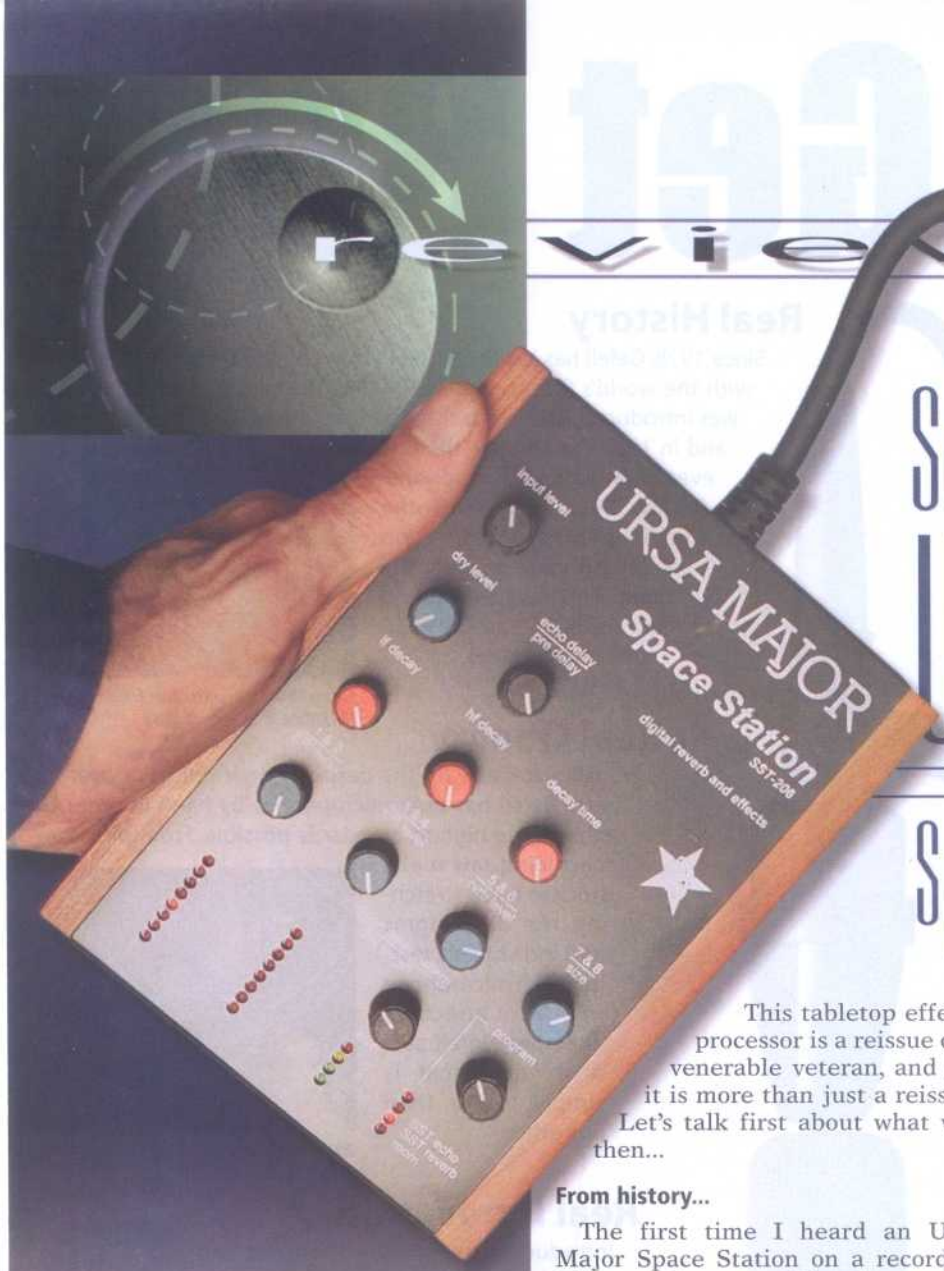
review

Seven Woods Audio Ursa Major Space Station SST-206



BY WILLIAM WITTMAN

Classic digital reverb, and then some

This tabletop effects processor is a reissue of a venerable veteran, and yet it is more than just a reissue. Let's talk first about what was then...

From history...

The first time I heard an Ursa Major Space Station on a record, I, like most listeners, didn't know what it was. My friend Jon Mathias (a staff engineer at the New York Record Plant Studios) used the Space Station on a mix he had done for Dire Straits. The song was "Skate Away," and the track basically begins with that distinctive bouncing bass drum sound that, simply put, sounds like nothing else. *That* was the Space Station.

The Record Plant (where I was a regular for many years) had two of them on the floating outboard equipment list, and one became part of my 'standard' equipment request list for my sessions. I used it on everything from the vocal sound on "Girls Just Want To Have Fun" to guitar solo thickening on "The Warrior."

Making apparent stereo out of mono sources and making single-source sounds appear thicker and wider are pursuits I have spent a lot of time on over the years. And the Space Station was a major player in that journey.

So the original Ursa Major Space Station and I go way back. And naturally, I was very interested to get my hands on the latest reissue version.

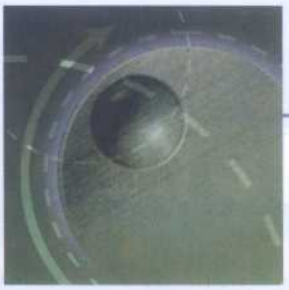
...to the modern day

The new Ursa Major Space Station SST-206 by Seven Woods Audio, Inc. (a new company founded by original Ursa Major designer Christopher Moore) is like a nephew to the original...similar and yet younger and different.

The unit itself could almost be described as 'playful' in its design; it's far smaller than its 3U rack predecessor, packaged in a small box that looks at first like the remote control for a larger device, obviously intended to sit on the console surface or next to your computer-based system.

A long multicore cable carries all of the Space Station's connections to the outside world: AES/EBU in and out on XLR, and a power line ending in an in-line transformer that connects to a conventional IEC cord. It weighs less than a pound and is about the size of a paperback book—eminently comfortable to hold and use.

The top panel is simplicity itself: logically-organized knobs for Input Level, Dry Level, Echo Delay, Low- and High-Frequency Decay, Decay Time, and four knobs for the levels of the four sets of paired taps. Below those you'll find a knob to select from



among three different overall algorithms, and a knob to select the Audition Delay Pattern, which I shall explain below...after I try and explain the Space Station concept.

How the Space Station creates space

Picture your dry original signal in the center of your mix. Now add two spaced delays, one left and the other right. They're slightly different from each other to create a stereo spread, or bounce. So, for example, you might have 12 milliseconds on the left and 16 ms on the right. This would add a slight double tracking and stereoizing to the original signal.

Now add another pair of spaced delays. These are also staggered left and right but are yet a bit longer than the first pair. For example, these might be 20 ms and 24 ms.

We are building a scattering left-right cluster of delays—you get the idea.

The Space Station gives you 4 pairs of delay taps to mix in, each pair with its own level control. This allows you to mix the levels of the ever-widening delays so that you might have the dry signal loudest, then the softer first pair of delays and then the progressively softer still subsequent pairs of delays. This would create the most natural sound, as that's what happens in real-life natural echo; the delays get softer as they fade away in time.

The Space Station allows you to play with these relationships. What if the first repeats are softer and the subsequent repeats get increasingly louder? Not a natural sound, but an effect almost suggesting backwards echo. Or get really creative and have the delays peak somewhere in the middle and then fade again. The Space Station encourages playfulness and creativity rather than providing preset preconceptions as to what you *should* want.

Audition Delay Patterns

Naturally, control over delay levels and balances isn't the only thing you'll want to play with. There are the delay times themselves. The Space Station provides delay taps from as short as 6 ms to as long as 255 ms. The lengths of the delay times in each pair of taps and the manner in which they increase amongst the four delay tap pairs vary with the chosen program. Ursa Major calls this the *Audition Delay Pattern*.

These patterns are grouped into families including *Rooms, Combs, Delay Clusters*, and *Space Repeats*. In virtually all families, the lower number taps have shorter delay times and higher numbers get progressively longer. Some patterns have right side delays shorter than left and others left shorter than right. Ursa Major has preselected these relationships for each family and pattern but in practice there is more than enough versatility to play with.

Room patterns attempt to create the effect of early reflections in a live room. These can be used to create a subtle thickening effect or, on the wider, larger room settings, a noticeable blurring and spread that can even create a rhythmic syncopation to the echo sound.

Comb patterns use the unit's short delays to create non-recursive (no feedback) comb filtering effects. Because the Space Station provides up to 8 spaced delays (in 4 pairs), the resulting comb effect can be very deep indeed, and quite complex if the user plays with the balance of the dry signal and the 4 tap pairs. Add feedback, via the Decay Time control, and the possibilities get even more robotic and interesting. Comb effects are most apparent on sources with broad tonal range and spectral content.

Fatty, Cloud, Slap, and *Echo* settings make up the family of more conventional delay and echo. *Fatty* (on the short end of the delay spectrum) provides that thickening effect that almost creates double (or in this case, up to 8 time!) tracking. Fatty adds a real impact to a sound, making it appear not only thicker and broader/wider in stereo but actually louder and, well, fatter.

Cloud is a slightly longer delay setting with an almost perceptible gap before the effect occurs after the dry signal. Cloud delays might appear as discrete repeats on a snare drum, but on less transient sounds, such as vocals or guitars, the effect is less distinct and so creates a lovely little haze around the original.

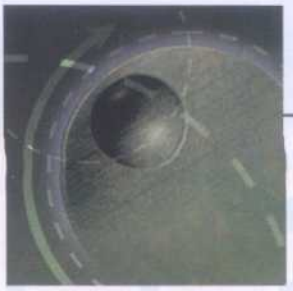
Slap is about what you'd expect, an audible separate repeat delay, but with the added flexibility of being able to add from two (left and right) delays up to the full eight increasing repeats. *Echo* provides basically one 250 ms slap, but with the added thickness and punch of 8 delays.

Finally, *Space Repeats* create even spacing of repeats, rather than scatter. The three Space Repeat settings give you the choice between Left-Right repeats, Left-Center-Right repeats, or L-R-L-R ping-pong motion. Way cool. Space Repeats are lots of fun on drums or percussion (remember "Skate Away") and it's almost impossible not to get something fun and interesting after playing with the settings for just a few seconds. All eight taps are used even in the two repeat-only settings, to provide more delay punch.

It's worth noting that all of these parameters are active in both of the Space Station's two original programs, labeled SST Echo and SST Reverb, but they produce different effects and spatializations depending on which you choose. For example, the manual suggests using the SST Reverb program with a Comb setting for a unique form of filtered reverberation.

A new Room

You can see that the Space Station does a lot. In practice, it's much easier to get up and running and using the unit than it is to try to describe it.



But as they say on late-night TV, don't buy yet. The Space Station also does reverb.

Room Reverberation (or simply 'Room') is a completely new program, not part of the original Space Station's repertoire. It was added to the reissue by the designer, who wanted to see how far he could push the modern hardware used in the new version of the Space Station. The Room program has different parameters than the other two in most cases; when a knob has two different labels, the one above the line is for the SST programs and the one below the line is for Room.

Room allows for actual stereo input to its reverb algorithm so that sources appear in true stereo. Again, the ability to mix the level of the original dry signal and the reverb is provided, as are eq controls to tailor the overall sound of the unit via the Space Station's built-in HF Decay and LF Decay eq controls.

Early Refection levels are adjustable by the ER Level control. This control maintains the relative levels of the unit's 10 early reflections to each other while varying the overall level. ER Length stretches the entire pattern of early reflections, from under 10 ms to 171 ms in length. Size adjusts the apparent dimensions of the simulated room. ER Delay is a pre-delay control for the early reflections and should not be confused (although it confused me!) with the Pre Delay knob which naturally enough delays the source as it enters the reverb.

I would have liked more pre-delay available than the Space Station's 171 ms maximum (I often use a 260 ms delay in front of a reverb device) but that's just me and it's a quibble; many of my most favorite reverbs don't have built-in pre-delay at all or have similarly short ones that require an additional delay (or tape machine) in front.

Interface issues

I noted above that only AES/EBU digital audio ins and outs are provided, at 48 kHz or 44.1 kHz sample rates, and this brings me to my primary complaint with this new Space Station. All right, I'll admit it, I'm an old analogue guy, but even in this modern digital world the lack of analogue ins and outs is a huge pain for me.

Even when I work in Pro Tools, I still mix by taking 48 outs into a big analogue desk. It sounds better, it's ergonomic (especially for people who've been making records that way for many years) and it provides access to the world of analogue outboard equipment and processing. So, it's quite common for me to be using all 48 outputs from my available D/A converters. I don't have spare channels to use for conversion on the Space Station. And it's in the mix where I am most likely to *want* to use the Space Station. So I am reduced to either dedicating what's probably an expensive stereo A-D/ D-A converter, or to using something like DAT machines for their cheap easy D-A: not the best audio solution and rather inelegant and clumsy as well.

So, hey, Seven Woods Audio, make one with converters at least as an option. Please?

Can't wait

Okay, now that the complaining is out of the way, I love the new SST-206 and I love having a Space Station back as a mix tool. As I said before, it's the kind of thing that once you get used to having it, you'll want it for something on almost every mix you do.

Nothing sounds quite like it. It's the kind of box where you'll find something cool every time you put it up and run something through it, just from blind fiddling if not from purposeful exploration. In fact, more than with most effects processors, the bolder your approach with the Space Station, the more interesting the results. I can't wait for the version with analogue I/O!

Price: $1395

More from: Seven Woods Audio, Inc., 44 Oak Ave., Belmont, MA 02478. voice/fax 617/489-6292, www.sevenwoodsaudio.com.

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