

Cort Lippe

### **Program Notes**

**Paraptra**, for stereo tape, (1991) was created at IRCAM, Paris, France, using the program *Max*, developed by Miller Puckette, whose technical advice made this piece possible, and signal processing and control programs written by the composer and Puckette for the 4X real-time digital signal processor. The digital mix of the final tape version was done at IRCAM, Paris, with the valuable assistance of Xavier Bordelais and Franck Rossi. The material for the tape is made up solely of digitally transformed and processed harp and classical guitar sounds. The sounds were sampled and transformed in a variety of ways including: frequency shifting, spatial panning, harmonizing, random amplitude modulating, time-stretching, and granular sampling using programs written by the composer and Puckette. The piece is divided into four main sections. Tremolo-like sounds at registral extremes combined with sounds containing a high degree of noise modulation define the first section. The second section explores descending and ascending passages. Percussive sounds characterize the third section, and a return to tremolo-like sounds make up the fourth section. The piece is released on the SEAMUS label, vol. 2. Duration: 14 minutes.