First Look: Cakewalk® SONAR V-Studio 700™
by Rick Paul - *3rd October 2008* -

Back at Winter NAMM 2008, Cakewalk and Roland announced that Roland Corporation was increasing its share of ownership of Cakewalk to become the major shareholder. Cakewalk products would henceforth be branded "Cakewalk by Roland", and the level of cooperation between the two companies would increase, though Cakewalk would continue to be run as a separate company. It is now about three quarters of a year later, and Cakewalk has announced the SONAR V-Studio 700, the first combination hardware/software product to arise from the fruits of these cooperative efforts.

While we at CakewalkNet.com general concentrate our efforts on hands-on product reviews, this new Roland/Cakewalk development is sufficiently newsworthy to SONAR users to warrant a brief look. Here's the scoop.

Background

At the highest level SONAR V-Studio 700 is an integrated software/hardware solution that includes SONAR 8 Producer digital audio workstation software, Cakewalk's Rapture softsynth, the VS-700C V-Studio Console, the VS-700R V-Studio I/O, an integrated Roland Fantom VS hardware synthesizer, and facilities for direct control over EDIROL video hardware such as the DV-7 line of nonlinear video editors and other hardware with V-Link support. On the surface, this may sound like a marketing bundle combining a copy of SONAR, a few extra synths, a control surface, and an audio interface. From a technical perspective, that isn't far off. However, there are some physical and logical hardware integration details that go beyond what simply packaging a control surface and audio interface together would provide. Even more significantly, though, the VS-700 hardware was designed with SONAR in mind. The idea is for the overall system to provide the kind of tight integration we might normally associate with dedicated hardware systems while still offering the kind of power and flexibility we associate with modern software-based DAWs.

If that sounds like a tease, sorry. We'll get to more detail below. Before we do, though, let's cover a few more basics.

We'll be covering what the VS-700 provides in some depth below. However, it might be worth spending a few words on the key things it does not provide. The most important of those is a Windows XP or Windows Vista computer. You will still provide that and configure it based on your needs, just as you would for more traditional SONAR-based systems. It also does not provide a MIDI keyboard, external monitoring system (e.g. powered monitors, an amp plus reference monitors, headphones), though it does provide headphone jacks and plenty of connectivity for monitors. Of course, you'll also need whatever microphones, acoustic and electronic instruments, and other external audio sources you may wish to record, and the cables used to hook them up.

What kind of computer will you need? Please refer to the SONAR 8 specifications on the Cakewalk web site for the latest most of that. The key additional need for the VS-700 is an available USB 2.0-compliant port for connecting the VS-700R V-Studio I/O module to the computer. The VS-700C V-Studio Console connects to the VST-700R via a second cable (both cables are provided), making for extremely simple hookup of the VS-700's hardware components. Of course, you'll also need to cable up your headphones and/or monitors, MIDI keyboard, mics, and anything else you might want to use, but we'll get to the possibilities there when we talk more about the components below.

The VS-700 is planned for February 2009 availability. Street price is anticipated to be in the $4,000 range, and Cakewalk plans to offer existing SONAR 8 Producer customers a $200 rebate on the VS-700 package. International pricing may vary by country. More details will be available at www.sonarvstudio.com.

Let's dive into the details.

SONAR 8 Producer with Rapture

SONAR 8 Producer is the heart of the VS-700, providing the key functionality for all aspects of music and audio production. Not only does it provide audio and MIDI recording, editing, mixing, and mastering capabilities as part of its DAW functionality, but it also provides a strong suite of audio and MIDI effects and software instruments to boot. Cakewalk provides the following high-level list of SONAR 8 Producer features:

- Complete DAW environment-from creation to delivery
- Tight integration with V-Studio hardware
- Best audio quality in industry-64-bit end-to-end
- Inspiring tools for creative production
- Fast and accurate audio & MIDI editing
- Powerful vocal processing with Roland V-Vocal
- Comprehensive mixing environment
- Deep levels of mix, edit, and instrument control through ACT
- Unlimited tracks, inserts, effects, and buses
- High track, low latency performance
- 49 effects/14 instruments including Dimension Pro
- Linear phase mastering plug-ins
- Flexible import/export for final project delivery or collaboration with other studios

We'll be taking a much more detailed look at SONAR 8 Producer in a future CakewalkNet product review, so I won't go into detail here. In the interim, you can find more information about SONAR 8 Producer on the Cakewalk web site. (Be sure to also check out the CakewalkNet review of SONAR 7 Producer while you're at it.)

The software-side package also includes the full version of Cakewalk's Rapture software synthesizer. Rapture, which won the MIPA (Musikmesse International Press Award) 2008 award for best software instrument, is a powerful instrument geared toward modern pop, dance, and electronic music, which lists for $199 on its own.

VS-700C V-Studio Console

The VS-700C V-Studio Console (hereafter called the VS-700C for brevity) is a classy looking control surface designed jointly by Cakewalk and Roland. This joint development allows the VS-700C to offer tighter integration with SONAR than your typical garden-variety control surface. In particular, the VS-700C features a dedicated implementation of Cakewalk's ACT (Active Controller Technology), which is used within SONAR to control everything from channel strips to softsynths to effects parameters. Let's take a closer look at key features of the VS-700C.

The VS-700C features nine 100mm touch sensitive, motorized faders. One of the faders is used as a master control, while the remainder of the faders are arranged in a bank of eight channel strips. Buttons are provided to tab backward and forward between fader banks. One feature of the VS-700C's tight integration with SONAR is the ability to lock specific SONAR channels to specific faders on the VS-700C. This gets around the common control surface scenario where it is necessary to either keep tabbing back and forth between fader banks to move between controls you are using that are not contiguously located, or to rearrange the SONAR tracks to be more conveniently located for correspondence to control surface fader banks. Instead, any SONAR tracks can be locked to any VS-700C faders, whether or not those tracks would be located near one another in SONAR. This will be a major benefit come time to mix large projects.

Besides the motorized faders, the VS-700C's channel strips feature dedicated Mute, Sol, and Arm (as in "record enable") buttons, as well as 5-segment level meters for each track. There is also a 2-line LCD display that provides abbreviated track names and the value of whatever control is active at the moment, as well as a knob to adjust the values of that control. There is also a Select button to determine which channel strip is affected by additional channel strip controls in a dedicated section of the VS-700C (see below).

Just to the left of the fader banks, opposite the Mute/Solo/Arm controls are global Mute/Solo/Arm controls. A control assignment button opposite the data adjustment knobs is used for toggling between controls.

To the left of the top portion of the channel strips is a Channel Strip Control section that provides 12 continuous push-button rotary encoders that can be used for EQ, Sends, or ACT controls. The photograph to the left shows these controls configured for EQ, with the 2-line LCD display at the top of the controls showing the function of each of the four EQ bands and the gain level of the parameter. The rotary encoders include dedicated labels to make it easy to see which EQ (or send) parameter you're adjusting, and a display toggle button in the lower left corner of the section makes it easy to toggle which data value is displayed.

Buttons near the bottom of this section determine whether the section is functioning as channel strip EQ, Send controls, or ACT parameter controls. When configured as ACT controls, the rotary encoders are automatically remapped to control whatever ACT-controllable entity has the focus in SONAR, be that track controls, softsynth controls, plug-in effects controls, or whatever.

Down near the lower left of the VS-700C is the Access Panel. This section provides one-button functionality to call up various SONAR views including Track view, the Synth Rack, AudioSnap, Console view, Piano Roll view, and more. It also provides access to such SONAR commands and utilities such as fade, freeze, split, clip mute, and editing commands. It is

possible to configure these buttons for custom assignments from over 45 SONAR commands. I'm starting to wonder if these Cakewalk guys have something against the trusty old mouse!

Of course, you'd expect a dedicated set of transport controls, and the VS-700C delivers. Not only are there the standard tape machine-like controls, but also SONAR's slate of controls for dealing with punch and loop points, turning Snap (grid) on and off, and setting and moving between markers. There are also jog and shuttle wheels (inner wheel is jog, outer is shuttle) and X/Y (horizontal/vertical) cursor controls for project navigation, zooming, and scrubbing. There is also a set of project controls to quickly invoke SONAR's Save (including Save As) and Undo/Redo controls, as well as dedicated OK/Enter and Cancel controls to respond to dialog boxes.

Moving up near the top right corner of the VS-700C, there is a dedicated surround panner, as well as a dedicated LFE send control. Nearby are also separate headphone level dials for two sets of headphones and a monitor level control. A mute button allows cutting the monitors out, which is a nice convenience when tracking with microphones in a one-room studio or the control room of a multi-room studio. There is also a V-Link button to switch the VS-700C from controlling SONAR to controlling video and imaging hardware such as the Edirol DV-7.

To the left of the surround panner is a multifunction T-bar for surround front/rear balance, controlling SONAR's X-Ray facility (allows plug-ins to become transparent to easily access multiple plug-ins without closing or shuffling them around), or controlling other ACT parameters, as well as for video hardware control.

Up in the far top right corner of the VS-700C is a Now Time display. It can display time in either M:B:T (Measure:Beat:Tick) format or in SMPTE time code as shown in the photo at right.

Last, but not least, down on the front right edge of the VS-700C are two quarter-inch headphone jacks plus an unbalanced input that can be switched between line level and Hi-Z (guitar) level for the self-recording musician. There is also an input sensitivity control for fine-tuning the level of the input.

While I haven't had the opportunity to try a VS-700C, or even to see one in person, it seems apparent to me, just from looking at the details of the photographs of the unit, how closely the hardware interface maps to SONAR's capabilities. While SONAR's ACT capabilities provide a great deal of potential for customizing arbitrary MIDI control hardware for use with SONAR, the notion of having a control surface that was designed expressly for SONAR would seem to take things to a whole other level.

VS-700R V-Studio I/O

The VS-700R V-Studio I/O (hereafter called VS-700R for brevity) audio interface provides low latency operation at up to 24-bit, 192 kHz over a USB 2.0 connection to the computer system. Cakewalk indicates the VS-700R provides the very best mic preamps and converter technology Roland has to offer. You won't find preamp controls on the VS-700R. Rather, the preamps are controlled digitally, allowing the possibility not only of controlling preamp gain from the VS-700C, but also the potential for saving gain settings as presets. As someone who is constantly turning a preamp dial when changing what mic or instrument is plugged into an analog input, I really like he idea of being able to just call up a preset for each mic or

instrument -- perhaps even different ones for different singers using the same mic. Digital effects on input include compression, low frequency cut, and input pad.

The front panel of the unit provides a sample rate selector, supporting rates of 44.1, 48, 88.2, 96, and 192 kHz. It also provides a wide range of LED-based indicators, including 8-segment input meters, and a sync mode (internal, two digital modes, and word clock) indicator, and MIDI activity meter, among others.

The VS-700R's back panel is where most of the connection action takes place. There is overall connectivity for 20 inputs and 26 outputs (18 inputs and 24 outputs simultaneously). Near the upper left of the unit, just next to the connector for the cable to the VS-700C, is the digital I/O. From left to right lie a 1-in/1-out MIDI interface, the USB connection to the computer, an 8-in/8-out ADAT optical interface, a 2-in/2-out digital interface that can be configured as either AES/EBU or coaxial S/PDIF, and word clock I/O.

Analog inputs lie across the bottom of the unit, just to the right of the power cord connector. There are eight simultaneous inputs with +48v phantom power. Each of these inputs can use a balanced or unbalanced quarter inch cable or 3-pin XLR cable. Note that these are separate jacks, not Neutrik-style combination jacks.

The VS-700R's analog outputs sit in the upper right-hand corner of the back panel. The left part of this section includes 10 balanced/unbalanced quarter inch connections. The number of outputs provides plenty of capacity for, for example, a 5.1 surround system plus a few external effects devices. The right part of this section, which is labeled "Monitor", contains quarter inch balanced/unbalanced stereo sub outputs plus XLR connectors for the right and left main monitors.

Need still more I/O? The VS-700 allows adding an additional VS-700R unit to increase the I/O capability to 41 inputs/56 outputs (37/48 simultaneous inputs/outputs).

Roland Fantom VS

Besides providing the I/O for the VS-700, the VS-700R also is home to the Roland Fantom VS hardware synthesizer. User controls for the Fantom VS are provided as a VSTi instrument plug-in within SONAR. However, because the DSP to run the synth sits on the VS-700R, there is essentially zero latency and CPU loading. The Fantom VS provides 1,400 patches, but there is also a slot, located on the VS-700R, for installing an optional ARX expansion board using Roland SuperNATURAL sound technology. (Roland currently offers ARX expansion boards for drums and electric pianos.) It is worth noting that, if you add a second VS-700R unit, you also get a second Fantom VS hardware synth, as well as an additional ARX expansion slot.

Closing Notes

I have to confess I've never been enamored of the idea of control surfaces, and my current audio interface is plenty adequate for my needs for the foreseeable future. Still, every once in a while I do get a bit frustrated by mixing with a mouse. Though I'll sometimes go to the length of configuring things to use ACT with my keyboard controller's four faders, that is usually more of a hassle than it's worth due to the way I set up my tracks in SONAR. Thus, the VS-700C's ability to lock track assignments without concern for where those tracks are located within SONAR made me sit up and take notice. In general, how tailored the VS-700C is to SONAR, which has been my main DAW

since its inception, is also a big attraction. The dedicated EQ controls on the VS-770C also caught my eye, thinking about all those times when I've been mousing around one dial at a time, trying to set controls with complex interactions. The notion of being able to have preamp presets was another feature that really caught my attention, thinking about the time that could save in trial and error settings when I change mics or singers. However, being a longtime Roland synth fan, I have to say the thing that really made me start drooling a bit was the notion of the Fantom VS being part of the package without requiring an extra hardware box beyond what would already be used in setting up the I/O portion of a well-connected DAW.

Here's the rub, though. At around a $4,000 street price, the VS-700 isn't going to be for everyone. Don't get me wrong. I believe the value is likely to be fairly good when you consider all that is included, and you could pay much more for high end control surfaces that may not even provide as much, no less the same kind of tight integration with SONAR. Nevertheless, $4K is still a significant chunk of change. Also, while you may not get a system that is as tailored for SONAR as this one, no less the Fantom VS synth, it is possible to build a system with similar functionality for considerably less. For example, the audio interface I'm using has 18 inputs/20 outputs, including 2 quality mic preamps and excellent converters, a 2x2 MIDI interface, and onboard DSP, albeit only for the vendor's effects. It cost around $500 at the time I got it, though it went down later. While it is no longer manufactured, there are still a number of other similarly capable, similarly priced interfaces out there, and many users don't even need that much connectivity. (Even I am not using all of it, though I do have an ADAT hooked up, as well as a 5.1 surround system in addition to my normal stereo monitors.) That kind of price point still leaves quite a margin for purchasing a capable control surface, so the question of how much value you assign to the extra integration you get (and the Fantom VS synth) is not insignificant.

My general take is that, if the quality of the A/D and D/A converters and preamps does end up being consistent with the price point of this unit or better, the connectivity and, especially, the integration of the VS-700 could well make it no brainer for those who can afford it. This would likely be especially true for those for whom "time is money", where the integration benefits will likely greatly improve productivity over less integrated control surfaces. Of course, many of those who can afford it, and would value the facilities the VS-700 provides, may already have in-place control surfaces and audio interfaces. The system could also be particularly attractive to users who are considering adding a new system or replacing an old system, be it hardware or another DAW, with an integrated SONAR system. It's quite easy to imagine basing a mid-range to high-end project studio around this system, especially for a user who is doing a lot of synth work and might appreciate the integrated Fantom VS.

The bottom line is that this Cakewalk/Roland collaboration appears, at least on paper, to be a strong sign that the potential of the relationship between the two companies is more than just potential. The SONAR V-Studio 700 looks like it could add significant value for SONAR users who can afford it. For the rest of us, well, it at least gives us something to aspire to and drool over. Maybe I should start taking donations... ;-)

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