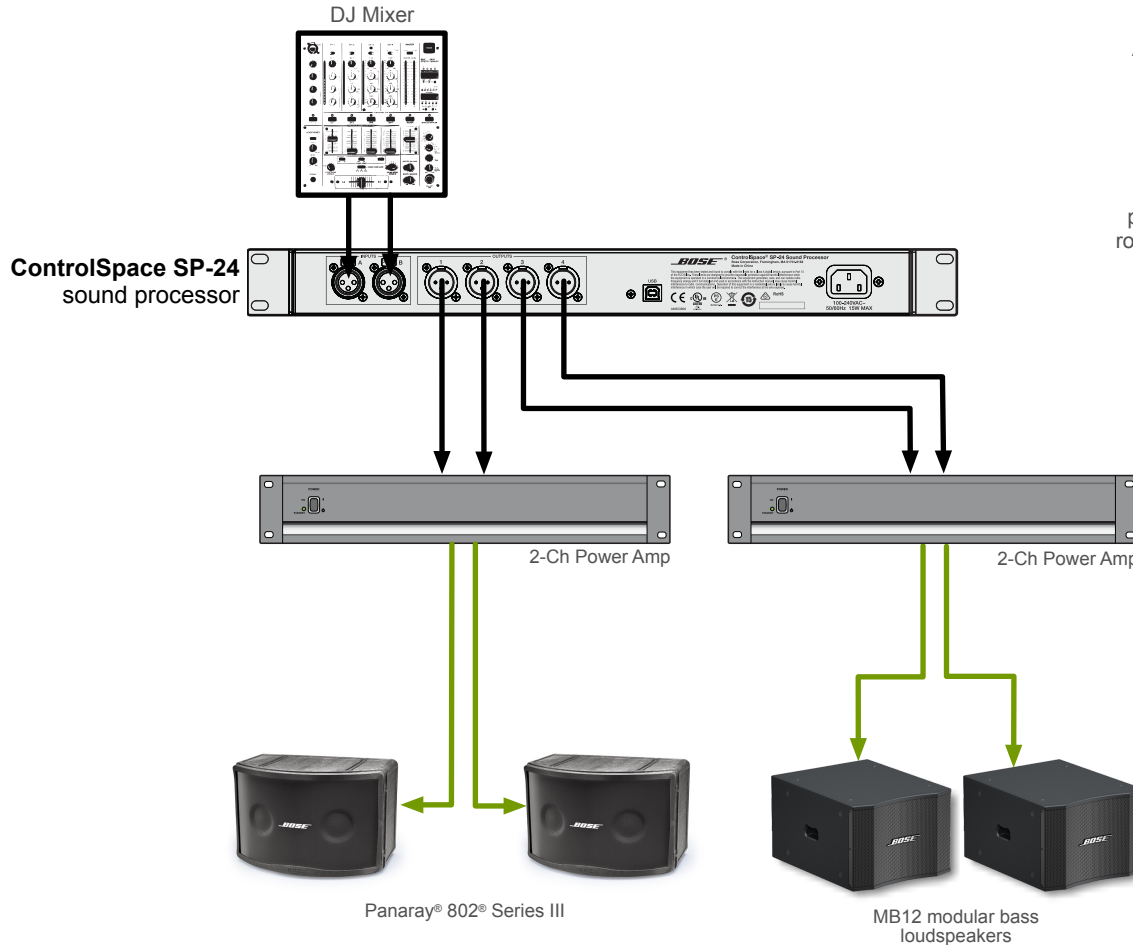
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Application 3 - Health Club

An aerobics training room at a health club is looking for a high-quality sound system to attract new customers and motivate existing customers. In this case two Panaray® 802 Series III loudspeakers and two MB12 modular bass loudspeakers offer the ideal group fitness room audio system.

The SP-24 sound processor enables a simple, straightforward processor setup when Bose loudspeakers are used in common routing configurations. Presets can be selected directly from the front panel without using the SP-24 Editor software and a PC.



Front Panel Preset Selection

Stereo HP + Bass			
SOURCE → A	1	<input checked="" type="checkbox"/> HP	A
	2	<input checked="" type="checkbox"/> HP	B
SOURCE → B	3	<input type="checkbox"/> LP	A + B
	4	<input type="checkbox"/> LP	A + B

Using the front panel interface of the SP-24 processor, factory-installed presets and preconfigured signal routing can be selected in just a few button presses.

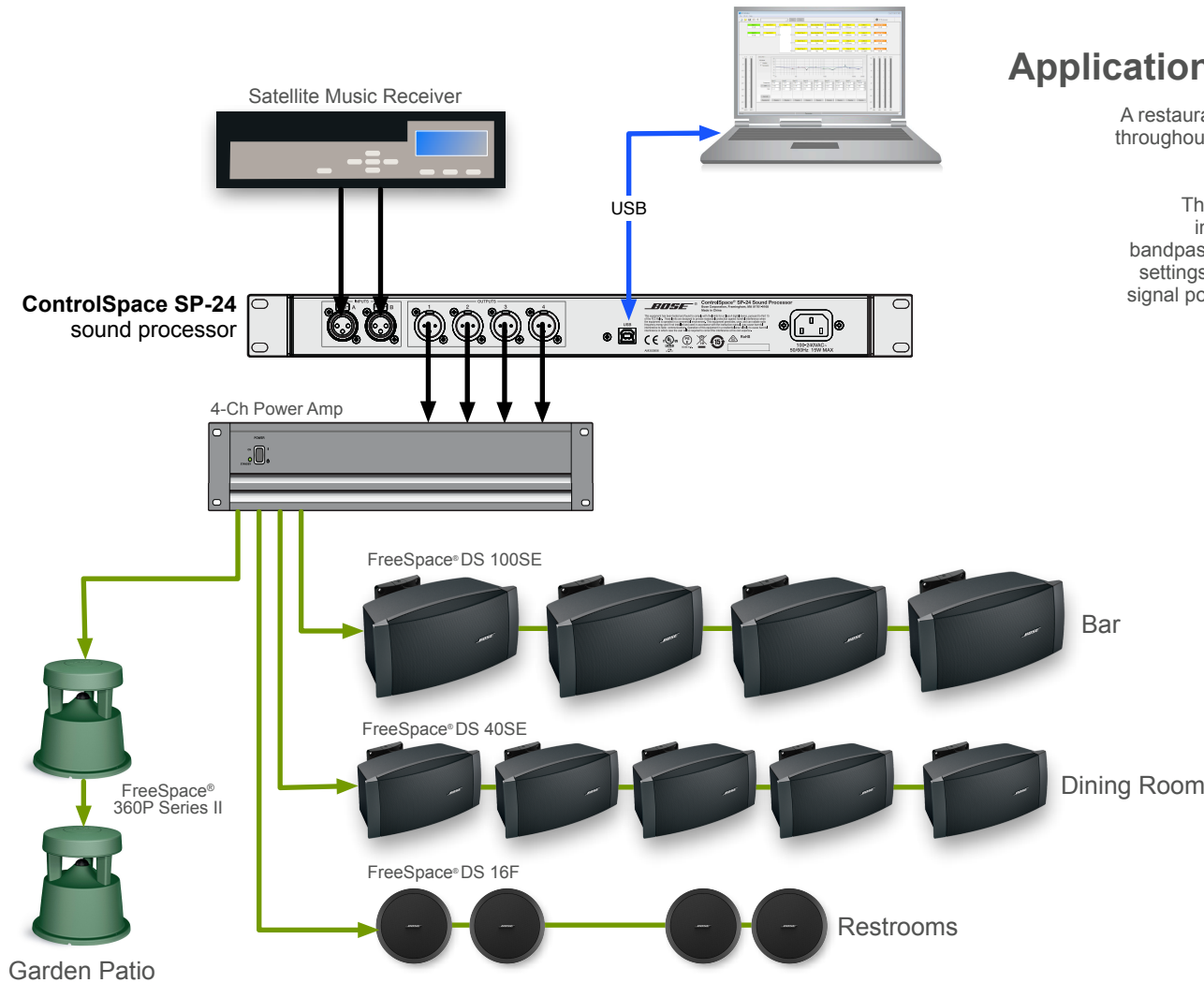
More than 150 loudspeaker presets in four routing categories can be selected easily, allowing for quicker installations when using Bose loudspeakers in common configurations.

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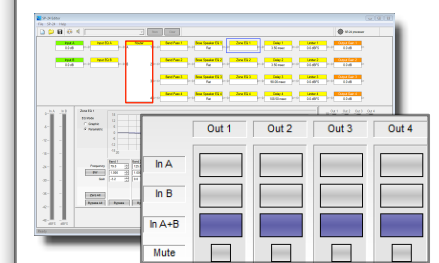
Application 4 - Restaurant and Bar

A restaurant/bar owner desires house music to be routed throughout the entire building using Bose FreeSpace® DS and 360P series II loudspeakers.

The SP-24 processor is configured to provide four independent zones of audio, each with their own bandpass, loudspeaker EQ, room EQ, delay, and limiter settings. Independent control of output gain, mute and signal polarity is within two mouse clicks when using the SP-24 Editor software online.



SP-24 Editor: Router



Selecting the router gives users quick access to route output channels to one or both input channels.

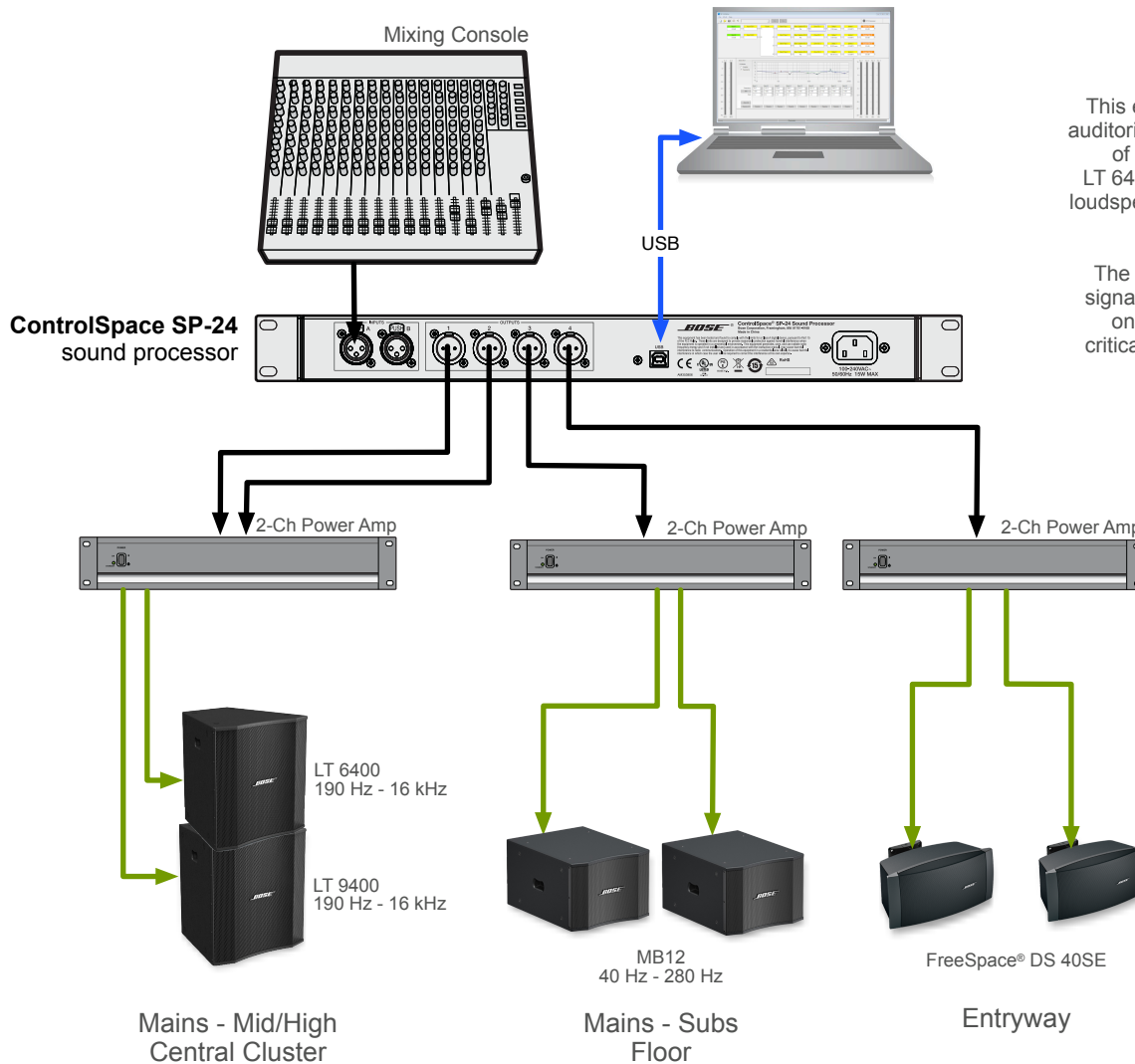
In this case, the router is being used to sum stereo channels at the source and distribute to four independent zones.

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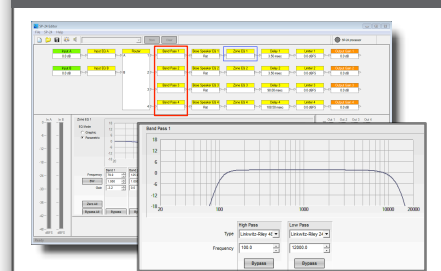
Application 5 - Auditorium

This example illustrates the use of the SP-24 sound processor in an auditorium application. The SP-24 feeds three power amplifiers. Two of the amps drive a central cluster arrangement consisting of one LT 6400 and one LT 9400 loudspeaker with two MB12 modular bass loudspeakers. A pair of DS 40SE loudspeakers deliver sound outside the auditorium in the entryway.

The SP-24 Editor runs on a laptop at the operator's position, where signal levels can be monitored and room EQ can be adjusted based on the content and crowd capacity. The SP-24 Editor becomes a critical tool for the audio engineer who prefers to optimize the sound system by adjusting the band pass blocks.



SP-24 Editor: Band Pass



Each of the four output channels on the SP-24 processor offer band pass control for loudspeakers. A high and low pass section offers frequency control together with a complement of Butterworth, Bessel, and Linkwitz-Riley filter types over a range of slopes.

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