



Roland Corporation U.S.  
5100 S. Eastern Avenue  
P.O. Box 910921  
Los Angeles, CA 90091-0921  
(323) 890-3700  
[www.rolandus.com](http://www.rolandus.com)



# TRACK NOTE

The INFO Source for Digital Recording

Vol. 3 No. 2

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## New DS-90 Demo Video Now Available!

If you haven't heard the news, Roland's DS-90's are the world's first 24-bit digital reference monitors, employing digital and analog inputs and high-quality built-in amplifiers to perfectly complement the COSM Speaker Modeling features found in the newest V-Studio workstations\* and V-Mixers\*\*, as well as provide superb nearfield monitoring for a wide range of today's digital studio applications. With the new DS-90 Demo Video, you'll learn why everyone is talking about these futuristic studio monitors. Just call (800) 386-7575 to order your copy for \$5 today (#DS-90DEMO).



DS-90 24-bit Digital Reference Monitors.

\* Speaker Modeling feature is available on the newest versions of the VS-1680 and VS-880EX.

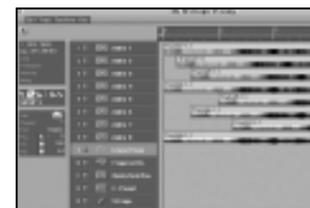
Need help with your V-Studio, V-Mixer, or other Roland digital recording products? Roland has a dedicated staff of product specialists available every weekday to answer your questions. You can reach Digital Recording Product Support directly by dialing (323) 890-3741. Support is available weekdays between the hours of 8:30AM and 5:00PM Pacific Coast Time.

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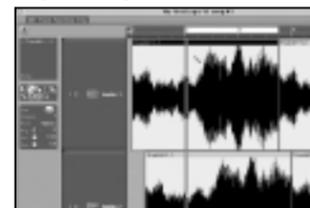
For most of us, recording music involves compromise. For example, you can record audio and MIDI with maximum flexibility on a Mac® or PC, but you often lose the portability, sound quality and stability of a stand-alone system. But imagine having the best MIDI/audio software program and the best stand-alone Virtual Studio in the world combined under one interface...Compromise no longer: Introducing Logic® VS!

### What is Logic VS?

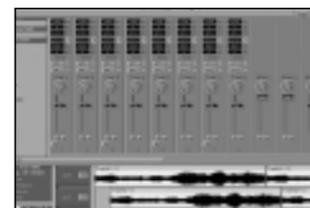
Logic VS is a customized version of Emagic's Logic Audio 4.0—the premier cross-platform, integrated MIDI/audio music production software. Logic VS gives V-Studio owners the option of connecting their Roland VS-880/880EX/1680 workstation to a computer for working with integrated audio and MIDI arrangements together on a large computer screen. What does this mean? Well, imagine taking your VS-1680 to the studio for some drum and bass tracking, going to a friend's house and recording some guitar work, then recording vocals at your singer's apartment. Finally, picture yourself going home, connecting the workstation to your computer, doing some MIDI recording, and then editing all of your MIDI and V-Studio tracks together onscreen. You can even use Logic VS and your V-Studio workstation on a laptop. And the really great news: Logic VS will be bundled FREE in the box with every new VS-880EX and VS-1680 workstation shipped starting 4th quarter, 1999. It will also be available for a nominal charge to all existing VS-880, VS-880EX, and VS-1680 owners by calling Emagic at (530) 477-1051.



**Arrange Window:** Audio phrases are shown as sequence blocks with waveform display for integrated editing of audio and MIDI tracks.



**Expanded Arrange Window:** Now that's BIG! Waveforms can be re-sized in the Arrange window for more precise editing.



**Mixer View:** Here you can edit effect settings, plus control and automate level, panning, and EQ for each track in your V-Studio.

### How does it work?

To use Logic VS, simply connect two MIDI cables between the V-Studio workstation and the computer, then launch the software. The first time you use Logic VS with an existing song in the V-Studio workstation, you must request the playlist and waveform overviews of the V-Studio tracks. This only needs to be performed once. All of the MIDI sequence data and waveform overviews are stored in the computer and all the audio data is stored in the V-Studio, but the audio phrases can now be represented by sequence blocks with waveform display in the Arrange window of Logic (see left).

When you edit the audio sequences on the computer, it sends a series of messages via MIDI to make those changes in the V-Studio. Editing audio files in the Arrange window is easy with standard "drag and drop" commands. The following audio editing options are available:

- Moving a region
- Deleting a region
- Copying a region
- Dividing a region

Logic VS not only gives you audio editing, but can also control the V-Studio via MIDI Machine Control (MMC)—even in Loop mode! It is also possible to control and automate the level, panning,

## New Releases

### Victor Wooten - Yin-Yang

Here at Track Notes, we usually shy away from coverage of new album releases. There's simply too many independent and major label albums which have been partially or fully tracked on V-Studios to cover each one. But we couldn't overlook this new release. It's a new dual-CD release from one of the world's great bass virtuosos, Victor Wooten, entitled Yin-Yang.

Continued on page 3

By BC Carr

EQ, short for "equalization," allows the engineer, mixer, or musician to smooth out the sound before it gets to the listener's ear. In order to do this, we often need to increase or decrease the level of the sound in various pitch ranges—most often referred to as "frequencies." We can do this much more effectively with a better understanding of the nature of sound.

Sound is created when a physical force sets air molecules into motion, causing waves of high and low pressure to ripple away from the source. If these waves could be seen, they would resemble waves moving across the ocean's surface. One sound wave—with a high pressure part and a low pressure part—is called a "cycle."

A sound's pitch or "tone" is determined by the number of cycles it contains per second. This is referred to as "hertz," or "Hz." The average human ear can hear sounds between 20Hz and 20,000Hz. Take a look at the chart below to better understand how frequency ranges affect what we hear.

Though it is preferable to use microphone selection and placement to get an accurate recording, it is possible to alter the sound's character by changing the levels of the sound in various frequency ranges. Knowing how much and what kind

## EQ Basics

|                  |   |
|------------------|---|
| 20Hz to 125Hz:   | Lowest range. Mic rumble or popping is in this range. These frequencies are felt more than heard.   |
| 125Hz to 250Hz:  | Tones in this range tend to sound muddy. Decreasing levels slightly in this range can "open" the sound up a bit.  |
| 250Hz to 500Hz:  | Lower midrange. The fundamental tones of most instruments, including guitars and vocals, fall here.   |
| 500Hz to 1.5KHz: | Upper midrange. The largest part of a vocal sound is here, as well as the shell resonance of most drums. Upper register of bass guitar is here, too.  |
| 1.5KHz to 3KHz:  | The human ear is most sensitive to this range, so raise or lower levels carefully. Hard consonant sounds, as well as the crack and sizzle of the snare, are in this range. Pick and fret noise can also be cut or boosted here. |
| 3KHz to 6KHz:    | Cut or boost cymbals, bells, and breathy sounds here.   |
| 6KHz to 12KHz:   | Changes made in this range affect the sheen and sparkle of the track.   |
| 12KHz to 20KHz:  | Air! This range is felt more than heard, and provides the "openness" of most sounds. Adds detail and dimension to the stereo  |

of EQ to use helps shape our mix more effectively.

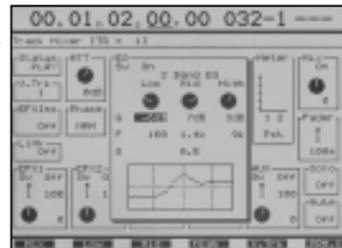
An equalizer usually has only a handful of controls, depending on its type. If there are a number of slider controls located at fixed frequency points that can be "cut" (decreased) or "boosted" (increased), it is a graphic EQ. Most amplifier or mixer channels, however, contain a 2-band "shelving" EQ which cuts or boosts the low and high frequency ranges by a selected amount.

If an equalizer has one or more knobs for controlling the midrange frequencies, it's called a 3-band EQ. Mid-band EQ cuts or boosts the frequency range both above and below a preset frequency point. Most modern mixing consoles will also include a control that lets the user change or "sweep" the frequency range of an EQ band—hence the name "sweepable" EQ.

Adding a control that selects how much of the frequency range above and below the selected frequency is to be affected creates a "parametric" EQ. This control is called the "Q" control, and can be used to narrow or widen the range of frequencies affected by the EQ boost or cut. Parametric EQ offers the greatest amount of control in shaping the sound of a recorded track or mix.

The chart below offers general guidelines on what happens to an audio signal by cutting or boosting frequencies in given ranges. The next time you are recording or mixing, try playing around with the settings in these ranges. You will be amazed how much of a difference it can make.

**HOT TIP:** One easy way to work with EQ is to raise the EQ's gain control close



The VS-1680's EQ section provides an excellent example of 3-band EQ in action. Note the "Q" control, making it a true "parametric" type. EQ can even be displayed as a wave for visual verification.

## Keeping Your Tracks Quiet

Want your nice, pristine VS recordings to sound even better? Try the following steps:

First, get as much volume as possible from your input source. This allows you to keep your Input knob as low (counterclockwise) as possible. Be sure that the red Peak Indicator does not light more than occasionally.

Next, check your Input and Pre Fader meter levels to be sure they aren't clipping. Finally, turn all unused Input knobs all the way down (counterclockwise), or be sure no other inputs are routed to the recording tracks.

When you are mixing, you also want to keep your Input knobs down, or better yet, turn off any unused Input channels. These steps will ensure you have the quietest possible tracks and mixes.

## Getting the New System Software for the VS-880EX and VS-1680

If you haven't heard, the new system software for the VS-880EX and the VS-1680 has arrived. These powerful updates give you the tools to take



Mastering Room: At mixdown, users can mix up to 16 tracks onto two additional "Mastering Room" tracks.

your project from the first recording to a finished CD master worthy of duplication. Included in the updates are a new "Mastering Took Kit" with split-frequency compression for optimal CD recording, as well as new COSM Speaker Modeling, which can be used in conjunction with the DS-90 digital nearfield monitors to model a range of popular studio monitors and even produce TV/boombox simulations.

These updates are available as a free download from the Roland US Website at [www.rolandus.com](http://www.rolandus.com). The Website gives you two ways to update; one method requires a MIDI sequencer, the other method requires an external SCSI Zip® drive.

To update your VS-880EX or VS-1680 using a MIDI sequencer, you'll need the following items:

- A MIDI sequencer (software or hardware-based) that can load and play Standard MIDI Files
- A MIDI cable
- The appropriate V-Studio System Software Update
- WinZip® (PC) or Stuffit Expander® (Mac) software applications for uncompressing the file once downloaded

Note: Users who do not have access to a MIDI sequencer can download a free program from the Roland Website for performing the update. PC users should download the "Update SMF" application while Mac users should choose the "MIDIgraphy" program.

To update your V-Studio using a SCSI Zip drive, you'll need the following items:

- Mac or IBM-compatible computer with SCSI card or internal Zip drive
- External SCSI Zip drive for connection to V-Studio
- SCSI cable
- The appropriate VS System Software Update
- WinZip (PC) or Stuffit Expander (Mac) software applications for uncompressing the file once downloaded

Once you've decided which update method to use, point your Internet browser to:

<http://www.rolandus.com/SUPPORT/SOFTWARE/UPDATES2.HTM>

A First Look...Continued from page 1

and EQ for each track, as well as full parameter editing of the V-Studio effects (see left). Logic even allows you to draw volume and pan data with "hyper draw"—just like high-end computer-based audio programs.

Following the new Logic Audio 4.0 release, Emagic plans to integrate the VS support into Logic Audio Silver, Gold and Platinum. Besides many other features, these versions provide many more advanced MIDI editing options. V-Studio users already familiar with computer-based hard disk recording may be interested in exploring the audio and MIDI editing features found in these higher versions of Logic Audio by upgrading their software. These versions also allow users to build more control faders in Logic's environment, customizing the interface.

The bundling of Logic VS with Roland's VS-880EX and VS-1680 Digital Studio Workstations is great news for those seeking to combine the advantages of

Victor Wooten...Continued from page 1

Now, to say Mr. Wooten has chops is like saying molten lava is a bit warm. As one critic put it, Victor is proof that all musicians are not created equal. But this CD is no mere display of mega-chops. It's a beautifully written and arranged work that goes from classic and smooth jazz (the Yin disc) to heavy funk and rock (the Yang disc), all with Wooten's signature style and some tasteful help from artists ranging from Steve Bailey, Count Bass D, Carter Beauford (Dave Matthews), JD Blair, Bootsy Collins, Bela Fleck, and many more.

The icing on the cake (for us V-Studio types anyway) is that the entire dual-CD release was recorded and mixed on two VS-1680's using only internal reverts, effects and EQ's. And the quality, as you'll hear, is nothing short of