PreSonus StudioLive RM32AI Digital Mixing System

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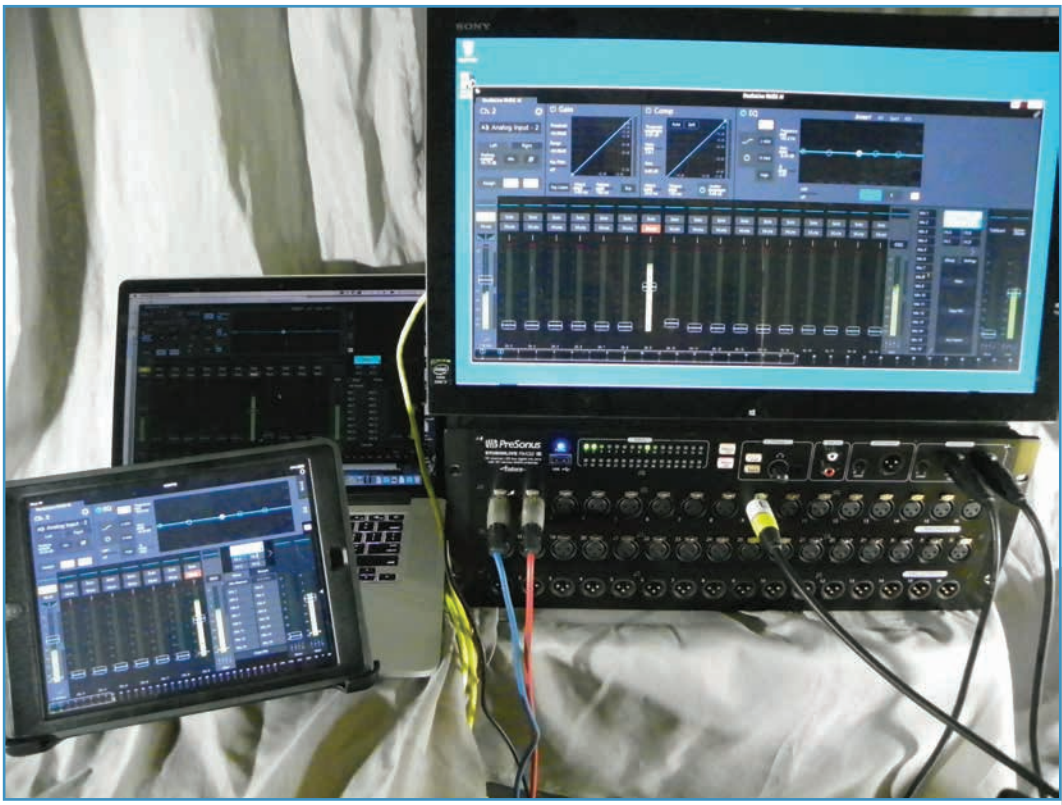

The RM32AI can be controlled any number of ways, simultaneously. Here with Sony Vaio touch screen, iPad, and MacBook Pro.

Baton Rouge, Louisiana-based PreSonus Audio Electronics, Inc. was founded in 1995 by Jim Odom and Brian Smith. Odom, the company's president, and Smith, VP of engineering, were both LSU engineering graduates. The company started in Odom's garage. The initial product was the DCP-8 digitally controlled eight-channel compressor/limiter/gate. In a span of 20 years, PreSonus has built a diverse lineup of products. Originally focused more toward recording applications, the company produced mic preamps, interfaces, and channel strips. It started addressing the software side of recording in 2006, with the introduction of Studio One. In 2009, it debuted the StudioLive series of digital mixers, incrementally updating it with new software and functionality. In 2013, it expanded its coverage into the live market further by introducing StudioLive-AI PA loudspeakers, and, in 2014, by acquiring loudspeaker manufacturer WorxAudio.

One of the latest product developments in PreSonus' StudioLive mixer series is the StudioLive RM32AI digital mixing system. I was intrigued when I first learned of it and was looking forward to the opportunity to check it out.

The mixer itself is a four-rack space unit that has 32 XLR mic inputs and 16 male XLR mix outputs, left/right main out, mono out, RCA tape in (hearkening back to the olden days of audio), and headphone out connections. There are 32 LEDs (signal input indicators) and a USB port on the front panel. Systems can even be cascaded for more inputs. The rear includes the on/off switch and IEC power inlet on the bottom left. A large heat sink takes up much of the top half of the panel. On the right-side lower half of the RM are two MIDI connectors (in/out, designated for future application), two DB25 connectors for mix outputs (one for outputs 1— 8, and the other for outputs 9 — 16), and an option card port. The option card for the review system comprised two FireWire S800 ports, an Ethernet port, and a S/PDIF output. The system normally ships with the AVB card standard, and the Dante card is just around the corner. If I didn't know better, I would think this was a stage rack for another system.

But this is the mixer, and the control device is a Windows or Mac laptop, an iPad, or—and this is the cool part—a Windows multi-touch computer, which provides the potential for a large control area. There are no physical faders; in fact, the only tactile controls are four buttons and three knobs on the mixer unit itself. Otherwise, all the control is via touch or mouse.

That can be pretty scary, I admit, but think about it: no faders or knobs

to break off or get dirty (or no openings on the console surface for dust, dirt, or moisture to get into). Admittedly, you now have to worry about the screen cracking, or damaging the touch screen in some way, but with many of the available mixing consoles utilizing auxiliary screens, that concern should be well covered at this point. Besides, that's what road cases are for.

I received a demo unit (shipped with a 21" Sony Vaio touch-screen computer) so I didn't get the entire customer/new product opening-the-box-for-the-first-time experience. The review system also did not include the USB Wi-Fi adapter (which allows wireless control and fits in the USB port on the front of the RM). And some things were already set up, so there was no creating an account and product registration for me.

A TP-LINK router (the recommended model) was included, so I downloaded UC Surface on my MacBook Pro and iPad, connected the iPad wirelessly and the MacBook via Ethernet cable to the router, and I was off and running. Easy as pie.

PreSonus StudioLive RM32AI with the Sony Vaio touch screen.

On the surface

UC Surface software displays a bank of virtual/graphic faders and the channel strip section, which takes up the majority of the screen. (The number of faders displayed depends on the type of control device you use.) Three on-screen areas provide access to various system functions: On the far right are the flex master channel strip, mix selection area, and main output area. Across the top of the display is the fat channel section, which will be familiar to users of PreSonus mixers. This is the business end of the selected channel, where the most frequently used controls are displayed prominently, and, most importantly, are readily accessible. Broken up into four sections, it includes: 1) channel name and number, preamp gain control, switches for phantom power and polarity, and switches to assign the selected channel to the main and/or mono output; and 2) the gate display and control area; 3) the compressor display and control area; and 4) EQ display and control.

Rear panel I/O with option card.

At the bottom of the screen is the meter bridge, as well as the method

for selecting the group of faders you wish to access.

The fat channel area includes channel number and input source (analog, FireWire, or network), and channel type (select from all, or a detailed listing of typical musical ensemble instrumentation, vocals, or, other). Each selection offers specific instruments; for example, the brass listing provides a selection of brass section, French horn, trombone, trumpet, and tuba. Others include such standard items as DI box or iPad and iPod. It also offers up a head-scratcher…beard. In actuality, it's an inside joke. The RM product manager, Ray Tantzen, is known for his impressive full beard. (For the full specs on his beard, go check out this link: http://blog.presonus.com/index.php/2014/12/09/faq-for-rays-beard/). You can select pre or post for pre-fat channel; link, for linking an adjacent channel; and a key source (off or channel 1 – 32) for selecting a trigger for the sidechain input to control a gate. Also available on this screen is channel input preamp gain control, switchable phantom power (48V), a polarity switch, and a set of assign switches (main and mono).

Next up is the gate. At the upper left of this screen is an icon of a switch, for turning the gate on and off. Just below it are sliders for setting threshold, expander, and key filter. There is also a key listen switch that allows you to hear how the aforementioned key filter is set. There are also attack and release controls.

The comp screen includes the threshold, ratio, gain, attack, and release setting controls, and there is also a limiter and switches for auto or soft. The parameters for the gate and compressor can be adjusted by either touching or clicking on the slider controls, or clicking on or touching the diagonal line in the grid and setting the threshold by dragging the "point" to your desired setting.

Presets

Fifty fat channel presets are available via the UC surface mix control software. Each preset has gate, compressor/limiter, and EQ settings that can be loaded independently of each other. You want the preset EQ but no compressor? No problem; just don't select it. Anything that you would expect from a contemporary digital mixer, the RM provides; parametric EQ and dynamics for each channel, effects (reverbs and delays), scene store, and recall are all available.

The EQ tab and, consequently, the EQ screen, provides the ability to switch the parametric EQ in or out, an adjustable high-pass filter, and switchable EQ bands for low, low-mid, high-mid, and highs. The graphical user interface displays a grid with frequencies along the bottom and decibel range along the right side (0 to +12, and 0 to -12). As with dynamics, settings can be adjusted either via the slide controls or by touching

The RM32 I/O.

or clicking on the "points" and dragging them to your desired setting. Along the top of the grid is the switch to enable SMAART Spectra tools, including RTA and spectral analysis, to help reinforce (pun intended) the intended application. Rational Acoustics' SMAART audio analysis software is built into the UC Surface editor software. The RM includes a suite of software that makes the system a powerful package: Capture 2, which enables virtual soundcheck, and Studio One Artist multitrack recording software. Also available as a free download is UC Surface editor/librarian/remote-control software.

Controlling remotely

One of the cooler aspects of the systems is that it offers myriad ways to interface and control the RM. I'm talking wireless, via the included Wi-Fi dongle; wired Ethernet; wired and wireless Dante and AVB; iPad, Mac, or PC computer; touch screen computer; even iPhone (for the QMix-AI personal monitor mix control system)! While live performance is the primary focus of the system, the RM can also facilitate multitrack recording and playback (virtual soundcheck or live recording). You can even use the same laptop for both multitrack recording and control of the RM.

QMix-AI aux mix control for iPhone and iPod touch is available free from the Apple App store. This allows the use of an iPhone or iPod touch as a control device/interface, so you can use the RM as a personal mixing system. iPad control allows access to the mixing parameters, so you can be mobile and move around the facility. A larger surface or a laptop would lend itself to staying in one place, but you could situate yourself in the middle of the audience, if so desired.

What makes the system so appealing and useful in performance applications is multi-touch control. While most mixers available today offer some level of iPad control (as does the RM), you can basically only perform one action at a time. In real life, mixing often requires operating multiple controls simultaneously. With multi-touch control, you can grab two faders at the same time or bring up a fader and adjust the EQ at the same time.

I did find control via MacBook or iPad to be more responsive than the touch-screen PC. It was particularly noticeable when trying to make fine adjustments; for example, trying to match input gain settings on multiple channels could be iffy with either touch surface. However, making adjustments with my MacBook Pro and trackball was spot-on. The larger screen did allow for more of an overview (more channels without scrolling, and both the dynamics and EQ control sections are displayed). On a smaller screen (laptop and iPad), the dynamics and EQ control sections are selectable via a tab to the right of the displays. On the larger display, 20 faders were accessible at once. On the Mac laptop, 12, and on iPad, eight.

While you sacrifice the tactile control of a typical mixing surface, the RM GUI has an extremely simple and basic look. And though it looks basic, there is much more than meets the eye. The functions needed to get going quickly, as well as those required to run the show, are front and center on the display. For those who insist on tactile control, PreSonus also has its new StudioLive CS18AI Ethernet/AVB control surface, which includes 100mm touch-sensitive faders.

AI: working together

"AI" stands for "Active Integrations." In short, PreSonus products designed and enabled with AI technology can sense when other AI-enabled products are on the network (wired or wireless) and can work together as a more comprehensive system.

The StudioLive RM32AI offers a glimpse into the future of live mixing. There is a lot going on with this mixer. Although you can get going pretty quickly, as you live with the RM you'll be able to invoke other capabilities and functionalities of the system. The RM was designed from the get-go to play well with other AI products from PreSonus, though practically any system where you would want a digital mixer is fair game for the RM. You just get the benefit of interoperability with the other AI gear. A list price of $2,499.95, allows you to be on the leading edge of innovation with a relatively small investment. Medium-sized houses of worship, nightclubs, local production facilities, and regional sound companies are all in the wheelhouse of this new product.