

**Keyboard Magazine, Germany, December 2004**  
**Review of the Ursa Major Space Station**  
**SST-206 Digital Reflection and Effects Processor**  
**By Matthias Fuchs**

**SST-206 Odyssey in Reverb Space**

It is unmistakably a dwarf-sized Mr. Bowman who floats through space with a demented Mona-Lisa grin in the final scene of Stanley Kubrick's masterpiece. The classic Ursa Major Space Station SST-282 echo machine seems to have undergone a similar reincarnation. At least, it turned up suddenly and is a lot smaller—sitting on top of this reviewer's mixer.

The original Space Station (see Studiostandards KB 09/04) was introduced in 1978, and after the EMT 250 and the Quad Eight CPR-16 was only the third digital echo device. It quickly found its place in many studios worldwide. The reason for its success was not only the quality of its reverb and delay effects, but also its then almost ridiculously low price of 8000 DM (for an EMT 250 one had to pay a modest 80,000 DM). In the years since, the Space Station has become a popular collectors' item thanks to its own particular sound. The dwindling number of working devices probably induced the original Space Station developer, Christopher Moore, to revive the Space Station under the umbrella of a new company named Seven Woods Audio, Inc.

**Deep Space Network**

Since the Space Station itself has no AD or DA converter, the input and output connections are AES/EBU interfaces. It supports word sizes of 16 and 24 bits as well as sampling rates of 32, 44.1 and 48kHz, which causes the delay times to change accordingly. Only the original Space Station programs (see below) will work operate at 88.2 and 96kHz.

**Inner Space**

The intuitive shaping possibilities of the special effects of the Space Station are outstanding. The principal of the original algorithm is comparatively simple, but with good functionality: it generates a multi-tap delay with two different groups of taps, where the timing and level of the signal can be varied.

*Reverberation Taps:* generate the basic echo by using feedback loops and a randomly generated time modulation.

*Audition-Delay Taps:* the audible signal is sampled here. Its timing structure varies depending on the selected Audition-Delay Pattern.

*Rooms:* this is a sequence of densely spaced taps to allow the modeling of initial reflections and dense reflections. With increasing spacing between the taps the larger rooms follow (rooms 3-4), after this comb filters and several delay clusters and finally the repeats.

*Delay:* the delay times of the echo programs are generated by an additional feedback tap and can be adjusted between 6 and 256ms.

Since the algorithm of the predecessor model would leave the 24-bit Motorola DSP mostly idle, the SST-206 received an improved version of the original programs and a completely re-developed room program, which extend the frequency response from 7kHz to 22kHz. The maximum delay time of the echo programs now is 670ms, the decay time can be set to infinity.

## Spaced Out

One cannot expect a realistic and completely natural room simulation, but the Space Station delivers *sound*. By using the available audition-delay patterns within both reverb and echo modes, one can achieve a wide variety of effects. The room programs provide dense reverb with varying pre-delay. Comb filter patterns help to make the reflected sound granular in a unique way and give it a metallic touch. Used as Special-FX this sound works with a wide variety of audio material. In particular, drums and vocals that are rich in harmonics are distorted in a very interesting way. The rest of the programs, such as Slap or Echo, which are based on more widely spaced taps, produce time delayed reverb clouds and are particularly well suited to fill out lead guitar or sound carpets. The repeats offer short reverb delays are great for "drumshhh". The basic characteristic of the reverb is always clearly modified, very dense and wonderfully grungy. It is suited very well to round out individual sounds or to provide more glue to a mix without sounding uniform.

In echo-mode the Space Station becomes a first-class dubbing machine. Because of the low frequency-response and a sound rich in discoloration, the Space Station can be seriously considered as a maintenance-free alternative to a true tape-echo. Using tap Audition-Delay tap mixers, stereo-delays can be rhythmically manipulated. With long delay- and decay-times, spacey psychedelic sounds can be produced in the twinkling of an eye.

The SST-206 will also make hardcore fans of the original Space Station happy: all acoustic idiosyncrasies have been convincingly reproduced.

I was really impressed by the SST+ programs, which use the full processing power! Everything said above applies also to these programs. Interestingly, they completely preserve the sound character of the original, while noticeably intensifying clarity, presence, and perseverance of the sound: a perfect symbiosis of low-fi and hi-fi.

The room program totally differs from the one on the original SST, and satisfies the requirements of non-vintage freaks. It offers true stereo processing, a noticeably cleaner background sound, as well as an updated parameter selection. This make the sound even more flexible. The quality of these features leaves nothing to be desired. Real-time access is possible at any time, making instant and drastic sound manipulation possible: with a few turns of the dial, you can turn a cathedral into an oil tank, and conjure spectacular comb-filter sounds for the science-fiction department. The acoustic results are thoroughly impressive. Large changes to the EARLY-REFLECTION-LEVEL and ROOM-SIZE parameters can produce audible glitches, which, according to the manufacturer, are unavoidable.

## Infinite Space

A rare combination of high-tech and retro style: on the one hand Spartan design without MIDI, without presets, without a display; on the other hand, the exclusive orientation to a modern digital studio environment. Still, it is a successful concept: the interface is so intuitive, the parameters so effective that presets or a display would be superfluous. Also the integration via digital interfaces has been designed to be as simple as possible, and accordingly works without problems.

Should one be looking for extraordinary and spectacular reverb and echo effects, at the highest acoustic level, as well as for convincing (and optional) retro-charm, one will love the SST-206 and not be too bothered by the somewhat higher price. The Space Station equally recommends itself to all ambitious producers and sound designers as a unique, acoustically versatile, and high-quality reverb and delay synthesizer.

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