

## LIFE AFTER MXR:

### USING A MODERN PITCH TRANSPOSER FOR *NIGHT FLAME RITUAL*

MXR went out of business in 1985, but is it surely not necessary to use an MXR Model 129. Any effects device that has pitch transposition should be able to do the job. Good sources of advice would be any local musical electronics store or Sweetwater Sound.

To understand the use of the pitch transposer here, first open the PDF file of the Performance Score and read "Notes on the Score" (page ii). Then look at the first page of the music score, and note that the starting settings for the three controls on the MXR pitch transposer—the transposition interval, the wet/dry balance, and the amount of regeneration—are shown above measure 1. The transposition interval here is  $\uparrow M2$  (up a major second), the wet/dry balance (dry being all the way left) is  $2/3$  towards wet, and regeneration is out (bypassed, i.e., no regeneration). To the right is shown the setting for the digital delay line (DDL) which is a separate unit.

Regeneration is shown in measure 4 at the 12:00 position, and on the next page at the 9:00 position. If regeneration is not available, either in the pitch transposer being used or as a separate unit, it can be comfortably dispensed with. Its practical function is to give the sound a bit of an edge. A good substitute would be any type of effects unit that creates some form of controlled distortion. The amounts of regeneration were determined by ear on the MXR 129, and it was not very strong. There was probably a filter circuit to reduce harshness. By comparison, the regeneration on the modular Moog Synthesizer was much more intense and it could go into oscillation.

Technically, regeneration is another term for feedback. But it is instantaneous; there is no delay. Therefore it is a different type of feedback from echo, reverb, digital delay, tape-head echo, or slapback. A synonym would be oscillation. Feed enough of the output back into the input and it becomes an oscillator. The regeneration circuitry was common on Moog and other synthesizers going back to the 1960's, long before digital delay lines. Moog had it on his low pass filter. Without regeneration a low-pass filter sounded like a muffling of the audio. Add some regeneration and the sound became more pointed or edgy or peaky; add more and there was an increased sense of pitch. With maximum regeneration there would be oscillation and the sound of a sine wave could be heard as part of the audio.

The performance kit for "Night Flame Ritual" contains an audio CD with a recorded performance of the piece (featuring the original MXR Model 129, naturally). This will give an idea of what the processed clarinet should sound like.

--Reynold Weidenaar, March 2008