



by Loren Alldrin

When it comes to technical ministries, the greatest challenge facing churches today is rarely technology – it’s people. Finding qualified, trained (or trainable) people to take the helm of all the pieces in a production system is not an easy task. Apart from training, the only other solution is to make the equipment easier and more accessible so more people can use it. This latter approach is at the heart of Peavey’s Sanctuary Series line of mixers. Peavey has set out to simplify and automate the pursuit of good sound to the degree that a willing person can operate the mixer with little or no training.

This issue, we test out the Peavey S-14 Sanctuary Series mixer (\$1,200). The S-14 is a rackmount unit with 10 mono mic/line inputs and two stereo inputs (14 channels in all). The Sanctuary Series line also includes a powered version of the S-14 (S-14P, \$1,800), a traditional consolestyle mixer with 24 inputs (the S-24, \$2,000) and an outboard four-channel Automix processor (the S-4, \$550).

When Simple Meets Advanced

Though it may look simple, the S-14 offers a range of processing that’s far from the norm in low-cost analog mixers. The mixer’s first four channels are the most feature-laden, designed primarily to handle a minister or pastor’s wireless and podium mics. Switches above each fader set the input’s priority in the S-14’s fourchannel Automix system.

Basically an advanced “ducking” circuit (which reduces one signal’s level to avoid competition with another), the Automix system prioritizes channels with a switch setting of wireless over those designated podium. This cuts down on the hollow, unfocused sound that results when a speaker’s voice is picked up by both a lavalier mic and nearby podium mic.

Inputs 1 through 4 also have a one-knob compressor designed to help level out fluctuations in volume. The knob sets the point at which compression kicks in to reduce level (the threshold); a red LED lights when the amount of gain reduction reaches 3 dB. Other controls include a three-band EQ, two monitor sends and an effects send.

Channels 1 through 10 use Peavey's "Mid-Morph" midrange EQ control, which boosts different frequencies than it cuts. Increasing the mid EQ gain boosts frequencies around 4 kHz, a very useful band for increasing clarity and definition. Decreasing the mid EQ gain cuts frequencies around 220 Hz, a frequency band that's usually the main culprit in muddy, boxy sound.

Channels 5 through 9 have a group assign switch that places their signal in one of two subgroups. The solo setting routes to a group with a low-cut filter for eliminating rumble from handheld or standmounted mics. The other group — Choir/ Inst — maintains a full-range signal to the mixer's outputs. Before reaching the mixer's outputs, these two groups go through individual noise gates and compressors. Both have a single knob that controls gate or compression threshold.

Instead of assign switches, the S-14's stereo inputs have an input select for painless playback of accompaniment tracks. This switch allows you to send just the left channel, right channel or the full stereo signal to the output. For accompaniment tracks with music on one channel and a guide vocal on the other, this is a great feature. Both stereo inputs have a three-band EQ with standard midrange control.

Optimized Output

Many of the S-14's more notable features show up on its output section, which is topped off by the digital reverb controls. The S-14's digital reverb offers four programs ranging from short and punchy to long and spacious. A four-position knob selects the program, while a second knob controls the reverb return level to the stereo bus. A handy peak LED shows the onset of clipping at the reverb's input, and a nearby button mutes the return altogether.

A major selling point for the S-14 will likely be its active feedback suppression, courtesy of Peavey's digital Feedback Ferret system. Feedback Ferret watches the stereo and monitor outputs for signs of feedback, then quickly applies a narrow notch filter to eliminate the feedback.

Recognizing that voice intelligibility is one of the prime directives — and challenges — in church sound, Peavey engineers equipped the S-14 with a voice enhancement circuit that boosts upper-mid and treble frequencies for better clarity. A single button engages voice enhancement for the pulpit, solo and choir/inst groups (stereo inputs are unaffected). A recessed switch selects between two different amounts of processing.

Recording a service with consistent levels is another serious challenge. Peavey's solution is an auto-level circuit that brings up signal levels during quiet passages and decreases them during loud sections. The resulting reduction in dynamic range makes recording easier, and also makes for more consistent sound for listeners outside the actual sanctuary area. Both the stereo record and aux (mono sum) outputs offer this switch-selectable autolevel feature.

The S-14's headphone cue and metering system departs from the norm, using a knob to select between just four signal sources: stereo main, monitor 1 send, monitor 2 send or a mix of both stereo inputs. This latter setting comes in handy when cueing up accompaniment tracks or other pre-recorded sources. A level knob sets headphone volume.

Hands On

Right from the box, the quality of the S-14's construction is apparent. The mixer is solidly built right here in the USA, and its knobs and faders have a quality feel. Getting familiar with the basic functions of the S-14 is straightforward, especially with the manual's helpful setup walkthroughs. Dialing in some of the more advanced features (Automix assignments, feedback eliminator, etc.) required a little deeper

study of the manual.

One crucial aspect of mixer setup—tracking down inputs and setting their gain—is made much more challenging on the S-14 thanks to the elimination of a key feature. That feature is a true solo button on each input. Though the S-14's manual details a gain-setting strategy that doesn't require a solo button, it's no help once a service is underway and a problem crops up. Whether for space, simplicity or monetary reasons, the omission of a solo button on the S-14 is a tragic one. Compounding the setup challenge is the touchiness of the S-14's gain controls near the middle of their range (where most inputs will fall).

Peavey's Mid-Morph mid EQ proves to be very effective at sculpting a channel's sound, provided you don't need to boost low-mid frequencies or cut high-mid frequencies. Not to worry—this doubleduty knob is effective at solving most mid-band EQ problems, and is the next best thing to having a true four-band EQ. The S-14's high-frequency EQ earns high marks for its smooth, musical sound. The vocal enhancement circuit isn't so smooth, but may prove beneficial with some systems.

The importance of balanced, consistent monitor mixes can't be overstated. Here the S-14 dishes up another unnecessary challenge in that its monitor sends are post-fader instead of pre-fader. This makes the monitor mix change as the main faders are moved for the house mix. The final head-scratcher is the S-14's lack of pan controls, which Peavey felt were unnecessary for the majority of small churches as they tend to run mono sound systems.

The S-14's Automix system works very well, seamlessly lowering the gain of lower-priority mics to assure clean, focused audio from those with a higher priority. The compressors on the Automix channels and two subgroups effectively reduce gain for a more consistent sound. They're at their best when trimming just a few dB off the loudest sections – if the CMP (compression) light is lit more often than not, a slight loss of clarity is detectable. The solo and choir/inst subgroup noise gates do their job nicely, shutting down noise without undue fluttering and springing back open transparently. The auto-level circuits on the S-14's tape and aux outputs aren't subtle, but they can really “fill the meters” with more consistent levels.

The S-14's digital reverb sounds very good for worship applications, with enough variety among the presets to suit a broad continuum of music styles. Its only drawback is its input gain sensitivity – channel send levels have to be kept on the low side to avoid audibly (and visibly) peaking the reverb's input.

The S-14's feedback reduction processor offers many of the benefits of Peavey's stand-alone Feedback Ferret. It works its magic transparently, resulting in a dramatic increase in house or monitor level without feedback. If set up properly, the feedback eliminator could forever banish that annoying shriek from your services.

The Big Picture

There's no question the S-14 offers an unprecedented level of power for a mixer in this size and price range. The S-14's list of capabilities goes on and on, including the majority of the processes needed for high-quality, small-venue sound. It's only flaws lie in some of the decisions made at the design phase. The S-14's lack of pan controls is merely unfortunate; that it has no solo feature and no pre-fader monitor sends is all but unforgivable.

The simplicity of the mixer's controls make it easier to use, but the sheer number of added features gives the careless or untrained operator more potential to actually ransack the sound. Don't be deceived into

thinking of the S-14 as an “any monkey could use it” solution to every audio problem. As with any mixer, success with the S-14 will require some training and careful setup. Once a person grasps the workings of the compressors, gates and other effects, however, the feature-packed Peavey S-14 has the power to generate well-balanced, consistent mixes.

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