ROLAND VR-3 AND VR-5

Video switching made easy and portable.

Reviewer: Jan Ozer

If you or a customer are looking for an inexpensive video switcher with a small footprint for embedded or portable use, you need to check out the Roland VR-3 ($1,995) and VR-5 ($4,995) multichannel SD switchers. Over the past 12 months, I've used both for different live productions, with very solid results. In this review, I'll discuss both units, identifying the features that they share and the unique features you should know about before choosing one or the other.

The unique selling proposition for both units is embedded 3.5in. touchscreen panels, which simplifies installation in tiny environs and make them both exceptionally portable. The VR-5 has two panels, one showing the available inputs and one showing the selected output. The VR-3 has one panel that you can toggle between these two modes. In part, this decreased screen real estate allowed Roland to pack the VR-3 into a hardcover-book-sized 12"x8"x3" unit—though the VR-5 is hardly portly at 15"x12"x5".

The VR-5 has five input channels: three for video, one for computer input, and one SD card player, while the VR-3 has only the three video channels and a computer input. On both units you can use the PC input to broadcast on a computer screen or to overlay titles on any other channel. On the VR-5, the video inputs can either be S-Video or composite (via BNC), while on the VR-3, they're all composite with RCA connectors.

While in theory that would seem to tip the quality input scale in favor of the VR-5, I can't say that I saw a significant quality difference in the video stream produced by both units.

There is a key difference relating to the PC input; that is, the VR-3 has a passthrough PC output, so if you wanted to connect the PC output to a VGA projector, you could. The VR-5 has no PC output, so you'd need some kind of VGA splitter to project the screen.

For audio, the VR-5 has stereo inputs (via RCA) for all the video inputs, so you can easily switch the audio with the video. There are also two mic/line inputs (XLR or 1/4in.) with phantom power plus PC audio input. On the VR-3, you have four mic/line inputs (XLR or 1/4in.) with phantom power plus one stereo input (via RCA) and PC audio input, but the audio inputs don't map directly to the video. While you could use the VR-3's audio mixer to make the audio switch with the video, it's much more complicated than with the VR-5.

Another difference is that the VR-3 has an internal microphone you can use to mix in ambient sound, like applause at the end of a song, which usually isn't picked up by instrument or vocal microphones on stage. This makes it easy to share the audience response of an event, but you'd have to set up a separate microphone to accomplish the same purpose with the VR-5. The VR-3 also has an audio reverb control not offered on the VR-5, where reverb is accessible only via menu controls.

On the output side, both units have composite outputs for preview monitors and a USB output for streaming, while the VR-5 has HDMI out, plus two BNC composite or S-Video outputs for a projection system or other output. The VR-3 has two RCA composite outputs, but no HDMI. For audio output, the VR-5 offers balanced XLR plus stereo RCA outputs; the VR-3 offers RCA and 1/4in. stereo outputs. The VR-5 also offers MIDI passthroughs, which I didn't test.

Beyond I/O, there's a great degree of similarity in feature set. With both units, you choose the desired input from the touchscreen monitor or via separate buttons. You can configure in a fade, wipe, or cut transition between the camera selections, or configure two input feeds as a picture-in-picture, split screen display, or chroma or luma keying. Neither unit has internal titling capabilities; that's the job of the PC computer input or the SD card player on the VR-5.

To test the computer titling capability with the VR-3, I connected the VR-3 to my HP EliteBook 8760w, created some slides in PowerPoint with white text and a black background, switched into slideshow mode, and composited the text over another feed on the VR-3. Although it takes some experimentation to get the sizing and positioning right, in a few minutes

you should be able to create a PowerPoint or Keynote deck you can use to supply titles for your event.

If you're streaming the event from a computer, Roland recommends not using the same computer to supply the overlay. Instead, they recommend using another computer or an iPhone or iPad with a VGA adapter, which I did not test but should work with both the VR-3 and VR-5.

Another major difference between the two units is the VR-5's MPEG-4 player/recorder, which works via the integrated SD card reader. On the playback side, you can use this function to play on-demand files from an SD card, whether to handle breaks in the presentation or to add content. The VR-5 can also overlay a logo from the SD card over the video feed, another nice touch of polish. On the recording side, the VR-5 can convert the presentation to MPEG-4 format and record it to the SD card—a nice, integrated technique that takes no extra gear.

In use, both units proved stable and very easy to use. In the first event—a live, outdoor concert—I used the Roland VR-5 with two cameras, one an old Canon XL2 with 20X glass that was perfect as the front camera that followed the action; the other was a Canon XH A1 as the static back camera. I connected both to the VR-5 via S-Video cables, with XLR cables from the soundboard feeding directly into the VR-5.

From there, I connected an S-Video output from the VR-5 into a Shuttle J3 5800 lunchbox-sized computer, equipped with a 2.8GHz six-core Intel i7 CPU running 32-bit Windows 7 Home Premium with 4GB of RAM, and a BlackMagic DeckLink card for video capture. I had tried the USB output from the VR-5, but the S-Video seemed just a touch sharper. Just to round out the details, I used Livestream as the live streaming service provider and pushed three streams from the Shuttle up to the Livestream servers in New York.

I was working with a buddy who has shot several concerts with me, but he has never run a mixer of any kind. Initially, I was driving the Roland and he was on the front camera, but soon we switched and he started operating the board with about 60 seconds of training. He had absolutely no problems running the boarda, and we settled into those roles for the rest of the evening. Basically, if you can click a button or touchscreen panel, you can switch video inputs. While figuring out more advanced functions like titling and picture-in-picture required a quick trip to the manual, that too was very well structured to quickly walk me through the operation.

The other event was an indoor marimba concert that I shot with two Canon XH A1s, one set up as the back camera and the other driven by my colleague and set close in on the performer. For audio, I positioned two Shure SM57 dynamic microphones on each side of the instrument, pointing slightly down, as the performer recommended. (Apparently, the big pipes on the marimba are located below the instrument; the sound pushes up through the keys, dictating microphone placement.)

I could have connected the microphones directly into the Roland mixer, but I wanted high-quality sound on tape for the on-demand streaming files I planned to produce after the concert. So I connected the microphones to one of the XH A1s, and output composite video and stereo audio into the Roland mixer via the camera's analog output port. I captured reference audio via the internal microphone on the other camera and output only the composite signal into the VR-3.

For this event, I used a Next Computer Radius computer—a briefcase-like computer that's about 17in. wide, 15in. tall, and 6in. deep, and weighs a little more than 20lbs., again using the DeckLink card for capture and Livestream to distribute the video. The Radius came with a four-core (eight with hyperthreading enabled) 3.4GHz IntelCore i7-2600 CPU with 8GB of RAM running 64-bit Windows 7. In this configuration, pushing out a single stream configured at 512x384@400kbps, the computer ran between 15 percent to 20 percent CPU utilization, as shown on the Livestream Procaster interface.

At the first concert, I had a 3'x9' table for all my gear, so room wasn't an issue. At the second, I had about a 2'x4' table for both the Radius and the VR-3, which turned out to be more than sufficient.

The two concerts I produced with these units went off without a hitch, and the live video streams produced from their output was top notch. I particularly appreciated the VR-3's size since the space I was provided with was a cramped 2'x4' for both a streaming encoder and VR-3. Basically, whether you're mixing for live streaming, projection, or storage to disc, unless HD is an absolute requirement, you should check out these compact and affordable Roland mixers.

PRODUCT SUMMARY

COMPANY: Roland, www.roland.com
PRODUCT: VR-3 and VR-5
PROS: Portable and easy to use
CONS: ???
APPLICATIONS: Live streaming, projection, or storage to disc
PRICE: $1,995 (VR-3); $4,995 (VR-5)