URSA Major Space Station SST-282

A review of the Ursa Major Space Station is long overdue in IM as it has been available for more than two years - since 1979. It is also true to say that it is never too late for something that is still as unique in its facilities as the Space Station.

The first thing about the Space Station that everyone always asks is what does it do, as the name gives nothing away. Well the answer is that it's a digital reverb system but that is far from the complete story. It appears to be capable of producing most of the kinds of echo and reverb you would need in normal studio use and some effects for abnormal use as well. I would tend to think the Space Station is pretty much dedicated to studio use only from the operational point of view although there is nothing to stop it's use on stage in the bigger PA rigs.

The heart of the Space Station is a delay with a range of delays from 1 to 255ms accessible through a Random Access Memory (RAM). As the delay is converted to digital form it can be manipulated and accessed in a variety of ways depending on the program and settings selected. What is undeniable is the Ursa Major have achieved some extremely good results from what is a relatively low priced unit through development of a design that is unique to them and they are being suitably quiet about how they have actually done it.

Physical dimensions are 5-1/4in high by 9in deep in a 19in rack mounting format. All the controls are on the front panel with the rear panel containing only the detachable power lead with IEC connector, and the XLR input and output connectors. Although the Space Station is strictly a mono unit, it generates a stereo reveberation pattern and so there are separate left and right outputs. The input is electronically balanced while the outputs are unbalanced.

The Input control is ahead of all the circuitry and an indication of the input level is given by a four LED display with fire points at -30, - 15, -6 and OdB. The display is electronically situated on the output of the analog/digital converter and so can more easily display digital overload which is far more critical than a slight analog overload. Apparently the indicator is peak reading with the capability of responding to transients of 62us and holding them till they can be displayed. The design of all the electronics in the Space Station is such that it is impossible to cause distortion within the unit at any setting if the input is clean.

The EQ controls are simple HF and LF cuts which act on the input signal. They are situated after the feedback point so recirculated signals are processed again. This gives the ability to control the general tone character of the reverberation as well as the decay times of the LF and HF bands relative to the mid range frequencies. This enables simulation of reverb within a bright or a dead acoustic.

The Space Station has 16 Audition Delay Programs which decide the principal characteristics of the reverb effect. These are arranged on eight push buttons with a ninth button selecting an upper or lower range for the others. These programs can be divided into four ranges - Rooms, Combs, Delay Clusters and Space Repeats.

The Room programs can be used on the shorter two settings as ADT type effects while the other two have rather longer times. The Comb programs are very short delays of 6, 10, 22, and 38ms and are such that they cause notches in the mixed signal creating a 'static flange' effect which can be most effective if adjusted for each particular signal. The different delay times create quite different sounds and probably are some of more

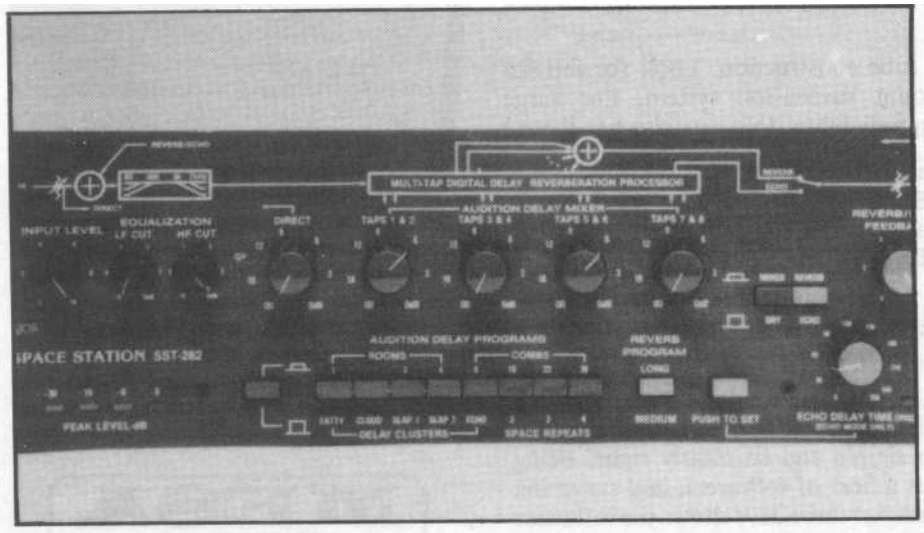
difficult aspects of the Space Station to get to grips with. The differences between some of the settings are very small such as the Comb 38 setting is very similar to Room 2 but I found that other parameters were able to alter that.

The lower range of programs includes five settings of the Delay Clusters with colorful names. Fatty is best described as a thickening of the sound while Cloud is similar with a slightly longer delay time. Slap 1 and 2 and much longer delays and Echo is even longer. The remaining three are the Space Repeats 2, 3 and 4 which are multiple repeats without feedback. All these programs are in 'stereo' with each program having a randomized pattern creating a very definite spread. To create reverberation the required setting of Audition Delay program is selected and the Reverb/Echo Feedback control adjusted. This can be further altered by a push button that allows adjustment of all the programs between long and medium reverb times.

In addition to the already mentioned facilities there is the Audition Tap Mixer. There are eight taps on the memory that are quite independent of the reverberation effects and do not have their signals regenerated. The delay times on the taps switch with the audition programs but allow a wide range of effects within it. Each control is for a pair of taps and they are fed to left and right outputs in an odd members to the left and even to the right mode. With no feedback used, some quite fascinating effects can be achieved by adjusting the relative levels of the delays. In the Fatty program all the delays are obviously very close together but subtle changes can be made that are just not possible with a standard delay line.

On longer programs the possible range of effects is greater with one effect appealing to me in particular - pseudo time reversal, where the level of the delay gets progressively louder with increasing delay time.

There is also another mode of operation - echo, where only one delay time is regenerated. The echo delay is set by a rotary control which only reads when the push-to-set button is used. This may seem a difficult way of operating but if the button is kept depressed, then the adjustment can be made while hearing the effect. This arrangement was intended to remove the noise that occurs during adjustment but this is really not a problem I found, although it does follow the well thought out pattern of design that pervades this unit.



Conclusion

The important question must be what does the reverb sound like?' Good reverb does not come cheap and virtually every artificial reverb system has some small imperfections and on the Space Station they are definitely very small imperfections indeed. Listening to the reverb signal only, reveals that the signal it is not very bright in tone and on some difficult signals little problems can be heard such as flutter near the end of the decay on long settings. On easy signals it passes with flying colors. Now if we listen to the sound mixed back in with the dry signal or mixed back in with the track in a mixing situation, all these slight imperfections are quite inaudible. The stereo spread of the reverb return is very effective and remarkably even. As a reverb only unit, I place it high in my estimations but remember that it can also create other effects with the audition tap mixer within the selected reverb program as well as decay control in high and low frequency bands, ADT, delay, flutter echo and multiple repeats and a whole host of other effects. This makes it the most versatile unit I have ever used excepting one or two others at about five times the price.

I have not done a great deal of description of the effects available on the Space Station because I could only cover a small number of the permutations possible but I urge you to try it. Words don't really describe sound effects satisfactorily, and even ten minutes playing will tell you more than a whole book of descriptions. You are certain to be impressed.