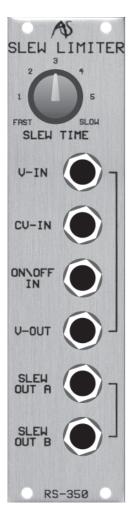# RS350

SLEW LIMITER

A Slew Limiter - also called a "Lag Processor" - is an example of a voltage processor. It produces no signal of its own, but affects those presented to its input.

Slew acts upon rapid changes in a signal, slowing them by an amount determined by manual and/or CV controls. Portamento is a perfect example of slew applied to a control signal: the slew circuit smooths the transitions between the stepped CVs normally used to determine pitch, thus making one note 'glide' to the next rather than jumping abruptly as it would otherwise do.

When applied to an audio signal, a slew limiter acts as a low-pass filter. On the RS350 the maximum slew rate is about 100ms per volt, so a 1V signal can reach a frequency of just 5Hz before it is attenuated. (This is quite unlike the Slew Limiter in the RS30 Frequency/Voltage Converter and Envelope Follower, which passes signals of up to 500Hz, or that in the RS70 Pre-Amp, which allows signals of up to 5kHz to pass unimpeded.)

Unlike the other slew limiters in the RS Integrator, the RS350 is *voltage controlled*, allowing you to control the amount of slew (or 'glide') dynamically. This permits a number of interesting possibilities that are not available elsewhere. For example, applying the keyboard CV to the V-IN socket, and an inverted/offset keyboard CV to the CV-IN allows you to decrease the glide time as you play up the keyboard, and increase it as you play down the keyboard. This is a very 'natural' sounding effect, rarely found on electronic synthesisers.

The RS350 also offers an on/off CV input that allows you to determine whether the original or the slewed signal is passed to the output. You can use this to jump between the target voltage and the intermediate, slewed voltage. This creates glissando type effects. You can, of course, use this together with the voltage-controlled slew time to generate a wide range of unusual CV signals.

IN USE

SLEW TIME

This allows you to adjust the amount of slew applied to the input signal. At its minimum (fully anticlockwise) the slew time is about 100ms per volt. At its maximum (fully clockwise) the slew time is about 2s per volt.

V-IN

The input accepts any signal in the range ±10V.

CV-IN

This accepts a CV in the range ±10V. The greater the CV presented, the greater the slew time becomes, thus slowing the transition from one voltage to another. (A negative voltage decreases the slew time.) You can apply a wide range of Gates and CVs to this input to create complex slew profiles.

ON/OFF IN

Apply a Gate or any other appropriate CV in the range 1V to 20V to defeat the slew effect. When the Gate is 'high' the input signal is passed directly to the output. When the Gate is 'low' the slewed signal is passed to the output.

V-OUT

The signal presented to V-IN is buffered and passed directly to V-OUT. This makes is possible to derive the slewed outputs without losing the original signal, which can therefore be 'daisy-chained' to further modules.

SLEW OUT A / SLEW OUT B

The Slew Limiter provides two buffered outputs, marked 'A' and 'B'. These are identical, and you can use these to direct the treated signal to two destinations simultaneously.