Spin Semiconductor

3K REFERENCE DESIGN:

This design is ideal for small mixers that are intended for fairly knowledgeable users, and provides an extreme range of detailed variables that 'fixed program' effects designs cannot match. The minimization of programs makes the understanding of the effects section easy, even for inexperienced users, and the degree of control offered allows mixers using this approach to be properly called 'performance mixers'. The ability for the mixing engineer to grab the decay time control and turn it to maximum (virtually infinite) at certain moments in a performance, or to manually flange through a cymbal flare, make this perhaps the simplest and most useful effects device. The only thing better than one of these on a mixer is TWO of them, with separate sends!

Four reverbs are included, all with the same variables of predelay, decay time and damping. The first three reverbs differ primarily in their initial sound and depth of diffusion:

The first of the reverb set is the **Hall**, which is very rough sounding and although gives the impression of a large space, would be a poor choice for percussive instruments. It can be used to advantage with vocals, especially the spoken voice, adding power and depth. The rather prominent initial echoes add a spaciousness to lead instrumentals. The rather deep low end response makes this program impressive at long decay times on a lone instrument, with a very dark 'tail' when heavily damped, but should be used with caution because of the low-mid reverb build-up that can go by unnoticed to the inexperienced mix engineer. It is typical of programs found in many mixers today, but much more useful due to the variables provided.

The second program, **Room**, is much tighter in regard to initial sound, and has the characteristics of a moderate sized room. This is somewhat of a compromise between the uneven spaciousness of the Hall and the brilliant tightness of the Plate.

The **Plate** was especially designed to be extraordinarily dense, with a brilliant initial sound, a slight high-end boost, and a definite loss in the low end. This program is excellent for vocals, with some predelay and very little (or no) damping, at moderate decay times. The reduced low end response mixes well and avoids the low-mid 'clutter' that can build up in heavy reverb mixes, ruining the clarity of the mix. Possibly the best all-around reverb program, responding powerfully to percussive instruments, and putting a beautiful 'polish' onto female vocals.

The fourth reverb program is the **Gated** version, a finite impulse response algorithm that is designed to fatten up percussion, especially snare drums, at short decay times. It can be used to good effect with vocals, providing a sustained 'reverb time', a rather uneven body, and an abrupt end that is interesting for effect.

The **Echo/Reverb** programs are perhaps an extreme example of spacious reverb, aided by the use of echo. The delay time offers a range from effective vocal doubling to long echo, and the repeat control can extend the echo time to near infinity. An excellent 'real time' effect for the mixing engineer to experiment with. The **Stereo Echo/Reverb** program is a ping-pong variant, for use in special cases.

The **Chorus/Reverb** program allows 4 chorus voices in stereo. At maximum depth, the effect is astounding, with multiple voices all with their own delays and pitch bends. The depth and rate controls allows the pitch bending to reach an extreme that will encompass every user's expectations.

The **Flange** program is designed for manual or automatic use. With the width control at minimum, the internal LFO is effectively shut off, and the delay control can be rotated to 'manually' flange through a given musical passage. As the width control is advanced, the internal LFO, controlled by the rate knob, takes over. When the width control is at the maximum, the flanger is sweeping over its entire range, but otherwise the sweeping range can be adjusted with the delay control. This is the basic setup of classic flangers used so much in the 70's and 80's.

These are just the programs that were written for this example. Others can be substituted, and this particular set can be modified. Please contact Spin Semiconductor with any inquiries about program modifications**.**

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